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U. S. DEPARTMENT OF COMMERCE
JOHN T. CONNOR, Secretary
WEATHER BUREAU
ROBERT M. WHITE, Chief

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

CLEMSON UNIVERSITY LIBRARY
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JUN 8

JANUARY 1965
Volume 16 No. 1

CLEMSON UNIVERSITY LIBRARY
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ASHEVILLE: 1965

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NOTE: Delayed data and corrections will be carried in the June and December issues of this publication.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 16 No. 1

JANUARY 1965

GENERAL SUMMARY OF WEATHER CONDITIONS

The opposing warm and cold air masses of January 1965 remind one of the two-faced Roman god for which the month is named. The cold face was most frequently turned toward the northern Plains and the East with the warm influence over the Rocky Mountains and the southern Plains. Considerable storminess occurred as the arctic air masses clashed with the warm humid masses from the Gulf.

Strong winds and heavy rains battered the coastal portions of Washington, Oregon, and California during the first week. Snow fell in the mountains of the Pacific Northwest and in the higher elevations of California. The snow depth at Blue Canyon, Calif., reached 70 inches and the snowpacks on some of the mountain ranges reached twice that depth. The rain over northern California intensity decreased at the end of the first week after 21 consecutive days of rain.

Arctic air poured across the Canadian border and the northern Great Plains during the first week of January. Tropical Gulf air pushed northward and by January 8, temperatures in the 60's were common as far north as Illinois.

At 1 a.m. January 8, Kansas City, Mo., registered 63° and Valentine, Nebr., 300 miles to the northwest, registered 10°. The balmy weather did not last. The cold air pushed southward and most of Illinois remained below freezing on the 9th. Subzero weather gripped the northern Plains as far south as Omaha, Nebr. San Antonio, Tex., registered 28° on the 12th.

As the cold air advanced southward, it touched off numerous showers and locally heavy thunderstorms from Arkansas to the Ohio River Valley. Snow and freezing rain fell over the southern Plains. Amarillo, Texas, received 2 inches of snow on the evening of the 8th and the morning of the 9th. Snow and rain continued in the Northwest. The cold front reached and crossed the Gulf of Mexico. Lake Charles, La., registered 32° on the 10th. Parts of Oklahoma received 4 inches of snow and 3 inches fell in northern Arkansas. By Monday morning, January 11, the storm had affected parts of 22 States. Snow accumulated to 10 inches in New Jersey and 11 inches in parts of Virginia. Freezing rain fell south of the snow zone and heavy rain fell south of the belt of freezing precipitation. Snowfall totals exceeded 3 inches from Arkansas across Tennessee to the Appalachians. The cold air lingered over the eastern States most of the rest of the month.

Mild temperatures began replacing the cold temperatures over the western Great Plains about midmonth. Temperatures reached the 50's and 60's over portions of the area. Frigid temperatures remained over the northern Plains. A few locations in Minnesota registered temperatures 40° below zero or colder on the 14th. Evansville, Ind., registered 4° below zero on the 17th.

Moderate to heavy snow fell from the central Great Plains to New England during the last half of January. The snow delayed traffic in the Iowa-Wisconsin area, especially from the 22d to 26th. Severe icing occurred in Ohio and Pennsylvania on the 23d. In some areas the ice accumulated to 1/2 to 3/4 inch. Numerous automobile accidents occurred on the icy roads in the Rome, Ga., vicinity during the last few days of January.

Several vigorous outbreaks of cold air occurred over the eastern half of the United States during January, each seeming to be more severe than the preceding outbreaks. The temperature at Sioux City, Iowa, did not rise above 6° for several days near the end of the month. The maximum temperatures at International Falls, Minn., were 0° or lower on 11 days in January.

In sharp constrast to the cold conditions over the northeastern United States, many southern locations experienced the warmest January in more than 10 years. Albuquerque, N. Mex., registered 68° on the 31st, the highest January temperature in more than half a century. It was one of the warmest Januarys of record in Nevada. It was the warmest January in a decade in southern Idaho. Mild weather prevailed during much of the month from Wyoming to New Mexico and portions of Texas.

Rainfall totals for the month exceeded 16 inches along portions of the Washington, Oregon, and northern California coast. The heavy rains in the Lewiston, Idaho, area melted much of the snowpack at the lower elevations. Montana was foggy, cloudy, and rainy much of the month. Precipitation continued, with diminishing amounts, in the flood stricken portions of Oregon and California for the first 10 days of January. The last 10 days were also rainy in that area. Little rain fell during the entire month from the Dakotas to Wisconsin and southward to New Mexico and western Texas. Parts of this area received less than 0.5 inch. Much of the area from Missouri, Arkansas, and eastern Texas to the Atlantic Ocean received more than 2 inches of precipitation during January.

Considerable severe weather occurred during the last 10 days of January. It included hail, high winds, duststorms, snow, sleet, freezing rain, and tornadoes. These storms occurred mostly from Oklahoma and Texas to the Carolinas. For details of some of these storms, the floods in Oregon, and other severe storms in January, see Storm Data, Volume 7, No. 1.

CONDENSED CLIMATOLOGICAL SUMMARY

JANUARY 1965

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	2 Stations	79	10+	Double Springs	-2	31	Mobile WBAP	9.35	Fort Morgan	1.50
Alaska	Ketchikan	56	18+	Tok	-71	5	Little Port Walter	40.31	Dot Lake	.01
Arizona	Sahuarita	88	14	Window Rock	-17	27	Tonto Creek Fish Htchy	6.75	Wahak Hotrontk	.07
Arkansas	Devils Knob	80	7	Evening Shade 1NE	2	31	Jessieville	7.80	Green Forest 4ESE	D .64
California	Indio US Date Garden	89	18	Bridgeport	-29	1	Honeydew 2WSW	21.00	8 Stations	.00
Colorado	2 Stations	75	8+	Sugar Loaf Reservoir	-39	2	Wolf Creek Pass 1E	6.81	Fountain	.00
Connecticut	Norwalk Gas Plant	60	10	Coventry	-22	31	Westbrook	4.35	Woodbury 3W	1.65
Delaware	Selbyville	68	9	2 Stations	-10	18	Lewes 1SW	4.13	2 Stations	2.23
Florida	2 Stations	90	26	Fountain 3SSE	14	18	Quincy Exp Station	4.49	Fellsmere 4W	.00
Georgia	Tallapoosa 2NNW	83	23	4 Stations	6	31	Atlanta Bolton	6.53	Savannah Beach	.45
Hawaii	Makahuena Point	89	5	Haleakala Summit	26	26	Kanalohuluhulu 1075	21.13	Halepohaku 111	.98
Idaho	Grand View 3WNW	59	29	Grouse	-33	1	Burke 2ENE	9.64	Malta 1NE	.27
Illinois	2 Stations	71	7	Sycamore	-20	30	Mackinaw	8.81	Olney 2S	.90
Indiana	Edwardsport Power Pl	74	9	Greensburg 3SW	-23	17	Collegeville St Jo Col	6.59	Bloomington 5SW	1.90
Iowa	Keokuk Lock and Dam 19	64	7	Decorah	-30	29	Keokuk Lock and Dam 19	8.58	Inwood 2W	.09
Kansas	Ashland	79	8	Horton	-11	31	Atchison	5.03	Aetna 2S	.04
Kentucky	Dema	74	8	Bonnieville 4N	-19	31	Hickman 1E	D 6.18	Cecilia	D2.08
Louisiana	Grand Coteau	83	8	Converse	10	18	Houma 1SW	8.32	Donaldsonville	1.28
Maine	Hiram 2S	50	9	3 Stations	-30	16+	Woodland	2.80	Middle Dam	.76
Maryland	Snow Hill	67	9	Oakland 1SE	-17	31	Sines Deep Creek 2	5.72	Crisfield Somers Cove	D2.11
Massachusetts	Salem CG Air Station	59	9	4 Stations	-17	31+	Nantucket WBAP	5.17	Bedford	1.25
Michigan	5 Stations	62	8	Ironwood	-37	15	Higgins Lake	D 4.78	Cornell	.25
Minnesota	2 Stations	46	22+	2 Stations	-50	14	Albert Lea	D 1.57	Warroad	T
Mississippi	West Point	82	3	Fulton 3W	4	31	Biloxi City	9.90	Pickens	1.25
Missouri	2 Stations	79	7	Princeton	-23	30	Gregory Landing	8.64	2 Stations	.92
Montana	Stanford	63	16	Redstone	-41	13	Hebgen Dam	6.72	Lima	.02
Nebraska	Purdum	70	7	Wakefield	-25	16	Deweese 4SE	1.92	Hartington	.05
Nevada	Desert Game Range	78	31	Charleston	-28	1	Mt Rose Highway Sta	15.87	Searchlight	T
New Hampshire	Windham	53	9	Fabyan	-32	15	Lincoln	2.97	Benton 5SW	.58
New Jersey	Atlantic City WBAP	65	9	Chatsworth	-15	18	Long Branch	5.28	Phillipsburg	1.97
New Mexico	Jal	79	31	Gavilan	-28	2	Bateman Ranch	4.10	10 Stations	.00
New York	Fredonia	61	9	2 Stations	-39	15	Sherman	6.02	Paul Smiths	.38
North Carolina	Whiteville	79	9	Statesville 2NNE	0	19	Andrews 2E	5.31	Red Springs	.80
North Dakota	Marmarth	48	15	Linton	-43	13	Jamestown St Hospital	1.68	3 Stations	T
Ohio	3 Stations	68	9+	2 Stations	-22	17	Dorset	D 6.66	Toledo Sewage	1.22
Oklahoma	do	80	7	Mutual	-1	10	Idabel	6.01	Canton Dam	.05
Oregon	Seaside	71	15	Danner	-17	1	Valsetz	28.42	McDermitt 26N	.88
Pennsylvania	Slippery Rock	68	8	Clemont 4NW	-30	17	Johnstown	6.68	Morgantown	1.69
Puerto Rico	Cruz Bay VI	92	2	Cayey 1E PR	48	12	Rio Blanco Upper PR	13.39	3 Stations	.00
Rhode Island	Providence WBAP	58	9	Kingston	-15	18	Newport	4.04	Woonsocket	2.15
South Carolina	Yemassee	79	10	Caesars Head	4	31	2 Stations	3.92	Marion	D .25
South Dakota	Wood	65	7	La Delle 7NE	-35	13	Lead 1SE	2.71	Gettysburg 14W	T
Tennessee	Bolivar 2	77	23	2 Stations	-8	17	Union City	6.01	Mount Pleasant 2SW	2.31
Texas	2 Stations	93	26+	Miami	2	10	Richards	7.67	13 Stations	.00
Utah	do	69	31+	Strawberry Hwy Station	-28	2	Alta	16.44	Ferron	.05
Vermont	3 Stations	54	10+	West Burke	-35	16	Whitingham	3.21	Huntington Center	.36
Virginia	Boykins	74	9	Culpeper	-11	31	Riverton	5.79	Emporia 1WNW	1.09
Washington	Kosmos	70	15	Quincy 1S	-10	6	Cougar 6E	24.97	Chief Joseph Dam	.69
West Virginia	Madison	73	9	2 Stations	-15	31	Canaan Valley	7.28	Ravenswood Dam 22	1.88
Wisconsin	Kenosha	59	8	Gordon 2ESE	-45	14	Milwaukee Mt Mary Col	4.37	Mondovi	.20
Wyoming	2 Stations	65	17+	Bondurant 3NW	-39	2	Alpine 2S	5.10	6 Stations	T

+ And also on an earlier date or dates

NOTE: Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	997.6	1020.7	57	35	45.8	- 0.7	73	9	8	31	0	16	36	72	3.21	- 1.82	1.78	8	1	T	T	2.0	26	38	N	10	13	3	15	5.6	55
HUNTSVILLE	600	997.0	1020.4	53	31	41.8	- 1.1	70	22	5	17	0	19	31	66	3.61	- 1.61	1.35	9	1	1.6	1	0.6	24	29	30	16	9	7	15	6.0	
MOBILE	211	1012.2	1020.3	64	41	52.5	- 0.5	75	9	18	17	0	7	44	76	9.35	4.71	8.34	11	3	0.0	0	0.7	8	27	36	30+	14	7	10	4.8	
MONTGOMERY	195	1013.5	1020.9	60	36	48.3	0.2	75	22	17	31+	0	10	37	68	6.10	2.04	4.73	9	1	T	0	0.8	28	32	N	10	13	5	13	5.2	59
ALASKA												B																				
ANCHORAGE PRK STRIP	85			17	3	10.0	- 2.4	44	18	-21	1	0	31			0.79	- 0.01	0.63	4		9.1	17										
ANCHORAGE	143	1001.0	1006.1	17	3	10.0		44	18	-19	5	0	31	3	72	0.57	- 0.82	0.35	5	0	8.5	16	3.2	2	30	15	18	12	4	15	5.8	48
ANNETTE	110	1004.7	1008.9	36	28	32.1	- 2.3	52	18	3	4	0	17	27	82	15.46	4.10	2.44	23	0	22.2	43	6.9	12	31	14	12	1	7	23	8.7	
BARROW	22	1024.4	1025.2	-16	-27	-21.0	- 4.8	1	19	-45	2	0	31	-30	62	0.04	- 0.14	0.03	3	0	0.5	12	10.4	9	37	8	19	V	V	V		
BARTER ISLAND	39	1022.4	1024.5	-18	-28	-22.6	- 5.8	5	20	-49	7	0	31	-30	70	0.13	- 0.27	0.05	6	0	1.3	15	5.5	9	36	9	18	X	X	X		
BETHEL	125	1000.3	1006.3	7	- 9	- .6	- 4.2	34	18	-33	1	0	31			0.59	- 0.53	0.16	12	0	6.4	18	9.8	3	35	2	16	9	4	18	6.4	
COLD BAY	94	995.9	999.5	33	22	27.3	- 0.5	42	17	6	8	0	30	23	84	1.21	- 1.11	0.40	16	0	16.4	5	0.7	18	46	14	17+	5	3	23	8.0	
FAIRBANKS	436	996.3	1014.8	- 8	-28	-18.0	- 6.9	38	18	-56	5	0	31			0.07	- 0.82	0.05	2	0	3.0	23	1.7	2	13	2	18	13	5	13	5.1	
JUNEAU	12	1008.8	1009.4	28	18	23.1	- 2.0	50	16	-15	6	0	23	18	81	7.75	3.75	2.18	19	0	45.2	30	9.4	11	35	12	16	6	5	20	7.5	34
KING SALMON	43	1001.0	1002.8	21	4	12.3	- 1.1	42	17	-25	1	0	30	6	75	0.79	- 0.28	0.26	12	0	6.0	9	4.6	4	43	9	17	7	2	22	7.5	
KOTZEBUE	10	1014.6	1014.9	1	-15	- 7.0	- 1.3	32	19	-41	17	0	31	-13	72	0.37	- 0.02	0.13	10	0	6.7	20	8.1	9	46	11	2	14	4	13	5.0	
MC GRATH	334	997.3	1011.0	- 1	-22	-11.4	- 2.4	31	18	-47	1	0	31	-20	64	0.40	- 0.86	0.26	8	0	12.1	23	1.0	31	20	18	14	10	4	17	6.3	
NOME	13	1010.2	1010.8	10	- 9	.8	- 3.6	32	19+	-32	16+	0	31	- 6	71	0.56	- 0.46	0.28	10	0	6.2	17	9.2	5	46	31	5	13	2	16	5.5	46
ST. PAUL ISLAND	22	1000.3	1001.3	27	18	22.6	- 2.8	38	5+	5	17+	0	31	20	89	3.65	1.84	0.85	23	0	28.3	20	12.1	3	63	35	17	1	4	26	9.0	
SHEMYA	122	997.0	1000.6	34	28	30.8	- 0.5	39	6+	20	17	0	26	25	81	2.63	0.13	0.58	25	0	10.8	5	4.8	4	53	9	31+	0	8	23	8.4	
YAKUTAT	28	1004.7	1005.7	29	15	22.1	- 5.2	45	18	-21	6	0	25	17	83	17.07	6.21	3.79	22	0	38.0	46	4.1	10				6	1	24	7.8	
ARIZONA																																
FLAGSTAFF	6993	787.7	1020.7	45	18	31.4	4.1	60	30	1	27	0	31	21	71	3.05	1.22	1.30	7	1	15.1	7	1.0	30	21	18	24	11	5	15	5.9	
PHOENIX	1117	978.7	1018.2	64	41	52.7	3.0	77	17	32	27+	0	2	39	64	1.22	0.49	0.78	5	1	0.0	0	1.6	13	49Y	ESE	7	15	5	11	4.8	82
TUCSON	2584	927.9	1016.9	66	41	53.6	3.8	77	18+	30	26+	0	4	32	51	0.45	- 0.37	0.38	4	1	0.0	0	2.6	15	29	W	25+	17	5	9	4.5	82
WINSLOW	4895	854.0	1022.3	49	26	37.3	6.3	67	31	11	2	0	27	29	79	1.42	0.99	0.54	7	0	3.5	1	1.8	22	38	22	7	10	9	12	5.6	
YUMA	194	1011.2	1018.4	69	45	56.6	1.2	80	17	34	9	0	0	33	46	0.56	0.17	0.55	2	0	0.0	0	3.8	36	40	S	24	13	7	11	5.3	80
ARKANSAS																																
FORT SMITH	449	1002.7	1019.6	55	29	42.0	2.2	75	7	10	17	0	20	31	68	1.69	- 0.97	0.90	6	1	0.1	T	2.0	36	36	SE	25	10	7	14	5.8	62
LITTLE ROCK	257	1010.2	1019.8	56	33	44.2	3.6	73	7	15	31	0	19	33	69	4.45	- 0.77	2.88	6	1	T	T	0.9	27	34	SE	15	11	7	13	5.5	55
TEXARKANA	372	1006.4	1019.9	59	37	47.9	2.8	76	7	16	17	0	11	37	68	4.51	- 0.33	2.24	5	3	0.0	0	2.3	18				11	6	14	5.4	
CALIFORNIA																																
BAKERSFIELD	494	1004.1	1021.9	56	39	47.2	- 0.2	71	6	29	1	0	4	40	79	0.74	- 0.43	0.44	5	0	0.0	0	1.0	1	32	33	24	7	7	17	7.0	
BISHOP	4108			56	26	41.0	4.2	72	31	8	1	0	26			0.48	- 0.51	0.23	7		0.2	T						10	12	9	5.4	
BLUE CANYON	5280			46	32	38.8	1.2	62	17	11	1	0	15			13.32	0.17	3.87	13		52.8	72			54	19	6	5	5	21	7.6	
BURBANK	724	992.6	1018.5	67	42	54.5	0.9	82	17	33	8	0	0	36	54	1.00	- 2.14	0.65	3		0.0	0	0.5	30	23	35	24+	12	7	12	5.3	
EUREKA U	43			53	42	47.3	- 0.1	62	18	32	8	0	1			5.82	- 0.88	1.34	16		0.0	0			42	N	23	5	2	24	8.2	35
FRESNO	328	1010.2	1022.0	53	39	46.3	0.2	68	23	29	1	0	5	42	87	1.05	- 0.98	0.34	8	0	0.0	0	1.2	14	30	NW	7	2	8	21	8.1	37
LONG BEACH	34	1017.6	1019.1	64	43	53.5	0.4	81	17	32	2	0	1	40	64	0.57	- 1.42	0.32	3	0	0.0	0	2.1	30	32	32	7	10	10	11	5.7	
LOS ANGELES	97	1015.2	1018.8	65	46	55.7	1.3	83	17	37	2	0	0	42	65	0.43	- 2.23	0.30	3	0	0.0	0	1.3	32	38Y	W	24	8	13	10	5.5	
LOS ANGELES U	270			69	48	58.3	2.5	85	17	37	1	0	0			0.84	- 2.23	0.49	3		0.0	0			29	SW	24+	14	12	5	4.0	65
MT SHASTA R	3544			44	28	36.2	2.9	62	29	9	1	0	24			7.01	0.65	2.53	13		26.6	24										
OAKLAND	6	1020.3	1020.8	54	44	49.3	1.3	64	29	35	1	0	0	43	80	2.95	- 0.88	1.06	11	0	0.0	0	2.1	21	35	17	2	7	4	20	7.2	
RED BLUFF	341	1007.5	1020.4	54	39	46.4	0.9	72	14	29	8+	0	3	39	79	4.09		1.82	11	1	4.0	4	1.8	19	43	SE	5+	6	5	20	7.5	45
SACRAMENTO	17	1020.7	1021.4	51	40	45.4	0.2	58	22	29	1	0	2	41	86	3.01	- 0.17	1.08	11	0	0.0	0	2.0	17	32	N	23+	4	5	22	8.0	32
SANDBERG F	4517			49	36	42.5	2.6	64	30	17	1	0	10			0.37	- 2.18	0.26	3	0	3.0	1			52	35	24	6	7	18	7.1	
SAN DIEGO	13	1017.6	1018.7	66	46	56.0	1.0	81	17	39	10	0	0	42	65	0.40	- 1.61	0.18	3	0	0.0	0	1.6	30	24	NW	7	9	13	9	5.2	77
SAN FRANCISCO	8	1020.3	1021.1	55	42	48.5	- 0.1	62	23	31	1	0	1	43	84	4.37	0.36	1.24	12	0	0.0	0	1.7	21	51	NW	5	6	5	20	7.3	
SAN FRANCISCO U	52			56	47	51.4	0.7	62	14	40	1	0	0			3.97	- 0.58	1.28	12		0.0	0			47	NW	5					53
SANTA CATALINA	1568			61	50	55.3	1.7	76	18	39	1	0	0			0.51	- 2.15	0.24	4	0	0.0	0						8	13	10	5.3	
SANTA MARIA	238			64	41	52.1	1.9	78	17	27	1	0	2			0.74	- 2.10	0.25	6		0.0	0						8	9	14	5.7	
STOCKTON	22	1021.0	1021.9	52	39	45.7	- 0.1	62	23	31	1	0	1	41	86	2.62	0.36	0.84	10	0	0.0	0	3.0	16	30	13	2	2	3	26	8.6	
COLORADO																																
ALAMOSA	7536			32	1	16.6	- 0.8	47	31	-18	3	0	31			0.28	0.02	0.20	3		2.7	4						7	14	10	5.7	
COLORADO SPRINGS	6145	808.0	1016.3	47	23	35.4	6.8	62	31	8	2	0	29	14	46	0.14	- 0.15	0.14	1	0	3.2	3	4.9	1	39	5	31	6	11	14	6.3	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days		Average dew point	Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
																			No. of days		Snow, Sleet				Fastest mile							
		Station ∅	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below			Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
COLORADO																																
DENVER	5283	833.7	1014.9	49	21	35.0	6.5	65	6	5	3	0	30	18	56	1.00	0.45	0.46	6	0	13.2	7	2.4	23	39	W	27	10	5	16	6.2	73
GRAND JUNCTION	4855	854.4	1021.9	42	23	32.3	6.3	57	31	6	2	0	31	23	71	0.66	0.02	0.32	5	0	5.9	3	1.8	11	25	NE	24	7	7	17	6.5	56
PUEBLO	4684	854.7	1017.0	55	18	36.5	6.5	68	31+	5	3	0	31	16	47	0.19	- 0.12	0.21	3	0	5.4	4	3.8	31	59	W	31	9	11	11	5.5	77
CONNECTICUT																																
BRIDGEPORT	7	1016.9	1017.5	33	20	26.4	- 3.8	55	9	1	15	0	29	17	70	3.34	- 0.35	1.00	10	0	26.2	10	8.9	32	45	33	3	6	11	14	6.4	
HARTFORD	169	1009.8	1016.5	31	14	22.5	- 3.5	50	22+	- 8	31	0	30	11	63	2.73	- 0.85	0.91	11	0	28.7	12	4.9	31	35	N	25	6	10	15	6.6	59
NEW HAVEN	6			34	19	26.1	- 3.5	55	9	1	15	0	29			3.14	- 0.82	1.12	10		21.9	8			34	NW	3	6	10	15	6.5	57
DELAWARE																																
WILMINGTON	78	1014.9	1017.8	38	20	29.0	- 4.4	59	9	2	17	0	29	20	69	2.38	- 1.02	0.84	7	0	8.4	6	4.8	30	32	30	3	8	7	16	6.3	
DIST.OF COLUMBIA																																
WASH NATL AP	14	1016.3	1018.5	42	25	33.4	- 3.5	62	9	9	31	0	27	21	63	2.73	- 0.30	0.[illegible]9	10	0	9.1	4	3.3	32	37	NNW	2	12	4	15	5.7	55
FLORIDA																																
APALACHICOLA U	13			62	46	54.0	- 1.1	74	26	23	17	0	4			2.17	- 0.97	1.39	9	0	0.0	0						18	3	10	3.9	60
DAYTONA BEACH	31	1019.6	1021.1	68	47	57.5	- 1.1	83	26	27	18	0	4	49	77	2.22	- 0.97	1.41	7	3	0.0	0	2.0	30	29	16	15	14	10	7	4.5	
FORT MYERS	15	1020.0	1020.4	75	52	63.7	0.2	83	23+	33	18	0	0	53	73	1.24	- 0.28	0.87	3	2	0.0	0	1.4	4	24	33	17	13	11	7	4.5	
JACKSONVILLE	24	1019.6	1020.6	66	44	55.3	- 0.6	81	23	26	18+	0	4	44	69	0.65	- 1.80	0.42	5	1	0.0	0	2.5	30	32	NW	30	15	7	9	4.2	68
KEY WEST	4	1019.3	1019.9	77	66	71.3	1.7	83	27	54	18	0	0	62	75	0.55	- 0.98	0.31	4	1	0.0	0	6.7	5	27	NW	2	11	14	6	4.6	68
LAKELAND U	214			71	51	60.7	- 1.0	83	26	30	17	0	2			1.41	- 0.64	0.93	7		0.0	0						12	11	6	4.2	68
MIAMI	7	1019.6	1020.0	76	58	67.0	0.1	84	26	35	18	0	0	57	71	1.98	- 0.05	1.02	12	2	0.0	0	2.0	6	30	31	30+	8	14	9	5.4	
ORLANDO	108	1016.6	1020.9	71	49	60.0	- 0.4	86	26	30	17	0	2	49	72	1.79	- 0.21	1.43	6	1	0.0	0	1.6	31	25	22	30	14	11	6	4.2	
PENSACOLA	112	1016.6	1020.7	63	43	52.6	- 0.9	76	26	21	17	0	7	43	70	2.35	- 1.87	1.52	11		0.0	0	0.9	32	48	N	23					69
TALLAHASSEE	58	1019.0	1021.3	65	36	50.3	- 3.6	79	26	15	18	0	10	41	74	3.86	0.44	2.19	8	1	T	0	1.2	31	32	27	24	14	11	6	4.2	
TAMPA	19	1020.7	1020.7	70	47	58.6	- 2.6	81	22	29	18	0	2	50	76	1.56	- 0.57	0.85	5	2	T	0	1.4	6	29	32	31+	15	7	9	4.2	69
WEST PALM BEACH	15	1019.3	1019.9	75	56	65.5	- 1.4	86	26	32	18	0	1	55	72	1.70	- 0.78	0.79	5	1	0.0	0	1.2	36	28	31	31+	13	11	7	4.7	
GEORGIA																																
ATHENS	802	990.2	1019.6	56	33	44.5	- 0.1	74	26	15	31	0	17	33	67	1.83	- 3.06	0.92	9	1	2.5	2	3.8	26	24	25	2	14	2	15	5.4	
ATLANTA	1005	982.7	1020.3	53	33	43.2	- 1.6	69	26	11	31	0	14	33	70	3.74	- 0.70	2.57	7	1	2.4	2	3.6	27	31	NW	24	12	4	15	5.6	58
AUGUSTA	143	1014.2	1019.8	61	32	46.1	- 1.5	76	9	19	19	0	18	34	68	1.34	- 1.65	0.81	7	1	T	0	3.3	26	29	28	24	9	10	12	5.4	
COLUMBUS	385			61	35	47.7	- 0.1	75	26+	18	31+	0	15	36	68	2.79	- 1.27	1.55	10		T	T	2.3	29	23	26	24+	13	5	13	5.2	
MACON	354	1007.8	1020.9	61	33	46.7	- 2.5	77	26	16	31	0	17	36	71	1.55	- 1.82	0.72	8	0	T	T	2.6	27	33	NW	24	12	9	10	4.8	64
ROME	637			55	29	41.7	- 0.4	71	8	8	31	0	20			2.70	- 2.81	0.74	8		1.2	1										
SAVANNAH	46	1018.6	1020.3	64	36	49.9	- 1.8	77	26+	19	19	0	13	38	69	0.83	- 1.95	0.42	6	0	T	0	3.0	26	26	NW	10	14	5	12	4.8	70
HAWAII																																
HILO	31	1011.9	1013.1	79	64	71.7	0.9	85	18	60	27+	0	0	63	78	9.28	- 2.54	5.37	14	1	0.0	0	1.2	23	41	36	29	6	14	11	6.2	46
HONOLULU	7	1012.5	1012.9	78	66	71.9	- 0.6	81	17+	61	31+	0	0	62	71	3.02	- 0.74	2.13	9	2	0.0	0	1.7	8	32	NW	29	4	13	14	6.8	66
KAHULUI	48	1010.5	1012.7	79	64	71.2		84	2+	59	28+	0	0			2.45	- 2.33	0.83	14	1	0.0	0	0.7	12	33	N	29	7	11	13	6.2	61
LIHUE	115	1008.1	1013.4	76	65	70.5	- 0.4	80	17+	60	25	0	0	63	80	7.57	2.06	2.04	17	2	0.0	0	0.9	32	27	NE	29	4	14	13	6.3	50
IDAHO																																
BOISE	2838	918.7	1021.5	39	29	34.1	5.0	52	31+	12	1	0	25	28	81	2.89	1.57	0.85	23	0	18.4	7	3.0	13	35	NW	3	0	2	29	9.5	21
IDAHO FALLS 42NW R	4790			30	7	18.3	4.9	42	5	-18	26	0	31			1.18	0.63	0.74							37	NNW	31					
IDAHO FALLS 46W R	4933			32	13	22.3	6.9	44	29	- 8	1	0	31			1.56	0.83	0.87	9		7.9	7			43	SW	24					
LEWISTON	1413			40	29	34.1	3.4	53	30	12	1	0	26			2.99	1.89	0.79	14		10.8	7						0	3	28	9.3	
POCATELLO	4454	864.2	1021.1	38	22	29.8	7.5	48	31+	3	1	0	25	22	77	0.71	- 0.50	0.23	11	0	4.7	2	9.2	22	36	SW	24	2	4	25	8.4	32
ILLINOIS																																
CAIRO U	314			47	30	38.1	0.7	67	8+	3	31	0	19			3.03	- 1.43	1.48	10		2.2	1			43	SW	25	6	12	13	6.4	55
CHICAGO O HARE	658	992.6	1018.0	30	13	21.5	- 2.7	60	8	-13	30	0	28	16	79	4.11	2.29	1.23	14	0	11.7	5	3.1	27	32	5	16+	7	8	16	6.6	
CHICAGO MIDWAY	607	994.6		32	17	24.5	- 1.5	63	8	- 9	30	0	26	15	67	4.09	2.23	1.43	12	0	10.0	4	3.3	27	34	S	15	7	8	16	6.6	48
MOLINE	582	995.9	1018.6	30	13	21.4	- 1.2	60	8	- 9	30	0	28	15	77	4.08	2.47	1.39	11	0	10.2	4	3.1	30	33	SE	26	9	8	14	6.1	49
PEORIA	652	993.9	1018.8	34	15	24.3	- 1.4	60	8	- 6	30	0	28	18	77	8.11	6.23	4.45	10	2	5.5	4	2.2	29	33	S	8	11	3	17	6.3	41
ROCKFORD	724	989.8	1017.9	29	10	19.5	- 2.5	55	8	-15	30	0	29	13	76	4.40	2.42	2.07	12	0	10.3	5	3.2	29	25	31	26+	10	5	16	6.0	
SPRINGFIELD	588	995.6	1018.6	37	17	27.3	- 1.1	65	7	-12	31	0	25	21	75	3.17	1.28	1.07	12	1	9.1	5	3.2	24	34	S	8	10	2	19	6.6	41

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90° F. or above	Temperature: No. of days: Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Sleet: Total	Precipitation: Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
INDIANA																																
EVANSVILLE	381	1005.4	1019.8	43	21	32.3	- 1.9	68	8	-14	31	0	22	26	78	2.53	- 1.45	0.92	12	1	4.5	3	2.4	27	30	SE	26+	7	4	20	7.1	49
FORT WAYNE	791	986.8	1018.0	34	16	24.8	- 2.2	61	8	-10	17	0	26	18	75	4.49	1.82	1.64	14	0	6.2	5	4.4	26	40	W	26	8	5	18	7.0	42
INDIANAPOLIS	792	988.2	1018.5	37	18	27.5	- 1.6	63	8+	-10	17	0	26	22	78	3.86	0.81	1.71	12	1	12.2	12	2.8	26	36	SE	26+	5	10	16	6.8	57
SOUTH BEND	773	988.2	1017.3	33	17	24.7	- 0.9	61	8	- 4	17	0	27	19	79	4.74	2.54	1.72	18	0	14.7	8	3.9	25	30	29	26	4	7	20	7.6	
IOWA																																
BURLINGTON	694			33	13	23.0	- 1.4	60	8	-12	31	0	28	17	77	3.95	2.31		11	0	8.0		4.4	30	26	30	8	10	5	16	6.2	
DES MOINES	938	983.4	1020.0	26	9	17.6	- 3.2	47	7	-17	30	0	29	13	83	1.62	0.32	0.47	10	0	7.4	3	3.0	33	35	NW	31	9	8	14	6.2	51
DUBUQUE	1065			25	7	16.1	- 3.1	45	7	-17	30	0	30			2.70	0.87	0.91	10		11.7	7						7	9	15	6.5	
SIOUX CITY	1095	978.7	1020.5	28	7	17.3	- 1.4	52	21	-20	16	0	30	10	76	0.44	- 0.34	0.17	5	0	6.4	4	2.5	34	45	NW	31	9	9	13	6.2	62
WATERLOO	868	985.8	1019.3	23	5	13.9	- 4.0	41	7	-18	16	0	30			1.11	- 0.04	0.41	9	0	6.6	3	3.9	31	32	31	8	9	6	16	6.1	
KANSAS																																
CONCORDIA	1470	963.8	1018.7	41	18	29.7	2.2	57	7	2	30+	0	28	21	75	0.87	0.17	0.65	4	1	0.3	T	1.2	33	50	NW	31	7	7	17	6.6	53
DODGE CITY	2582	924.8	1018.2	48	21	34.4	3.3	74	7	10	29+	0	30	22	67	0.49	- 0.08	0.23	5	0	4.9	2	2.3	28	38	N	31	7	8	16	6.7	62
GOODLAND	3645	887.2	1017.2	49	16	32.6	5.2	72	7	1	9	0	30	17	58	0.30	- 0.09	0.17	5	0	4.6	2	4.8	27	48	32	15	12	5	14	5.7	
TOPEKA	876	986.5	1019.3	42	20	31.0	2.2	68	7	0	30	0	27	23	74	1.60	0.58	0.76	7	1	2.9	3	1.5	32	36	NW	31	7	7	17	6.5	57
WICHITA	1321	969.2	1018.4	46	24	35.2	3.2	69	7	11	30+	0	25	27	76	0.56	- 0.25	0.22	6	0	3.3	3	0.6	27	57	N	31	7	7	17	6.7	56
KENTUCKY																																
COVINGTON	869	985.8	1018.3	42	20	30.6	- 1.0	65	8	- 9	31	0	26	23	73	3.11	- 0.45	1.19	14	0	9.3	5	3.6	25	29	26	26	5	7	19	7.1	
LEXINGTON	966	982.7	1019.3	42	23	32.2	- 2.3	64	8	-10	31	0	23	24	73	2.83	- 2.11	1.09	12	0	9.9	4	4.7	20	30	22	26	6	8	17	6.7	
LOUISVILLE	474	1001.0	1019.0	45	24	34.3	- 0.7	67	8	- 5	31	0	22	27	75	2.76	- 1.34	0.71	12	0	11.8	5	2.4	25	30	SW	16	6	6	19	7.1	48
LOUISIANA																																
ALEXANDRIA	92	1015.9	1020.3	63	38	50.4	0.1	77	8+	18	17	0	10	42	76	2.10	- 3.22	1.37	7	2	0.0	0	0.3	30	23	1	30+	14	6	11	5.0	
BATON ROUGE	64	1018.0	1020.7	66	41	53.2	0.3	80	2	20	17	0	8	43	72	2.61	- 2.17	1.74	7		0.0	0	1.2	12	35	24	22	14	8	9	4.7	
LAKE CHARLES	14	1019.3	1020.2	66	44	55.0	1.3	79	2	22	17	0	2	47	78	2.49	- 1.95	2.10	3	1	0.0	0	1.2	16	29	26	22	12	8	11	4.8	
NEW ORLEANS	3	1019.6	1020.5	65	45	54.9	0.3	76	30	26	17	0	4	46	75	4.48	0.64	4.12	6	1	0.0	0	0.9	5	27	14	22	11	10	10	5.3	
SHREVEPORT	252	1010.5	1019.7	62	40	50.8	3.3	79	7	18	17	0	10	41	73	3.77	- 1.03	1.88	4	1	0.0	0	2.6	20	32	30	26	14	5	12	5.1	64
MAINE																																
CARIBOU	624			17	0	8.7	- 1.8	43	9	-21	16	0	31			1.21	- 0.90	0.38	12		18.7	16						9	8	14	6.3	
PORTLAND	61	1012.5	1015.0	29	10	19.8	- 2.0	49	9	-13	15	0	31	9	64	1.68	- 2.69	0.60	9	0	16.2	9	4.6	31	33	NW	1	8	7	16	6.4	59
MARYLAND																																
BALTIMORE	148	1012.2	1018.1	40	21	30.8	- 4.0	63	9	1	17	0	29	21	69	3.09	- 0.34	1.01	10	0	8.3	5	4.8	30	34	N	27+	10	6	15	5.8	61
MASSACHUSETTS																																
BLUE HILL OBS R	629			31	15	22.8	- 4.2	55	9	- 9	15	0	30			3.06	- 1.43	1.11	14		33.0	12			54	NW	4					51
BOSTON	15	1014.9	1015.9	33	18	25.4	- 4.5	57	9	- 4	15	0	30	14	64	2.64	- 1.30	1.23	13	0	22.2	8	9.2	30	35	N	4	8	8	15	6.5	57
NANTUCKET	43	1014.9	1015.2	35	23	29.0	- 4.0	49	9	10	30+	0	30	21	71	5.17	0.95	1.45	14	0	38.9	16	6.8	31	43	N	16	7	8	16	6.6	44
PITTSFIELD	1170			27	9	17.9	- 3.9	51	9	-13	15	0	31			2.82	- 0.15	0.79	16		25.4	13										
WORCESTER	986	979.3	1015.1	29	13	20.9	- 3.1	52	9	-11	15	0	31	9	63	1.71	- 2.00	0.55	14	0	18.7	11	8.2	30	40	30	3	6	12	13	6.3	
MICHIGAN																																
ALPENA	689			26	6	16.3	- 3.4	50	8	-19	17+	0	31			2.79	0.84	0.87	17		32.5	13			33	W	8	4	8	19	7.6	41
DETROIT	619	993.6	1017.1	32	19	25.5	- 1.4	62	8	1	17	0	30	18	75	3.74	1.69	0.96	14	0	7.1	3	5.4	27	43	SW	26	7	5	19	7.0	43
DETROIT M WAYNE CO	633	992.2	1017.3	32	17	24.7	- 1.8	62	8	- 5	17	0	30	17	73	3.63	1.70	1.10	13	0	11.7	5	4.7	25				7	3	21	7.3	
DETROIT WILLOW RUN	711	988.2	1017.4	30	16	22.8	- 3.8	59	8	- 4	17	0	30	15	70	3.29	1.35	0.89	13	0	7.1	5	5.3	26	35	26	8	7	5	19	7.1	
FLINT	770	988.2	1017.0	30	14	22.1	0.0	60	8	- 7	30+	0	30	15	72	2.60	0.90	0.75	16	1	13.3	7	4.6	26	32	28	8	5	9	17	7.2	
GRAND RAPIDS	784	986.8	1017.1	30	15	22.5	- 1.9	59	8	- 4	29	0	31	17	79	3.99	2.08	1.28	15	0	24.1	8	3.5	28	38	S	8	4	4	23	8.1	
HOUGHTON LAKE	1150	971.9	1015.7	24	7	15.5		49	8	-18	28+	0	31	11	80	2.47		0.80	13	0	26.5	16	3.9	27	23	29	26+	6	7	18	7.2	
LANSING	841	984.1	1017.0	30	14	21.9	- 2.4	59	8	- 4	17	0	31	19	85	3.17	1.21	1.28	15	1	6.3	4	4.9	27	36	SW	26	4	10	17	7.5	48
MARQUETTE U	677			23	8	15.8	- 3.7	44	21	-13	29	0	30			1.16	- 0.73	0.24	18		17.0	20			35	NW	21	5	9	17	7.3	46
MUSKEGON	627	993.6	1017.4	31	18	24.3	- 1.7	55	8+	- 3	17+	0	29	20	83	3.47	1.37	1.01	20	0	44.2	20	3.1	31	30	23	27+	1	5	25	9.0	
SAULT STE MARIE	721	987.8	1015.6	20	4	12.0	- 3.8	36	21+	-27	14	0	31	8	81	2.86	0.79	0.70	19	0	42.3	32	1.5	29	48	29	8	3	7	21	8.1	33
MINNESOTA																																
DULUTH	1428	964.1	1018.7	16	- 6	5.2	- 3.5	36	8+	-38	14	0	31	- 4	65	0.89	- 0.26	0.21	13	0	10.6	20	5.4	29	42	NW	17	7	11	13	6.3	58

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MINNESOTA																																
INTERNATIONAL FALLS	1179	973.2	1019.6	10	-14	- 2.0	- 5.1	32	7+	-42	14	0	31	- 8	75	0.22	- 0.62	0.09	7	0	2.9	16	4.8	27	29	32	17	10	9	12	5.8	
MINNEAPOLIS	834	987.5	1019.9	19	1	10.0	- 2.4	41	21	-23	13	0	30	3	72	0.47	- 0.23	0.19	7	0	10.5	9	2.4	31	28	E	8	11	6	14	5.8	55
ROCHESTER	1297	968.8	1019.5	19	1	9.7	- 3.9	39	21	-26	14	0	30	4	75	0.45	- 0.46	0.16	7	0	11.1	6	3.7	28	32	31	17	11	5	15	6.0	
ST CLOUD	1034	979.7	1020.1	16	- 6	5.3	- 4.8	39	21	-31	29	0	31			0.48	- 0.24	0.16	9		6.6	10						10	5	16	5.8	
MISSISSIPPI																																
JACKSON	310	1008.5	1020.7	61	36	48.5	0.5	76	8+	17	17	0	11	39	75	2.86		1.51	8	3	T	0	1.8	20	29	SE	16	12	7	12	5.1	
MERIDIAN	290	1009.8	1021.1	61	35	48.1	0.0	76	9	14	17	0	15	39	75	3.46	- 1.23	2.34	7	1	T	T	1.4	25	71	35	17	11	6	14	5.3	
VICKSBURG U	234			60	40	50.0	1.0	75	8+	19	17	0	7			2.76	- 2.37	0.95	9		T	0			26	SE	22+	14	8	9	4.9	67
MISSOURI																																
COLUMBIA	778	989.2	1018.4	42	21	31.8	1.5	75	7	- 6	31	0	26	24	74	2.52	0.81	0.85	12	1	5.3	3	1.8	29	43	S	8	8	5	18	6.6	55
KANSAS CITY	742	991.2	1018.9	42	21	31.4	- 0.3	69	7	- 3	30	0	26	23	72	2.35	0.94	0.96	10	1	4.2	2	1.6	30	25	SE	31	7	6	18	6.7	61
SAINT JOSEPH	811			40	18	29.1	1.9	62	7	- 9	31	0	27			3.52	2.32		8	1	2.3		2.5	32	38	30	31					
ST LOUIS	535	998.3	1019.4	43	21	31.9	0.0	73	7	- 7	31	0	25	23	70	2.51	0.53	0.74	10	1	7.3	5	2.5	27	30	SE	26+	9	3	19	6.6	44
SPRINGFIELD	1265	972.2	1018.8	48	25	36.2	2.6	75	7	4	31+	0	25	27	71	2.47	0.51	0.72	9	3	0.4	T	2.2	21	29	S	15+	7	7	17	6.7	54
MONTANA																																
BILLINGS	3567	888.3	1015.6	39	17	28.1	4.9	54	15	-11	8	0	28	19	70	0.66	0.12	0.24	7	0	8.0	3	7.2	26	54	NW	31	8	7	16	6.5	62
GLASGOW	2277			15	- 2	6.4	- 3.4	40	15	-24	8	0	31			0.46	- 0.02	0.12	12		10.7	15						4	8	19	7.5	
GREAT FALLS	3662	884.9	1017.7	34	13	23.9	1.8	55	17	-20	8	0	24	14	71	0.84	0.23	0.40	6	0	6.9	4	6.7	23	36	NW	30+	8	5	18	7.0	49
HAVRE	2582			19	- 1	8.8	- 5.1	41	14	-18	9+	0	31			0.56	0.07	0.22	10		7.1	11			38	NW	31	7	6	18	6.7	56
HELENA	3828	878.8	1017.4	37	22	29.6	11.0	50	30	3	1	0	27	21	72	0.36	- 0.11	0.21	7	0	2.3	1	4.8	26	40	NW	3	3	3	25	8.5	39
KALISPELL	2965	909.6	1017.1	33	19	25.9	6.1	42	30	-12	1	0	31	25	91	1.84	0.47	0.62	16	0	20.7	17	3.6	18	23	14	3	0	0	31	9.8	
MILES CITY	2629	921.1	1018.6	23	4	13.5	- 3.0	39	15	-16	8	0	31	9	83	0.96	0.52		12	0	13.4		1.7	32								
MISSOULA	3190	904.2	1019.7	31	19	24.6	5.4	48	30	-10	1	0	31	23	92	1.46	0.54	0.41	18	0	21.5	15	0.7	24	33	W	30	0	1	30	9.6	17
NEBRASKA																																
GRAND ISLAND	1841	950.2	1019.3	36	10	22.8	0.2	57	21	- 7	30	0	31	14	74	0.67	0.04	0.49	8	0	7.9	6	2.1	31	40	34	31	5	8	18	6.9	
LINCOLN U	1150			35	13	24.4	- 0.7	55	21	- 5	30	0	30			0.34	- 0.58	0.17	6	0	3.7	2			34	NW	31	6	9	16	6.6	50
NORFOLK	1544			32	8	20.0	0.6	55	21	-16	30	0	31			0.35	- 0.43	0.24	4		5.9	4						9	6	16	6.3	
NORTH PLATTE	2775	916.0	1017.4	43	10	26.3	2.3	65	7	- 8	27+	0	31	15	70	0.61	0.18	0.55	4	0	9.2	9	2.5	34	45	NW	31	5	9	17	6.9	59
OMAHA	978	983.1	1019.9	34	12	23.0	0.7	56	21	-16	30	0	29	16	76	0.60	- 0.22	0.22	8	0	6.8	4	2.6	34	45	NW	31	10	7	14	6.2	61
SCOTTSBLUFF	3950	877.8	1016.9	46	19	32.2	6.9	62	18	9	26	0	30	20	66	0.46	0.17	0.20	7	0	4.3	2	4.9	31	39	35	31	8	9	14	6.5	
VALENTINE	2587			38	10	24.0	4.0	66	7	- 5	30	0	31			0.23	- 0.17	0.13	6		2.3	1			45	NW	31	5	8	18	6.8	
NEVADA																																
ELKO	5075	846.9	1022.0	40	20	30.3	7.7	55	30	-10	1	0	27	24	79	0.84	- 0.32	0.36	9	0	9.3	3	4.4	22	31	28	7	2	6	23	8.1	
ELY	6253	809.7	1020.9	42	17	29.4	6.6	55	31	-11	8	0	30	20	71	0.46	- 0.32	0.39	5	1	6.6	5	3.5	19	42	NW	6	4	6	21	7.8	62
LAS VEGAS	2162	942.1	1019.9	60	35	47.1	4.0	72	31	23	9	0	14	24	44	0.05	- 0.48	0.05	1	0	T	0	3.8	25	52	S	24	9	8	14	5.7	79
RENO	4404	868.9	1022.3	43	24	33.6	2.2	67	31	- 4	1	0	28	27	81	1.64	0.45	0.52	9	0	5.2	4	2.6	19	56	W	23	1	6	24	8.4	71
WINNEMUCCA	4299	870.3	1021.7	41	25	32.7	5.5	61	30	- 9	1	0	26	26	76	0.98	- 0.07	0.54	9	0	3.2	3	4.1	20	46	N	23	0	4	27	9.0	25
NEW HAMPSHIRE																																
CONCORD	339	1002.7	1015.8	29	9	18.9	- 2.3	49	9	-14	31	0	31	9	66	0.97	- 2.26	0.36	11	0	13.2	7	5.2	31	35	NW	3	8	9	14	6.0	53
MT WASHINGTON OBS	6262			11	- 8	1.3	- 5.0	36	9	-38	14	0	31			4.55	- 0.89	0.79	19	0	31.7	2			125Y	N		5	5	21	7.7	27
NEW JERSEY																																
ATLANTIC CITY	64	1015.9	1018.3	38	17	27.6	- 7.2	65	9	- 8	17	0	29	19	70	3.58	0.02	1.17	12	0	8.2	6	5.2	31	32	32	3	7	10	14	6.5	47
ATLANTIC CITY U	11			39	25	31.8	- 4.2	60	9	9	10+	0	26			3.48	- 0.27		12						52	NW	3					
NEWARK	11	1016.9	1017.9	35	22	28.3	- 5.0	56	9	5	15	0	28	18	68	2.86	- 0.47	0.73	8	0	16.1	8	6.0	31	39	32	3	6	12	13	6.5	
TRENTON U	56			36	22	28.9	- 4.2	58	9	3	15	0	29			2.86	- 0.24	0.88	8		15.0	9			36	NW	3	9	6	16	6.3	55
NEW MEXICO																																
ALBUQUERQUE	5310	839.1	1019.2	50	27	38.8	3.8	68	31	14	26	0	26	22	55	0.47	0.06	0.39	3	1	1.4	1	2.5	36	52	NW	22	14	8	9	4.5	77
CLAYTON	4969			53	24	38.6	5.4	70	24	12	26	0	28			0.10	- 0.25	0.08	2		2.0	2						10	6	15	5.9	
RATON	6379			49	17	32.7	3.7	62	31+	0	27+	0	30			0.21	- 0.15	0.18	3		2.6	2						8	10	13	6.0	
ROSWELL	3617			61	28	44.2	6.3	78	31	16	26	0	23			0.12	- 0.36	0.12	1	0	1.2	T			47	W	22	14	9	8	4.5	83
SILVER CITY	5373			55	29	42.2	2.7	67	30	17	27	0	22			0.85	0.22	0.50	5		0.7	T						13	6	12	5.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW YORK																																
ALBANY	277	1006.8	1017.8	27	9	18.1	-4.6	46	9	-14	31	0	31	9	68	1.95	-0.52	0.87	12	0	20.5	10	3.9	27	36	W	9	6	10	15	6.8	48
BINGHAMTON	1590	955.6	1016.8	27	13	19.8	-4.0	51	9	-12	17	0	30	14	77	4.15	1.65	1.50	17	0	24.9	11	4.6	27	35	NW	26	4	7	20	7.9	33
BUFFALO	705	989.8	1016.5	30	17	23.6	-0.9	59	9+	-4	15+	0	30	16	74	3.27	0.43	0.70	20	0	19.2	7	6.6	25	51	SW	26	1	7	23	8.4	29
NEW YORK U	132	1014.6	1017.9	36	24	29.7	-3.5	55	9	9	17	0	28	16	59	3.09	-0.22	0.94	9	0	14.8	6	5.0	29	37	NW	3	9	11	11	5.6	46
J.F. KENNEDY	15	1016.6	1017.2	35	22	28.5	-3.3	59	9	5	15	0	28	18	66	2.99	-0.24	0.66	8	0	17.4	7	6.2	31	36	33	3	5	15	11	6.4	
NEW YORK LA GUARDIA	11	1015.6	1017.5	35	25	30.2	-3.4	56	9	9	15	0	26	17	60	2.93	-0.38	1.09	9	1	11.9	5	6.2	32	32	NW	23	4	12	15	6.8	
ROCHESTER	547	996.3	1017.5	30	13	21.6	-3.6	57	9	-6	15+	0	30	15	74	3.05	0.65	0.76	14	0	26.6	12	6.6	24	47	W	26	3	5	23	8.1	31
SYRACUSE	410	1001.4	1017.0	29	12	20.5	-3.5	58	9	-16	17	0	30	14	74	2.28	-0.87	0.45	18	0	31.8	13	4.8	26	42	W	26	2	10	19	7.6	36
NORTH CAROLINA																																
ASHEVILLE	2140	941.1	1018.8	49	25	37.0		69	26	7	31	0	23	27	72	2.16		1.06	8	0	5.5	6	3.1	34	32	34	3	14	5	12	4.8	
CAPE HATTERAS R	7	1017.6	1018.0	54	38	45.8	-0.8	70	23	19	20+	0	8	37	73	1.95	-1.95	0.63	11	1	0.3	T	4.4	33	38	N	25	10	8	13	5.6	59
CHARLOTTE	735	990.9	1019.0	53	30	41.5	-1.2	69	23	13	19	0	19	31	68	2.17	-1.36	0.64	8	1	11.2	10	2.3	26	31	N	2	16	2	13	4.7	64
GREENSBORO	897	986.5	1019.1	50	28	38.9	-0.8	69	9	8	31	0	22	27	67	2.27	-1.13	0.89	6	1	9.1	6	2.5	26	29	NW	27	13	5	13	5.3	65
RALEIGH	433	1002.4	1018.6	53	28	40.5	-1.1	73	23	8	19	0	23	27	63	1.47	-1.75	0.41	8	2	9.7	6	3.3	27	29	25	24+	11	8	12	5.2	60
WILMINGTON	28	1018.3	1019.8	58	34	46.2	-1.7	74	23+	22	31	0	14	35	69	1.29	-1.56	0.49	6	0	2.9	3	3.0	28	33	NW	24	12	8	11	5.3	72
WINSTON SALEM	963	982.7	1018.6	50	31	40.5	-0.2	69	9	14	31	0	19	24	54	2.22	-1.46	0.67	6	1	13.2	9	2.6	28	20	27	29+	13	6	12	5.1	
NORTH DAKOTA																																
BISMARCK	1647	957.0	1020.9	14	-9	2.5	-7.4	35	21	-35	13	0	31	-5	66	0.54	0.10	0.24	7	0	10.2	12	2.4	36	31	NW	31	5	13	13	6.6	64
FARGO	896	986.1	1021.6	10	-12	-1.2	-8.5	30	21	-35	29	0	31	-7	73	0.10	-0.43	0.07	3	0	1.2	9	1.6	31	34	N	19	10	6	15	5.9	79
WILLISTON	1899			14	-8	3.0	-5.3	36	16	-38	13	0	31			0.71	0.16	0.42	11		7.1	12			32	N	31	3	11	17	7.3	46
OHIO																																
AKRON	1208	971.9	1018.0	34	17	25.2	-3.1	60	8	-9	17	0	29	19	79	5.25	2.39	1.19	17	1	15.9	9	4.7	25	30	27	26	3	4	24	8.1	
CINCINNATI OBS	761			40	23	31.8	-1.9	64	8	-3	31	0	23			4.19	0.52	2.48	13		8.1	5			28	S	16					51
CLEVELAND	777	987.1	1017.2	34	20	27.2	-0.4	62	8	-2	30	0	28	20	75	4.45	1.78	1.04	22	1	13.6	10	5.9	23	40	W	26	2	4	25	8.6	36
COLUMBUS	812	987.8	1018.9	37	20	28.3	-1.6	61	9+	-11	17	0	27			2.70	-0.46	0.59	17	0	10.2	7	3.1	25	43	SW	26	5	7	19	7.3	39
DAYTON	1002	981.0	1018.3	38	20	29.2	-0.4	62	8	-7	17	0	25	19	65	2.32	-0.86	0.85	14	0	8.7	8	4.5	22	40	S	26	4	11	16	7.1	57
MANSFIELD	1297			34	18	25.8	-1.5	60	8	-9	17	0	27			3.01	-0.21	0.95	16		11.3	6						2	9	20	7.9	
TOLEDO	676	991.5	1017.9	32	17	24.7	-1.6	62	8	-9	17	0	29	18	75	4.61	2.28	1.29	16	0	9.0	4	4.7	26	40	SW	26	4	8	19	7.4	50
YOUNGSTOWN	1178	973.2	1017.7	31	17	23.9	-3.4	58	9+	-9	17	0	29	18	77	4.80	1.64	1.06	21	2	16.7	6	4.7	25	29	27	26	3	3	25	8.4	
OKLAHOMA																																
OKLAHOMA CITY	1280	971.2	1018.8	50	28	38.8	1.8	73	7	13	10	0	25	30	75	0.98	-0.33	0.73	4	0	2.0	2	2.0	21	42	SW	25	9	8	14	5.9	66
TULSA	650	994.2	1019.1	52	28	39.8	3.6	77	7	12	16	0	24	28	67	1.56	-0.15	0.67	8	2	0.3	T	1.6	22	34	SW	25	8	10	13	5.9	64
OREGON																																
ASTORIA	8	1015.2	1016.0	48	37	42.3	1.6	61	15	30	3	0	7	37	82	16.59	4.88	2.83	23	0	10.7	4	3.8	15	44	18	1	1	4	26	9.0	
BURNS U	4151	873.7	1020.3	37	20	28.6	3.8	54	30	0	1	0	28	24	82	2.40	0.78	0.67	17		24.9	14	3.2	26				3	4	24	8.4	
EUGENE	359	1004.7	1018.4	44	37	40.8	1.7	56	30+	32	17+	0	2	38	91	9.92	3.59	2.26	21	0	4.9	6	3.7	19	26	18	23	0	2	29	9.4	
MEACHAM	4050			35	25	29.9	3.9	50	30	13	1	0	29			8.71	4.51	1.94	20		41.5	26						1	7	23	8.5	
MEDFORD	1298	971.9	1020.5	43	35	39.0	3.6	56	30	22	1	0	11	35	89	4.30	1.16	0.83	18	0	13.2	5	0.5	27	23	14	2	0	2	29	9.6	
PENDLETON	1482	963.8	1018.9	40	31	35.4	3.2	63	30	18	12	0	23	31	85	3.08	1.66	0.72	17	0	7.0	3	5.1	23	40	26	24	1	4	26	8.8	
PORTLAND	21	1016.3	1017.6	45	35	40.2	1.8	55	30+	29	17	0	11	38	88	7.44	2.07	1.52	21	0	T	0	5.8	17	37	NW	27	3	1	27	8.9	28
SALEM	196	1010.8	1018.1	46	35	40.5	2.0	54	30+	25	17	0	8	38	92	8.15	1.45	1.93	22	0	T	T	6.3	19	28	18	26+	4	1	26	8.6	
SEXTON SUMMIT R	3836			41	32	36.8	2.7	57	15	19	3+	0	16			6.41	0.82	1.49	18		38.5	53			44	17	23	6	2	23	7.9	
PACIFIC AREA																																
CANTON ISLAND	8			87	77	82.1	-1.0	90	20	75	24	1	0			0.94	-1.67	0.94	2		0.0	0						3	20	8	6.3	
ENIWETOK	13	1009.1	1010.0	85	76	80.7	-0.5	87	3	73	13	0	0	70	71	0.70	-0.32	0.25	13		0.0	0	16.0	7								
TAGUAC GUAM R	361			83	71	76.9	-1.3	86	13	65	8+	0	0			10.29	5.66	3.82	20		0.0	0			29	NE	21					50
JOHNSTON	7	1011.5	1012.1	80	72	75.7	-1.4	82	23+	68	31	0	0	65	70	1.56	-2.33	0.76	11	0	0.0	0	8.3	5	32	NE	30	13	10	8	4.7	59
KOROR	94	1005.4	1009.0	87	75	80.9	0.6	89	4+	72	19+	0	0	74	83	6.40	-5.33	3.00	14	1	0.0	0	4.4	8	21	E	9	0	0	31	10.0	67
KWAJALEIN	8	1008.1	1009.1	85	76	80.5	0.4	86	13+	71	19	0	0	72	77	3.85	0.24	1.86	12	1	0.0	0	18.4	6	31	8	19	1	11	19	7.9	
MAJURO	10	1008.1	1008.4	84	77	80.2	0.0	85	31+	72	3+	0	0	72	77	9.85	2.87	2.92	14	0	0.0	0	13.0	6	30	NE	21	2	4	25	8.7	62
MARCUS ISLAND	20			75	67	71.1		80	9+	61	17	0	0			7.78	1.89	3.36	13		0.0	0			40	NW	25	2	11	18	7.3	39
PONAPE R	123	1002.7	1008.2	85	75	80.4	-0.1	88	25	71	21	0	0	73	81	11.74	0.67	4.55	24	0	0.0	0	7.6	5	28	NE	21	0	4	27	9.2	42
TRUK MOEN ISLAND	5	1007.5	1007.8	85	75	80.2	-0.5	88	26	73	23+	0	0	73	78	13.86	5.46	6.22	15	2	0.0	0	10.4	5	25	NE	20	0	8	23	8.4	54
WAKE	11	1013.9	1014.2	80	71	75.6	-1.8	83	31+	68	8+	0	0	63	67	0.06	-1.08	0.04	3	0	0.0	0	8.4	6	26	2	1	9	15	7	5.3	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32° F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	F.	F.	F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PACIFIC AREA																																
YAP R	55	1006.4	1008.3	86	76	81.1	0.6	89	24+	74	16+	0	0	75	82	3.32	-4.55	0.77	22	0	0.0	0	6.4	6	27	NE	10	0	2	29	9.8	31
PENNSYLVANIA																																
ALLENTOWN	376	1003.7	1018.2	33	16	24.3	-4.7	46	9	-3	15	0	29	15	68	2.70	-0.47	0.76	10	0	11.7	6	5.6	30	43	28	27	9	7	15	6.1	
ERIE	732	989.5	1017.3	32	19	25.8	-1.5	60	8	-2	17	0	29	20	79	3.86	1.19	0.70	22	1	16.8	8	6.7	22	39	25	26	3	4	24	8.5	
HARRISBURG	335	1005.4	1018.8	34	19	26.4	-4.9	50	9	0	15	0	29	16	65	2.70	-0.06	0.66	10	0	13.4	7	4.6	27	32	NW	2	8	6	17	6.5	49
PHILADELPHIA	5	1016.9	1018.1	36	22	29.2	-2.7	56	9	5	17	0	29	18	65	2.35	-0.97	0.62	8	0	11.9	6	4.6	32	29	NW	16+	8	7	16	6.4	49
PITTSBURGH	1137	972.2	1017.7	36	20	28.2	-0.7	63	8	-8	17	0	26	19	69	3.84	0.87	0.94	19	0	10.6	5	5.1	26	37	28	26	5	5	21	7.9	31
PITTSBURGH U	749			37	23	30.3	-3.0	63	9+	-1	17	0	24			3.67	0.85	1.05	17		7.5											23
READING U	266			36	21	28.5	-4.2	51	9	4	15	0	29			2.38	-0.69	0.59	10		10.8	7			40	NW	3	10	6	15	6.2	46
SCRANTON	930	982.4	1017.9	30	16	23.0	-4.7	45	9	-5	17	0	30	15	71	2.07	-0.22	0.63	16	0	11.5	4	3.0	28	23	NW	25+	4	5	22	7.5	39
WILLIAMSPORT	527	999.0	1018.8	31	14	22.3	-6.5	42	9	-7	17	0	30	17	78	2.88	0.21	0.93	14	0	9.4	3	2.5	28	28	27	20	7	4	20	7.1	
RHODE ISLAND																																
BLOCK ISLAND	110			34	22	28.1	-4.0	49	9	4	15	0	28			2.92	-0.92	1.27	9		21.5	11										
PROVIDENCE	51	1013.5	1016.0	34	16	25.0	-4.2	58	9	-3	18	0	30	14	63	3.46	-0.35	1.07	11	0	28.7	11	6.6	31	31	22	28+	8	10	13	6.4	53
SOUTH CAROLINA																																
CHARLESTON	41	1018.3	1019.8	61	36	48.4	-1.4	78	23	21	19	0	12	36	67	1.69	-0.85	0.77	6	2	T	T	3.2	27	40	NW	30	10	10	11	5.5	56
CHARLESTON U	9			59	42	50.5	-1.0	73	9+	28	18+	0	5			1.42	-0.98	0.56	7		T	T			31	NW	30					
COLUMBIA	217	1011.5	1019.6	59	32	45.7	-1.2	75	23	19	19	0	19	33	67	1.43	-1.59	0.57	9	0	1.1	1	3.1	26	24	25	29+	10	13	8	5.0	63
FLORENCE	146	1013.9	1019.4	58	33	45.5	-2.0	76	9	21	19	0	14	32	64	0.80	-1.84	0.45	6	1	1.1	1	2.5	28	26	33	30	15	5	11	4.9	
GNVLE SPARTANBURG	957	984.1	1019.3	54	32	42.8	-1.2	68	26+	15	19	0	18	30	64	2.39	-1.89	0.65	10	1	7.7	6	2.8	25	31	NW	24	15	4	12	4.9	59
SOUTH DAKOTA																																
ABERDEEN	1296	970.9	1021.1	14	-10	2.1	-8.7	35	21	-32	13	0	31	-4	72	0.15	-0.51	0.10	3	0	4.1	5	2.0	35	30	36	27	9	8	14	6.2	
HURON	1282	971.2	1020.8	18	-7	5.4	-7.1	34	4	-29	28	0	31	0	74	0.22	-0.26	0.10	4	0	3.6	7	1.4	32	36	SE	31	7	9	15	6.4	51
RAPID CITY	3165	902.1	1016.9	38	13	25.4	3.4	57	7	-4	9	0	31	18	75	0.61	0.25	0.19	7	0	4.3	2	3.0	1	57	NW	31	5	14	12	6.0	57
SIOUX FALLS	1418	965.8	1020.1	23	1	12.0	-3.2	43	21	-25	16	0	31	5	71	0.24	-0.38	0.13	4	0	3.3	3	2.0	32	30	32	8	9	8	14	5.9	
TENNESSEE																																
BRISTOL	1507	963.4	1018.9	46	27	36.5	-1.8	67	26	8	31+	0	22	27	71	3.23	-0.46	1.67	11	1	7.5	4	2.5	28	40	25	26	9	8	14	6.1	
CHATTANOOGA	670	994.9	1020.4	52	30	40.9	-0.8	68	22+	8	31	0	19	32	74	3.51	-2.10	2.03	8	1	1.8	1	1.5	27	27	N	24	9	5	17	6.2	63
KNOXVILLE	980	984.1	1020.1	49	31	40.1	-1.3	68	8	8	17	0	19	30	70	3.94	-0.94	2.32	9	0	6.3	4	2.9	28	39	N	26	8	8	15	6.4	46
MEMPHIS	263	1009.8	1020.2	54	33	43.4	1.9	73	8	10	31	0	17	31	66	4.79	-1.28	3.51	6	3	T	T	2.3	23	34	SE	15	10	8	13	5.7	61
NASHVILLE	577	997.3	1019.5	51	29	40.0	0.1	70	22	2	31	0	20	30	69	2.98	-2.51	1.81	9	0	1.2	1	2.4	25	40	SE	26	5	7	19	6.8	53
OAK RIDGE	905			48	29	38.5	-1.4	65	8	9	31	0	20			4.17	-1.77	2.22	10		4.3	3			41Y		26	8	10	13	6.2	
TEXAS																																
ABILENE	1762	956.0	1018.4	61	36	48.3	3.7	78	1	23	29+	0	14	32	60	1.13	0.25	0.59	3	1	0.0	0	3.1	24	47	S	25	11	9	11	5.2	69
AMARILLO	3604	891.0	1016.5	55	27	41.0	4.3	74	6	16	10	0	27	25	61	0.55	-0.10	0.33	5	0	5.6	2	5.5	28	45	N	31	8	14	9	5.4	83
AUSTIN	597	997.3	1019.8	64	43	53.4	3.0	78	8	26	17	0	5	41	68	4.09	1.74	3.44	5	2	0.0	0	0.8	25	31	SW	23	10	10	11	5.1	65
BROWNSVILLE	16	1018.3	1018.8	73	53	63.0	1.6	89	30	36	17	0	0	54	77	0.51	-0.84	0.33	4	1	0.0	0	2.9	11	36	SE	25	10	9	12	5.1	61
CORPUS CHRISTI	41	1018.3	1019.7	70	48	59.1	1.7	87	25	30	17	0	2	50	76	0.86	-0.77	0.45	6	2	0.0	0	3.3	11	36	S	25+	13	5	13	5.1	64
DALLAS	481	1001.7	1019.2	59	38	48.2	2.3	75	6	21	17	0	12	37	69	1.87	-0.45	1.21	7	1	0.0	0	1.5	22	33	S	15	11	9	11	5.6	64
DEL RIO	1026	982.4	1019.1	67	42	54.5		81	29+	31	11	0	3	35	55	0.16	-2.33	0.11	2	0	0.0	0	1.6	8	28	31	25					
EL PASO	3918	883.8	1017.8	59	37	48.0	5.1	72	31	21	28	0	8	29	51	0.19	-0.27	0.14	4	1	0.0	0	2.9	29	54	W	25	9	10	12	5.4	79
FORT WORTH	537	998.6	1019.6	58	36	47.1		69	7	7	30	0	26	37	72	2.77		1.90	6	1	0.0	0	1.6	24	29	19	31+	11	9	11	5.4	
GALVESTON U	7			63	51	56.9	2.0	73	2	31	17	0	1			1.65	-1.81	0.84	4		0.0	0			29	NE	9					58
HOUSTON U	41			68	49	58.4	3.8	81	2	28	17	0	1			2.62	-1.10	1.55	5		0.0	0										
HOUSTON	50	1017.6	1019.8	68	45	56.0	2.4	82	2	23	17	0	4	46	74	1.87	-1.91		5	1	0.0		0.8	24	31	20	25	13	6	12	4.8	74
LAREDO	500	1001.0	1019.1	74	50	61.6	3.9	93	25	34	17	1	0	42	56	0.04	-1.09		1	1	0.0		2.5	13	30	35	9					
LUBBOCK	3243	904.8	1017.8	59	29	44.3	5.1	75	31+	17	27	0	21	28	59	0.08	-0.60	0.08	2	0	0.2	T	4.9	28	59	28	25	11	8	12	5.0	
MIDLAND	2851	917.7	1017.0	62	33	47.6	3.6	77	31	24	11+	0	20	29	57	0.06	-0.74	0.04	3	0	0.0	0	2.9	26	41	27	25	13	7	11	4.5	
PORT ARTHUR	16	1019.3	1019.8	67	43	55.0	1.4	80	2	20	17	0	5	47	78	1.59	-2.64	1.24	3	1	0.0	0	0.8	19	34	S	30	15	4	12	4.9	63
SAN ANGELO	1903	950.9	1018.3	63	37	49.7	2.8	78	29	24	11	0	14	33	58	0.53	-0.44	0.29	3	0	0.0	0	3.9	25	36	29	25	12	9	10	4.7	
SAN ANTONIO	788	991.2	1019.5	67	42	54.4	2.4	81	8	25	17	0	9	40	64	2.40	0.66	1.65	6	1	0.0	0	0.6	36	34	SW	23	15	6	10	4.4	70
VICTORIA	104	1015.9	1020.0	68	46	56.9	1.5	80	7+	25	17	0	2	47	73	2.07	-0.27	1.42	6	2	0.0	0	0.5	16	49		25	11	6	14	5.5	
WACO	500	1001.4	1019.6	63	40	51.4	3.4	78	8	21	17	0	12	39	68	2.97	0.70	2.22	5	2	0.0	0	2.4	23	35	18	31	12	8	11	4.8	
WICHITA FALLS	994	981.4	1018.7	55	31	42.8	0.0	79	7	19	17+	0	22	33	73	1.73	0.61	0.92	4	1	T	T	1.7	25	39	30	25	11	10	10	5.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days		Average dew point		Total	Departure from normal	Greatest in 24 hours	No. of days		Snow, Sleet		Resultant speed	Resultant direction	Fastest mile			Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
												Max. 90°F. or above	Min. 32°F. or below						.01 inch or more	With thunderstorms	Total	Maximum depth on ground			Speed	Direction	Date					
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
UTAH																																
MILFORD	5028			44	19	31.6	7.0	63	31	1	9+	0	30			0.59	0.02	0.42	4		6.1	4						7	7	17	6.9	
SALT LAKE CITY	4220	874.4	1022.2	39	24	31.0	3.8	52	31+	3	22	0	26	22	71	2.13	0.78	0.53	11	1	15.7	4	4.0	17	36	N	7	1	5	25	8.7	24
WENDOVER	4237			41	26	33.5	6.5	58	31+	14	2	0	25			0.11	- 0.21	0.05	3		0.3	T						4	7	20	7.6	
VERMONT																																
BURLINGTON	327	1003.4	1016.6	23	4	13.7	- 2.5	48	9	-19	15	0	31	5	64	0.60	- 1.35	0.35	10	0	11.8	5	1.4	27	32	S	9+	6	6	19	7.0	52
VIRGINIA																																
LYNCHBURG	916			45	25	34.9	- 2.7	66	8	9	31	0	24			2.18	- 1.11	0.88	10		8.3	4			27	W	16	13	5	13	5.3	58
NORFOLK	26	1018.0	1018.8	49	30	39.7	- 1.5	73	9	12	17	0	19	28	66	2.73	- 0.60	0.84	8	0	10.6	5	3.1	31	34	N	3+	10	6	15	5.8	55
RICHMOND	162	1012.5	1018.7	47	25	35.6	- 3.1	68	9	2	19	0	24	23	64	2.51	- 0.95	0.74	12	0	12.4	8	1.7	30	30	N	3	11	5	15	5.5	60
ROANOKE	1174	975.3	1018.0	46	26	36.0	- 2.1	70	8	9	31	0	25	23	62	2.73	- 0.30	0.89	10	0	9.1	4	3.3	32	37	NNW	2	12	4	15	5.7	55
WASHINGTON																																
OLYMPIA	195	1008.8	1016.3	43	34	38.9	0.8	53	14	23	3	0	13	37	92	9.37	1.52	1.84	22	0	14.8	4	4.8	20	36	8	18	0	2	29	9.4	
SEATTLE TACOMA	400	999.3	1016.0	45	36	40.2	1.9	55	14	29	9	0	7	37	88	5.27	- 0.46	1.01	19	1	7.3	2	5.1	21	33	22	24	0	2	29	9.4	
SPOKANE	2356	931.6	1017.6	33	24	28.6	3.3	44	30	15	22	0	30	26	88	2.82	0.38	0.99	15	0	20.1	19	4.7	19	37	S	27	0	3	28	9.5	8
STAMPEDE PASS R	3958			30	24	26.8	3.3	53	14	14	9+	0	29			18.64	6.61	3.00	25		99.6	121										
TATOOSH ISLAND R	101	1010.8	1014.1	45	38	41.2	- 0.8	51	15	30	23	0	3	38	89	12.77	1.95	2.04	22	0	6.5	4	6.4	11	72	W	1	1	2	28	9.0	18
WALLA WALLA U	949			42	32	36.6	3.4	62	30	23	12	0	23			3.29	1.40	0.65	16		7.3	3			34	W	3	0	3	28	9.5	
YAKIMA	1052	979.3	1018.9	37	21	28.9	1.4	54	30	5	9	0	28	25	85	1.33	0.14	0.54	9	0	12.1	16	1.8	25	35	26	26	2	5	24	8.5	
WEST INDIES																																
SAN JUAN P.R.	15	1014.9	1017.3	81	69	74.7	0.3	84	31	62	28+	0	0	65	72	2.62	- 2.08	1.12	16	0	0.0	0	8.1	7	30	E	21	5	19	7	5.3	61
SWAN ISLAND	28			81	73	77.0		83	15+	70	28+	0	0			3.51	1.65	2.67	10	1	0.0	0			.			5	19	7	5.5	
WEST VIRGINIA																																
BECKLEY	2504	927.2	1018.9	40	23	31.2		64	26+	- 5	31	0	26	24	75	5.31		1.79	17	0	21.3	9	5.3	25	46	24	26	6	9	16	7.0	
CHARLESTON	939	982.7	1018.7	43	24	33.3	- 3.3	68	8	2	31	0	24	23	68	4.65	0.33	1.38	14	0	13.7	5	3.8	24	29	24	26	5	11	15	7.2	
ELKINS	1970	944.8	1018.4	40	16	28.1	- 4.4	64	26	-10	31	0	29	22	78	5.31	1.69	1.49	20	1	21.6	7	4.6	27	46	27	26	5	8	18	7.4	
HUNTINGTON	827	987.8	1018.9	43	25	33.9	- 2.7	69	8	- 1	31	0	22	25	72	3.36	- 0.29	1.06	12	0	10.0	6	3.0	24	32	24	26	6	10	15	7.0	
PARKERSBURG U	615			41	23	31.8	- 2.8	66	8	2	31+	0	24			2.31	- 1.03	0.82	13		6.7	4			40	W	26					37
WISCONSIN																																
GREEN BAY	682	990.9	1017.9	22	7	14.4	- 2.4	44	7	-21	29	0	30	8	72	0.93	- 0.22	0.28	12	0	12.5	7	5.3	30	38	SW	8	10	8	13	6.0	47
LA CROSSE	652	994.2	1020.3	21	1	11.0	- 5.5	42	7	-30	29	0	30	5	76	0.81	- 0.38	0.39	8	0	12.7	7	2.2	30	29	30	8	10	6	15	6.0	
MADISON	858	985.1	1018.2	25	7	15.9	- 1.6	45	7	-25	29	0	30	11	78	1.80	0.40	0.65	14	0	18.3	14	3.5	30	34	S	17	9	5	17	6.3	52
MILWAUKEE	672	991.9	1018.2	27	12	19.5	- 1.1	57	8	-16	29	0	29	14	79	3.33	1.50	1.00	15	0	23.6	12	4.5	28	32	S	16+	8	4	19	6.7	49
WYOMING																																
CASPER	5319	834.7	1016.1	40	20	29.7	6.3	50	16	-10	31	0	29	16	58	0.78	0.22	0.25	8	0	16.5	5	14.5	24	41	26	31	10	4	17	6.1	
CHEYENNE	6126	808.7	1016.0	43	21	32.1	6.7	59	18	7	31	0	30	14	51	0.57	0.05	0.22	7	0	8.5	4	12.4	30	60	NW	27	9	6	16	6.3	50
LANDER	5563	826.3	1016.5	42	18	29.7	10.4	59	14	0	2	0	30	14	54	0.19	- 0.27	0.10	2	0	3.7	2	2.5	24	59	W	27	8	10	13	6.1	70
SHERIDAN	3942	875.7	1016.2	43	16	29.9	8.6	61	6	2	2	0	30	19	67	1.18	0.54	0.29	12	0	11.8	4	5.4	27	61	NW	4	8	11	12	6.0	61

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

A Maximum hourly average.
B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

V Sun below horizon January 1-23, inclusive.
X Sun below horizon January 1-17, inclusive.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days		Average dew point		Total	Departure from normal	Greatest in 24 hours	No. of days		Snow, Sleet		Resultant speed	Resultant direction	Fastest mile (1.6 kilometers)			Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
												Max 32.2 °C or above	Min. 0 °C or lower						.25 mm or more	With thunderstorms	Total	Maximum depth on ground			Speed	Direction	Date					
	M.	Mb.	Mb.	C.	C.	C.	C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
ALABAMA																																
BIRMINGHAM	189	997.6	1020.7	13.9	1.7	7.7	-0.4	22.8	9	-13.3	31	0	16	2.2	72	82	- 46	45	8	1	T	T	0.9	26	17.0	N	10	13	3	15	5.6	55
HUNTSVILLE	183	997.0	1020.4	11.7	- 0.6	5.4	-0.6	21.1	22	-15.0	17	0	19	- 0.6	66	92	- 41	34	9	1	41	T	0.3	24	13.0	30	16	9	7	15	6.0	
MOBILE	64	1012.2	1020.3	17.8	5.0	11.4	-0.3	23.9	9	- 7.8	17	0	7	6.7	76	237	120	212	11	3	0	0	0.3	8	12.1	36	30+	14	7	10	4.8	
MONTGOMERY	59	1013.5	1020.9	15.6	2.2	9.1	0.1	23.9	22	- 8.3	31+	0	10	2.8	68	155	52	120	9	1	T	0	0.4	28	14.3	N	10	13	5	13	5.2	59
ALASKA												B																				
ANCHORAGE PRK STRIP	26			- 8.3	-16.1	-12.2	-1.3	6.7	18	-29.4	1	0	31			20		16	4		231	432										
ANCHORAGE	44	1001.0	1006.1	- 8.3	-16.1	-12.2		6.7	18	-28.3	5	0	31	-16.1	72	14	- 21	9	5	0	216	406	1.4	2	13.4	15	18	12	4	15	5.8	48
ANNETTE	34	1004.7	1008.9	2.2	- 2.2	0.1	-1.3	11.1	18	-16.1	4	0	17	- 2.8	82	393	104	62	23	0	564	1092	3.1	12	13.9	14	12	1	7	23	8.7	
BARROW	7	1024.4	1025.2	-26.7	-32.8	-29.4	-2.7	-17.2	19	-42.8	2	0	31	-34.4	62	1	- 4	1	3	0	13	305	4.6	9	16.5	8	19	V	V	V		
BARTER ISLAND	12	1022.4	1024.5	-27.8	-33.3	-30.3	-3.2	-15.0	20	-45.0	7	0	31	-34.4	70	3	- 7	1	6	0	33	381	2.5	9	16.1	9	18	X	X	X		
BETHEL	38	1000.3	1006.3	-13.9	-22.8	-18.1	-2.3	1.1	18	-36.1	1	0	31			15	- 13	4	12	0	163	457	4.4	3	15.6	2	16	9	4	18	6.4	
COLD BAY	29	995.9	999.5	0.6	- 5.6	- 2.6	-0.3	5.6	17	-14.4	8	0	30	- 5.0	84	31	- 28	10	16	0	417	127	0.3	18	20.6	14	17+	5	3	23	8.0	
FAIRBANKS	133	996.3	1014.8	-22.2	-33.3	-27.8	-3.8	3.3	18	-48.9	5	0	31			2	- 21	1	2	0	76	584	0.8	2	5.8	2	18	13	5	13	5.1	
JUNEAU	4	1008.8	1009.4	- 2.2	- 7.8	- 4.9	-1.1	10.0	16	-26.1	6	0	23	- 7.8	81	197	95	55	19	0	1148	762	4.2	11	15.6	12	16	6	5	20	7.5	34
KING SALMON	13	1001.0	1002.8	- 6.1	-15.6	-10.9	-0.6	5.6	17	-31.7	1	0	30	-14.4	75	20	- 7	7	12	0	152	229	2.1	4	19.2	9	17	7	2	22	7.5	
KOTZEBUE	3	1014.6	1014.9	-17.2	-26.1	-21.7	-0.7	0.0	19	-40.6	17	0	31	-25.0	72	9	- 1	3	10	0	170	508	3.6	9	20.6	11	2	14	4	13	5.0	
MC GRATH	102	997.3	1011.0	-18.3	-30.0	-24.1	-1.3	- 0.6	18	-43.9	1	0	31	-28.9	64	10	- 22	7	8	0	307	584	0.4	31	8.9	18	14	10	4	17	6.3	
NOME	4	1010.2	1010.8	-12.2	-22.8	-17.3	-2.0	0.0	19+	-35.6	16+	0	31	-21.1	71	14	- 12	7	10	0	157	432	4.1	5	20.6	31	5	13	2	16	5.5	46
ST. PAUL ISLAND	7	1000.3	1001.3	- 2.8	- 7.8	- 5.2	-1.6	3.3	5+	-15.0	17+	0	31	- 6.7	89	93	47	22	23	0	719	508	5.4	3	28.2	35	17	1	4	26	9.0	
SHEMYA	37	997.0	1000.6	1.1	- 2.2	- 0.7	-0.3	3.9	6+	- 6.7	17	0	26	- 3.9	81	67	3	15	25	0	274	127	2.1	4	23.7	9	31+	0	8	23	8.4	
YAKUTAT	9	1004.7	1005.7	- 1.7	- 9.4	- 5.5	-2.9	7.2	18	-29.4	6	0	25	- 8.3	83	434	158	96	22	0	965	1168	1.8	10				6	1	24	7.8	
ARIZONA																																
FLAGSTAFF	2131	787.7	1020.7	7.2	- 7.8	- 0.3	2.3	15.6	30	-17.2	27	0	31	- 6.1	71	77	31	33	7	1	384	178	0.4	30	9.4	18	24	11	5	15	5.9	
PHOENIX	340	978.7	1018.2	17.8	5.0	11.5	1.7	25.0	17	0.0	27+	0	2	3.9	64	31	12	20	5	1	0	0	0.7	13	21.9Y	ESE	7	15	5	11	4.8	82
TUCSON	788	927.9	1016.9	18.9	5.0	12.0	2.1	25.0	18+	- 1.1	26+	0	4	0.0	51	11	- 9	10	4	1	0	0	1.2	15	13.0	W	25+	17	5	9	4.5	82
WINSLOW	1492	854.0	1022.3	9.4	- 3.3	2.9	3.5	19.4	31	-11.7	2	0	27	- 1.7	79	36	25	14	7	0	89	T	0.8	22	17.0	22	7	10	9	12	5.6	
YUMA	59	1011.2	1018.4	20.6	7.2	13.7	0.7	26.7	17	1.1	9	0	0	0.6	46	14	4	14	2	0	0	0	1.7	36	17.9	S	24	13	7	11	5.3	80
ARKANSAS																																
FORT SMITH	137	1002.7	1019.6	12.8	- 1.7	5.6	1.2	23.9	7	-12.2	17	0	20	- 0.6	68	43	- 25	23	6	1	T	T	0.9	36	16.1	SE	25	10	7	14	5.8	62
LITTLE ROCK	78	1010.2	1019.8	13.3	0.6	6.8	2.0	22.8	7	- 9.4	31	0	19	0.6	69	113	- 20	73	6	1	T	T	0.4	27	15.2	SE	15	11	7	13	5.5	55
TEXARKANA	113	1006.4	1019.9	15.0	2.8	8.8	1.6	24.4	7	- 8.9	17	0	11	2.8	68	115	- 8	57	5	3	0	0	1.0	18				11	6	14	5.4	
CALIFORNIA																																
BAKERSFIELD	151	1004.1	1021.9	13.3	3.9	8.4	-0.1	21.7	6	- 1.7	1	0	4	4.4	79	19	- 11	11	5	0	0	0	0.4	1	14.3	33	24	7	7	17	7.0	
BISHOP	1252			13.3	- 3.3	5.0	2.3	22.2	31	-13.3	1	0	26			12	- 13	6	7		5	T						10	12	9	5.4	
BLUE CANYON	1609			7.8	0.0	3.8	0.7	16.7	17	-11.7	1	0	15			338	4	98	13		1341	1829			24.1	19	6	5	5	21	7.6	
BURBANK	221	992.6	1018.5	19.4	5.6	12.5	0.5	27.8	17	0.6	8	0	0	2.2	54	25	- 54	17	3		0	0	0.2	30	10.3	35	24+	12	7	12	5.3	
EUREKA U	13			11.7	5.6	8.5	-0.1	16.7	18	0.0	8	0	1			148	- 22	34	16		0	0			18.8	N	23	5	2	24	8.2	35
FRESNO	100	1010.2	1022.0	11.7	3.9	7.9	0.1	20.0	23	- 1.7	1	0	5	5.6	87	27	- 25	9	8	0	0	0	0.5	14	13.4	NW	7	2	8	21	8.1	37
LONG BEACH	10	1017.6	1019.1	17.8	6.1	11.9	0.2	27.2	17	0.0	2	0	1	4.4	64	14	- 36	8	3	0	0	0	0.9	30	14.3	32	7	10	10	11	5.7	
LOS ANGELES	30	1015.2	1018.8	18.3	7.8	13.2	0.7	28.3	17	2.8	2	0	0	5.6	65	11	- 57	8	3	0	0	0	0.6	32	17.0Y	W	24	8	13	10	5.5	
LOS ANGELES U	82			20.6	8.9	14.6	1.4	29.4	17	2.8	1	0	0			21	- 57	12	3		0	0			13.0	SW	24+	14	12	5	4.0	65
MT SHASTA R	1080			6.7	- 2.2	2.3	1.6	16.7	29	-12.8	1	0	24			178	17	64	13		676	610										
OAKLAND	2	1020.3	1020.8	12.2	6.7	9.6	0.7	17.8	29	1.7	1	0	0	6.1	80	75	- 22	27	11	0	0	0	0.9	21	15.6	17	2	7	4	20	7.2	
RED BLUFF	104	1007.5	1020.4	12.2	3.9	8.0	0.5	22.2	14	- 1.7	8+	0	3	3.9	79	104		46	11	1	102	102	0.8	19	19.2	SE	5+	6	5	20	7.5	45
SACRAMENTO	5	1020.7	1021.4	10.6	4.4	7.4	0.1	14.4	22	- 1.7	1	0	2	5.0	86	76	- 4	27	11	0	0	0	0.9	17	14.3	N	23+	4	5	22	8.0	32
SANDBERG R	1377			9.4	2.2	5.8	1.4	17.8	30	- 8.3	1	0	10			9	- 55	7	3	0	76	T			23.2	35	24	6	7	18	7.1	
SAN DIEGO	4	1017.6	1018.7	18.9	7.8	13.3	0.6	27.2	17	3.9	10	0	0	5.6	65	10	- 41	5	3	0	0	0	0.7	30	10.7	NW	7	9	13	9	5.2	77
SAN FRANCISCO	2	1020.3	1021.1	12.8	5.6	9.2	-0.1	16.7	23	- 0.6	1	0	1	6.1	84	111	9	31	12	0	0	0	0.8	21	22.8	NW	5	6	5	20	7.3	
SAN FRANCISCO U	16			13.3	8.3	10.8	0.4	16.7	14	4.4	1	0	0			101	- 15	33	12		0	0			21.0	NW	5					53
SANTA CATALINA	478			16.1	10.0	12.9	0.9	24.4	18	3.9	1	0	0			13	- 55	6	4	0	0	0						8	13	10	5.3	
SANTA MARIA	73			17.8	5.0	11.2	1.1	25.6	17	- 2.8	1	0	2			19	- 53	6	6		0	0						8	9	14	5.7	
STOCKTON	7	1021.0	1021.9	11.1	3.9	7.6	-0.1	16.7	23	- 0.6	1	0	1	5.0	86	67	9	21	10	0	0	0	1.3	16	13.4	13	2	2	3	26	8.6	
COLORADO																																
ALAMOSA	2297			0.0	-17.2	- 8.6	-0.4	8.3	31	-27.8	3	0	31			7	1	5	3		69	102						7	14	10	5.7	
COLORADO SPRINGS	1873	808.0	1016.3	8.3	- 5.0	1.9	3.8	16.7	31	-13.3	2	0	29	-10.0	46	4	- 4	4	1	0	81	76	2.2	1	17.4	5	31	6	11	14	6.3	
DENVER	1610	833.7	1014.9	9.4	- 6.1	1.7	3.6	18.3	6	-15.0	3	0	30	- 7.8	56	25	11	12	6	0	335	178	1.1	23	17.4	W	27	10	5	16	6.2	73
GRAND JUNCTION	1480	854.4	1021.9	5.6	- 5.0	0.2	3.5	13.9	31	-14.4	2	0	31	- 5.0	71	17	1	8	5	0	150	76	0.8	11	11.2	NE	24	7	7	17	6.5	56
PUEBLO	1428	854.7	1017.0	12.8	- 7.8	2.5	3.6	20.0	31+	-15.0	3	0	31	- 8.9	47	5	- 3	5	3	0	137	102	1.7	31	26.4	W	31	9	11	11	5.5	77

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	°C.	°C.	°C.	°C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
CONNECTICUT																																
BRIDGEPORT	2	1016.9	1017.5	0.6	- 6.7	- 3.1	-2.1	12.8	9	-17.2	15	0	29	- 8.3	70	85	- 9	25	10	0	665	254	4.0	32	20.1	33	3	6	11	14	6.4	
HARTFORD	52	1009.8	1016.5	- 0.6	-10.0	- 5.3	-1.9	10.0	22+	-22.2	31	0	30	-11.7	63	69	- 22	23	11	0	729	305	2.2	31	15.6	N	25	6	10	15	6.6	59
NEW HAVEN	2			1.1	- 7.2	- 3.3	-1.9	12.8	9	-17.2	15	0	29			80	- 21	28	10		556	203			15.2	NW	3	6	10	15	6.5	57
DELAWARE																																
WILMINGTON	24	1014.9	1017.8	3.3	- 6.7	- 1.7	-2.4	15.0	9	-16.7	17	0	29	- 6.7	69	60	- 26	21	7	0	213	152	2.1	30	14.3	30	3	[illegible]	7	16	6.3	
DIST.OF COLUMBIA																																
WASH NATL AP	4	1016.3	1018.5	5.6	- 3.9	0.8	-1.9	16.7	9	-12.8	31	0	27	- 6.1	63	69	- 8	23	10	0	231	102	1.5	32	16.5	NNW	2	12	4	15	5.7	55
FLORIDA																																
APALACHICOLA U	4			16.7	7.8	12.2	-0.6	23.3	26	- 5.0	17	0	4			55	- 25	35	9	0	0	0						18	3	10	3.9	60
DAYTONA BEACH	9	1019.6	1021.1	20.0	8.3	14.2	-0.6	28.3	26	- 2.8	18	0	4	9.4	77	56	- 25	36	7	3	0	0	0.9	30	13.0	16	15	14	10	7	4.5	
FORT MYERS	5	1020.0	1020.4	23.9	11.1	17.6	0.1	28.3	23+	0.6	18	0	0	11.7	73	31	- 7	22	3	2	0	0	0.6	4	10.7	33	17	13	11	7	4.5	
JACKSONVILLE	7	1019.6	1020.6	18.9	6.7	12.9	-0.3	27.2	23	- 3.3	18+	0	4	6.7	69	17	- 46	11	5	1	0	0	1.1	30	14.3	NW	30	15	7	9	4.2	68
KEY WEST	1	1019.3	1019.9	25.0	18.9	21.8	0.9	28.3	27	12.2	18	0	0	16.7	75	14	- 25	8	4	1	0	0	3.0	5	12.1	NW	2	11	14	6	4.6	68
LAKELAND U	65			21.7	10.6	15.9	-0.6	28.3	26	- 1.1	17	0	2			36	- 16	24	7		0	0						12	11	6	4.2	68
MIAMI	2	1019.6	1020.0	24.4	14.4	19.4	0.1	28.9	26	1.7	18	0	0	13.9	71	50	- 1	26	12	2	0	0	0.9	6	13.4	31	30+	8	14	9	5.4	
ORLANDO	33	1016.6	1020.9	21.7	9.4	15.6	-0.2	30.0	26	- 1.1	17	0	2	9.4	72	45	- 5	36	6	1	0	0	0.7	31	11.2	22	30	14	11	6	4.2	
PENSACOLA	34	1016.6	1020.7	17.2	6.1	11.4	-0.5	24.4	26	- 6.1	17	0	7	6.1	70	60	- 47	39	11		0	0	0.4	32	21.5	N	23					69
TALLAHASSEE	18	1019.0	1021.3	18.3	2.2	10.2	-2.0	26.1	26	- 9.4	18	0	10	5.0	74	98	11	56	8	1	T	0	0.5	31	14.3	27	24	14	11	6	4.2	
TAMPA	6	1020.7	1020.7	21.1	8.3	14.8	-1.4	27.2	22	- 1.7	18	0	2	10.0	76	40	- 14	22	5	2	T	0	0.6	6	13.0	32	31+	15	7	9	4.2	69
WEST PALM BEACH	5	1019.3	1019.9	23.9	13.3	18.6	-0.8	30.0	26	0.0	18	0	1	12.8	72	43	- 20	20	5	1	0	0	0.5	36	12.5	31	31+	13	11	7	4.7	
GEORGIA																																
ATHENS	244	990.2	1019.6	13.3	0.6	6.9	-0.1	23.3	26	- 9.4	31	0	17	0.6	67	46	- 78	23	9	1	64	51	1.7	26	10.7	25	2	14	2	15	5.4	
ATLANTA	306	982.7	1020.3	11.7	0.6	6.2	-0.9	20.6	26	-11.7	31	0	14	0.6	70	95	- 18	65	7	1	61	51	1.6	27	13.9	NW	24	12	4	15	5.6	58
AUGUSTA	44	1014.2	1019.8	16.1	0.0	7.8	-0.8	24.4	9	- 7.2	19	0	18	1.1	68	34	- 42	21	7	1	T	0	1.5	26	13.0	28	24	9	10	12	5.4	
COLUMBUS	117			16.1	1.7	8.7	-0.1	23.9	26+	- 7.8	31+	0	15	2.2	68	71	- 32	39	10		T	T	1.0	29	10.3	26	24+	13	5	13	5.2	
MACON	108	1007.8	1020.9	16.1	0.6	8.2	-1.4	25.0	26	- 8.9	31	0	17	2.2	71	39	- 46	18	8	0	T	T	1.2	27	14.8	NW	24	12	9	10	4.8	64
ROME	194			12.8	- 1.7	5.4	-0.2	21.7	8	-13.3	31	0	20			69	- 71	19	8		30	T										
SAVANNAH	14	1018.6	1020.3	17.8	2.2	9.9	-1.0	25.0	26+	- 7.2	19	0	13	3.3	69	21	- 50	11	6	0	T	0	1.3	26	11.6	NW	10	14	5	12	4.8	70
HAWAII																																
HILO	9	1011.9	1013.1	26.1	17.8	22.1	0.5	29.4	18	15.6	27+	0	0	17.2	78	236	- 65	136	14	1	0	0	0.5	23	18.3	36	29	6	14	11	6.2	46
HONOLULU	2	1012.5	1012.9	25.6	18.9	22.2	-0.3	27.2	17+	16.1	31+	0	0	16.7	71	77	- 19	54	9	2	0	0	0.8	8	14.3	NW	29	4	13	14	6.8	66
KAHULUI	15	1010.5	1012.7	26.1	17.8	21.8		28.9	2+	15.0	28+	0	0			62	- 59	21	14	1	0	0	0.3	12	14.8	N	29	7	11	13	6.2	61
LIHUE	35	1008.1	1013.4	24.4	18.3	21.4	-0.2	26.7	17+	15.6	25	0	0	17.2	80	192	52	52	17	2	0	0	0.4	32	12.1	NE	29	4	14	13	6.3	50
IDAHO																																
BOISE	865	918.7	1021.5	3.9	- 1.7	1.2	2.8	11.1	31+	-11.1	1	0	25	- 2.2	81	73	40	22	23	0	467	178	1.3	13	15.6	NW	3	0	2	29	9.5	21
IDAHO FALLS 42NW R	1460			- 1.1	-13.9	- 7.6	2.7	5.6	5	-27.8	26	0	31			30	16	19							16.5	NNW	31					
IDAHO FALLS 46W R	1504			0.0	-10.6	- 5.4	3.8	6.7	29	-22.2	1	0	31			40	21	22	9		201	178			19.2	SW	24					
LEWISTON	431			4.4	- 1.7	1.2	1.9	11.7	30	-11.1	1	0	26			76	48	20	14		274	178						0	3	28	9.3	
POCATELLO	1358	864.2	1021.1	3.3	- 5.6	- 1.2	4.2	8.9	31+	-16.1	1	0	25	- 5.6	77	18	- 13	6	11	0	119	51	4.1	22	16.1	SW	24	2	4	25	8.4	32
ILLINOIS																																
CAIRO U	96			8.3	- 1.1	3.4	0.4	19.4	8+	-16.1	31	0	19			77	- 36	38	10		56	T			19.2	SW	25	6	12	13	6.4	55
CHICAGO O HARE	201	992.6	1018.0	- 1.1	-10.6	- 5.8	-1.5	15.6	8	-25.0	30	0	28	- 8.9	79	104	58	31	14	0	297	127	1.4	27	14.3	5	16+	7	8	16	6.6	
CHICAGO MIDWAY	185	994.6		0.0	- 8.3	- 4.2	-0.8	17.2	8	-22.8	30	0	26	- 9.4	67	104	57	36	12	0	254	102	1.5	27	15.2	S	15	7	8	16	6.6	48
MOLINE	177	995.9	1018.6	- 1.1	-10.6	- 5.9	-0.7	15.6	8	-22.8	30	0	28	- 9.4	77	104	63	35	11	0	259	102	1.4	30	14.8	SE	26	9	8	14	6.1	49
PEORIA	199	993.9	1018.8	1.1	- 9.4	- 4.3	-0.8	15.6	8	-21.1	30	0	28	- 7.8	77	206	158	113	10	2	140	102	1.0	29	14.8	S	8	11	3	17	6.3	41
ROCKFORD	221	989.8	1017.9	- 1.7	-12.2	- 6.9	-1.4	12.8	8	-26.1	30	0	29	-10.6	76	112	61	53	12	0	262	127	1.4	29	11.2	31	26+	10	5	16	6.0	
SPRINGFIELD	179	995.6	1018.6	2.8	- 8.3	- 2.6	-0.6	18.3	7	-24.4	31	0	25	- 6.1	75	81	33	27	12	1	231	127	1.4	24	15.2	S	8	10	2	19	6.6	41
INDIANA																																
EVANSVILLE	116	1005.4	1019.8	6.1	- 6.1	0.2	-1.1	20.0	8	-25.6	31	0	22	- 3.3	78	64	- 37	23	12	1	114	76	1.1	27	13.4	SE	26+	7	4	20	7.1	49
FORT WAYNE	241	986.8	1018.0	1.1	- 8.9	- 4.0	-1.2	16.1	8	-23.3	17	0	26	- 7.8	75	114	46	42	14	0	157	127	2.0	26	17.9	W	26	8	5	18	7.0	42
INDIANAPOLIS	241	988.2	1018.5	2.8	- 7.8	- 2.5	-0.9	17.2	8+	-23.3	17	0	26	- 5.6	78	98	21	43	12	1	310	305	1.3	26	16.1	SE	26+	5	10	16	6.8	57
SOUTH BEND	236	988.2	1017.3	0.6	- 8.3	- 4.1	-0.5	16.1	8	-20.0	17	0	27	- 7.2	79	120	65	44	18	0	373	203	1.7	25	13.4	29	26	4	7	20	7.6	
IOWA																																
BURLINGTON	212			0.6	-10.6	- 5.0	-0.8	15.6	8	-24.4	31	0	28	- 8.3	77	100	59		11	0	203		2.0	30	11.6	30	8	10	5	16	6.2	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

JANUARY 1965

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
IOWA																																
DES MOINES	286	983.4	1020.0	- 3.3	-12.8	- 8.0	-1.8	8.3	7	-27.2	30	0	29	-10.6	83	41	8	12	10	0	188	76	1.3	33	15.6	NW	31	9	8	14	6.2	51
DUBUQUE	325			- 3.9	-13.9	- 8.8	-1.7	7.2	7	-27.2	30	0	30			69	22	23	10		297	178						7	9	15	6.5	
SIOUX CITY	334	978.7	1020.5	- 2.2	-13.9	- 8.2	-0.8	11.1	21	-28.9	16	0	30	-12.2	76	11	- 9	4	5	0	163	102	1.1	34	20.1	NW	31	9	9	13	6.2	62
WATERLOO	265	985.8	1019.3	- 5.0	-15.0	-10.1	-2.2	5.0	7	-27.8	16	0	30			28	- 1	10	9	0	168	76	1.7	31	14.3	31	8	9	6	16	6.1	
KANSAS																																
CONCORDIA	448	963.8	1018.7	5.0	- 7.8	- 1.3	1.2	13.9	7	-16.7	30+	0	28	- 6.1	75	22	4	17	4	1	8	T	0.5	33	22.4	NW	31	7	7	17	6.6	53
DODGE CITY	787	924.8	1018.2	8.9	- 6.1	1.3	1.8	23.3	7	-12.2	29+	0	30	- 5.6	67	12	- 2	6	5	0	124	51	1.0	28	17.0	N	31	7	8	16	6.7	62
GOODLAND	1111	887.2	1017.2	9.4	- 8.9	0.3	2.9	22.2	7	-17.2	9	0	30	- 8.3	58	8	- 2	4	5	0	117	51	2.1	27	21.5	32	15	12	5	14	5.7	
TOPEKA	267	986.5	1019.3	5.6	- 6.7	- 0.6	1.2	20.0	7	-17.8	30	0	27	- 5.0	74	41	15	19	7	1	74	76	0.7	32	16.1	NW	31	7	7	17	6.5	57
WICHITA	403	969.2	1018.4	7.8	- 4.4	1.8	1.8	20.6	7	-11.7	30+	0	25	- 2.8	76	14	- 6	6	6	0	84	76	0.3	27	25.5	N	31	7	7	17	6.7	56
KENTUCKY																																
COVINGTON	265	985.8	1018.3	5.6	- 6.7	- 0.8	-0.6	18.3	8	-22.8	31	0	26	- 5.0	73	79	- 11	30	14	0	236	127	1.6	25	13.0	26	26	5	7	19	7.1	
LEXINGTON	294	982.7	1019.3	5.6	- 5.0	0.1	-1.3	17.8	8	-23.3	31	0	23	- 4.4	73	72	- 54	28	12	0	251	102	2.1	20	13.4	22	26	6	8	17	6.7	
LOUISVILLE	144	1001.0	1019.0	7.2	- 4.4	1.3	-0.4	19.4	8	-20.6	31	0	22	- 2.8	75	70	- 34	18	12	0	300	127	1.1	25	13.4	SW	16	6	6	19	7.1	48
LOUISIANA																																
ALEXANDRIA	28	1015.9	1020.3	17.2	3.3	10.2	0.1	25.0	8+	- 7.8	17	0	10	5.6	76	53	- 82	35	7	2	0	0	0.1	30	10.3	1	30+	14	6	11	5.0	
BATON ROUGE	20	1018.0	1020.7	18.9	5.0	11.8	0.2	26.7	2	- 6.7	17	0	8	6.1	72	66	- 55	44	7		0	0	0.5	12	15.6	24	22	14	8	9	4.7	
LAKE CHARLES	4	1019.3	1020.2	18.9	6.7	12.8	0.7	26.1	2	- 5.6	17	0	2	8.3	78	63	- 50	53	3	1	0	0	0.5	16	13.0	26	22	12	8	11	4.8	
NEW ORLEANS	1	1019.6	1020.5	18.3	7.2	12.7	0.2	24.4	30	- 3.3	17	0	4	7.8	75	114	16	105	6	1	0	0	0.4	5	12.1	14	22	11	10	10	5.3	
SHREVEPORT	77	1010.5	1019.7	16.7	4.4	10.4	1.8	26.1	7	- 7.8	17	0	10	5.0	73	96	- 26	48	4	1	0	0	1.2	20	14.3	30	26	14	5	12	5.1	64
MAINE																																
CARIBOU	190			- 8.3	-17.8	-12.9	-1.0	6.1	9	-29.4	16	0	31			31	- 23	10	12		475	406						9	8	14	6.3	
PORTLAND	19	1012.5	1015.0	- 1.7	-12.2	- 6.8	-1.1	9.4	9	-25.0	15	0	31	-12.8	64	43	- 68	15	9	0	411	229	2.1	31	14.8	NW	1	8	7	16	6.4	59
MARYLAND																																
BALTIMORE	45	1012.2	1018.1	4.4	- 6.1	- 0.7	-2.2	17.2	9	-17.2	17	0	29	- 6.1	69	78	- 9	26	10	0	211	127	2.1	30	15.2	N	27+	10	6	15	5.8	61
MASSACHUSETTS																																
BLUE HILL OBS R	192			- 0.6	- 9.4	- 5.1	-2.3	12.8	9	-22.8	15	0	30			78	- 36	28	14		838	305			24.1	NW	4					51
BOSTON	5	1014.9	1015.9	0.6	- 7.8	- 3.7	-2.5	13.9	9	-20.0	15	0	30	-10.0	64	67	- 33	31	13	0	564	203	4.1	30	15.6	N	4	8	8	15	6.5	57
NANTUCKET	13	1014.9	1015.2	1.7	- 5.0	- 1.7	-2.2	9.4	9	-12.2	30+	0	30	- 6.1	71	131	24	37	14	0	988	406	3.0	31	19.2	N	16	7	8	16	6.6	44
PITTSFIELD	357			- 2.8	-12.8	- 7.8	-2.2	10.6	9	-25.0	15	0	31			72	- 4	20	16		645	330										
WORCESTER	301	979.3	1015.1	- 1.7	-10.6	- 6.2	-1.7	11.1	9	-23.9	15	0	31	-12.8	63	43	- 51	14	14	0	475	279	3.7	30	17.9	30	3	6	12	13	6.3	
MICHIGAN																																
ALPENA	210			- 3.3	-14.4	- 8.7	-1.9	10.0	8	-28.3	17+	0	31			71	21	22	17		826	330			14.8	W	8	4	8	19	7.6	41
DETROIT	189	993.6	1017.1	0.0	- 7.2	- 3.6	-0.8	16.7	8	-17.2	17	0	30	- 7.8	75	95	43	24	14	0	180	76	2.4	27	19.2	SW	26	7	5	19	7.0	43
DETROIT M WAYNE CO	193	992.2	1017.3	0.0	- 8.3	- 4.1	-1.0	16.7	8	-20.6	17	0	30	- 8.3	73	92	43	28	13	0	297	127	2.1	25				7	3	21	7.3	
DETROIT WILLOW RUN	217	988.2	1017.4	- 1.1	- 8.9	- 5.1	-2.1	15.0	8	-20.0	17	0	30	- 9.4	70	84	34	23	13	0	180	127	2.4	26	15.6	26	8	7	5	19	7.1	
FLINT	235	988.2	1017.0	- 1.1	-10.0	- 5.5	0.0	15.6	8	-21.7	30+	0	30	- 9.4	72	66	23	19	16	1	338	178	2.1	26	14.3	28	8	5	9	17	7.2	
GRAND RAPIDS	239	986.8	1017.1	- 1.1	- 9.4	- 5.3	-1.1	15.0	8	-20.0	29	0	31	- 8.3	79	101	53	33	15	0	612	203	1.6	28	17.0	S	8	4	4	23	8.1	
HOUGHTON LAKE	351	971.9	1015.7	- 4.4	-13.9	- 9.2		9.4	8	-27.8	28+	0	31	-11.7	80	63		20	13	0	673	406	1.7	27	10.3	29	26+	6	7	18	7.2	
LANSING	256	984.1	1017.0	- 1.1	-10.0	- 5.6	-1.3	15.0	8	-20.0	17	0	31	- 7.2	85	81	31	33	15	1	160	102	2.2	27	16.1	SW	26	4	10	17	7.5	48
MARQUETTE U	206			- 5.0	-13.3	- 9.0	-2.1	6.7	21	-25.0	29	0	30			29	- 19	6	18		432	508			15.6	NW	21	5	9	17	7.3	46
MUSKEGON	191	993.6	1017.4	- 0.6	- 7.8	- 4.3	-0.9	12.8	8+	-19.4	17+	0	29	- 6.7	83	88	35	26	20	0	1123	508	1.4	31	13.4	23	27+	1	5	25	9.0	
SAULT STE MARIE	220	987.8	1015.6	- 6.7	-15.6	-11.1	-2.1	2.2	21+	-32.8	14	0	31	-13.3	81	73	20	18	19	0	1074	813	0.7	29	21.5	29	8	3	7	21	8.1	33
MINNESOTA																																
DULUTH	435	964.1	1018.7	- 8.9	-21.1	-14.9	-1.9	2.2	8+	-38.9	14	0	31	-20.0	65	23	- 7	5	13	0	269	508	2.4	29	18.8	NW	17	7	11	13	6.3	58
INTERNATIONAL FALLS	359	973.2	1019.6	-12.2	-25.6	-18.9	-2.8	0.0	7+	-41.1	14	0	31	-22.2	75	6	- 16	2	7	0	74	406	2.1	27	13.0	32	17	10	9	12	5.8	
MINNEAPOLIS	254	987.5	1019.9	- 7.2	-17.2	-12.2	-1.3	5.0	21	-30.6	13	0	30	-16.1	72	12	- 6	5	7	0	267	229	1.1	31	12.5	E	8	11	6	14	5.8	55
ROCHESTER	395	968.8	1019.5	- 7.2	-17.2	-12.4	-2.2	3.9	21	-32.2	14	0	30	-15.6	75	11	- 12	4	7	0	282	152	1.7	28	14.3	31	17	11	5	15	6.0	
ST CLOUD	315	979.7	1020.1	- 8.9	-21.1	-14.8	-2.7	3.9	21	-35.0	29	0	31			12	- 6	4	9		168	254						10	5	16	5.8	
MISSISSIPPI																																
JACKSON	94	1008.5	1020.7	16.1	2.2	9.2	0.3	24.4	8+	- 8.3	17	0	11	3.9	75	73		38	8	3	T	0	0.8	20	13.0	SE	16	12	7	12	5.1	
MERIDIAN	88	1009.8	1021.1	16.1	1.7	8.9	0.0	24.4	9	-10.0	17	0	15	3.9	75	88	- 31	59	7	1	T	T	0.6	25	31.7	35	17	11	6	14	5.3	
VICKSBURG U	71			15.6	4.4	10.0	0.6	23.9	8+	- 7.2	17	0	7			70	- 60	24	9		T	0			11.6	SE	22+	14	8	9	4.9	67

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
MISSOURI	M.	Mb.	Mb.	°C.	°C.	C.	C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
COLUMBIA	237	989.2	1018.4	5.6	-6.1	-0.1	0.8	23.9	7	-21.1	31	0	26	-4.4	74	64	21	22	12	1	135	76	0.8	29	19.2	S	8	8	5	18	6.6	55
KANSAS CITY	226	991.2	1018.9	5.6	-6.1	-0.3	-0.2	20.6	7	-19.4	30	0	26	-5.0	72	60	24	24	10	1	107	51	0.7	30	11.2	SE	31	7	6	18	6.7	61
SAINT JOSEPH	247			4.4	-7.8	-1.6	1.1	16.7	7	-22.8	31	0	27			89	59		8	1	58		1.1	32	17.0	30	31					
ST LOUIS	163	998.3	1019.4	6.1	-6.1	-0.1	0.0	22.8	7	-21.7	31	0	25	-5.0	70	64	13	19	10	1	185	127	1.1	27	13.4	SE	26+	9	3	19	6.6	44
SPRINGFIELD	386	972.2	1018.8	8.9	-3.9	2.3	1.4	23.9	7	-15.6	31+	0	25	-2.8	71	63	13	18	9	3	10	T	1.0	21	13.0	S	15+	7	7	17	6.7	54
MONTANA																																
BILLINGS	1087	888.3	1015.6	3.9	-8.3	-2.2	2.7	12.2	15	-23.9	8	0	28	-7.2	70	17	3	6	7	0	203	76	3.2	26	24.1	NW	31	8	7	16	6.5	62
GLASGOW	694			-9.4	-18.9	-14.2	-1.9	4.4	15	-31.1	8	0	31			12	-1	3	12		272	381						4	8	1	7.5	
GREAT FALLS	1116	884.9	1017.7	1.1	-10.6	-4.5	1.0	12.8	17	-28.9	8	0	24	-10.0	71	21	6	10	6	0	175	102	3.0	23	16.1	NW	30+	8	5	18	7.0	49
HAVRE	787			-7.2	-18.3	-12.9	-2.8	5.0	14	-27.8	9+	0	31			14	2	6	10		180	279			17.0	NW	31	7	6	18	6.7	56
HELENA	1167	878.8	1017.4	2.8	-5.6	-1.3	6.1	10.0	30	-16.1	1	0	27	-6.1	72	9	-3	5	7	0	58	T	2.1	26	17.9	NW	3	3	3	25	8.5	39
KALISPELL	904	909.6	1017.1	0.6	-7.2	-3.4	3.4	5.6	30	-24.4	1	0	31	-3.9	91	47	12	16	16	0	526	432	1.6	18	10.3	14	3	0	0	31	9.8	
MILES CITY	801	921.1	1018.6	-5.0	-15.6	-10.3	-1.7	3.9	15	-26.7	8	0	31	-12.8	83	24	13		12	0	340		0.8	32								
MISSOULA	972	904.2	1019.7	-0.6	-7.2	-4.1	3.0	8.9	30	-23.3	1	0	31	-5.0	92	37	14	10	18	0	546	381	0.3	24	14.8	W	30	0	1	30	9.6	17
NEBRASKA																																
GRAND ISLAND	561	950.2	1019.3	2.2	-12.2	-5.1	0.1	13.9	21	-21.7	30	0	31	-10.0	74	17	1	12	8	0	201	152	0.9	31	17.9	34	31	5	8	18	6.9	
LINCOLN U	351			1.7	-10.6	-4.2	-0.4	12.8	21	-20.6	30	0	30			9	-15	4	6	0	94	51			15.2	NW	31	6	9	16	6.6	50
NORFOLK	471			0.0	-13.3	-6.7	0.3	12.8	21	-26.7	30	0	31			9	-11	6	4		150	102						9	6	16	6.3	
NORTH PLATTE	846	916.0	1017.4	6.1	-12.2	-3.2	1.3	18.3	7	-22.2	27+	0	31	-9.4	70	15	5	14	4	0	234	229	1.1	34	20.1	NW	31	5	9	17	6.9	59
OMAHA	298	983.1	1019.9	1.1	-11.1	-5.0	0.4	13.3	21	-26.7	30	0	29	-8.9	76	15	-6	6	8	0	173	102	1.2	34	20.1	NW	31	10	7	14	6.2	61
SCOTTSBLUFF	1204	877.8	1016.9	7.8	-7.2	0.1	3.8	16.7	18	-12.8	26	0	30	-6.7	66	12	4	5	7	0	109	51	2.2	31	17.4	35	31	8	9	14	6.5	
VALENTINE	789			3.3	-12.2	-4.4	2.2	18.9	7	-20.6	30	0	31			6	-4	3	6		58	T			20.1	NW	31	5	8	18	6.8	
NEVADA																																
ELKO	1547	846.9	1022.0	4.4	-6.7	-0.9	4.3	12.8	30	-23.3	1	0	27	-4.4	79	21	-8	9	9	0	236	76	2.0	22	13.9	28	7	2	6	23	8.1	
ELY	1906	809.7	1020.9	5.6	-8.3	-1.4	3.7	12.8	31	-23.9	8	0	30	-6.7	71	12	-8	10	5	1	168	127	1.6	19	18.8	NW	6	4	6	21	7.8	62
LAS VEGAS	659	942.1	1019.9	15.6	1.7	8.4	2.2	22.2	31	-5.0	9	0	14	-4.4	44	1	-12	1	1	0	T	0	1.7	25	23.2	S	24	9	8	14	5.7	79
RENO	1342	868.9	1022.3	6.1	-4.4	0.9	1.2	19.4	31	-20.0	1	0	28	-2.8	81	42	11	13	9	0	132	102	1.2	19	25.0	W	23	1	6	24	8.4	71
WINNEMUCCA	1310	870.3	1021.7	5.0	-3.9	0.4	3.1	16.1	30	-22.8	1	0	26	-3.3	76	25	-2	14	9	0	81	76	1.8	20	20.6	N	23	0	4	27	9.0	25
NEW HAMPSHIRE																																
CONCORD	103	1002.7	1015.8	-1.7	-12.8	-7.3	-1.3	9.4	9	-25.6	31	0	31	-12.8	66	25	-57	9	11	0	335	178	2.3	31	15.6	NW	3	8	9	14	6.0	53
MT WASHINGTON OBS	1909			-11.7	-22.2	-17.1	-2.8	2.2	9	-38.9	14	0	31			116	-23	20	19	0	805	51			55.9 Y	N		5	5	21	7.7	27
NEW JERSEY																																
ATLANTIC CITY	20	1015.9	1018.3	3.3	-8.3	-2.4	-4.0	18.3	9	-22.2	17	0	29	-7.2	70	91	1	30	12	0	208	152	2.3	31	14.3	32	3	7	10	14	6.5	47
ATLANTIC CITY U	3			3.9	-3.9	-0.1	-2.3	15.6	9	-12.8	10+	0	26			88	-7		12						23.2	NW	3					
NEWARK	3	1016.9	1017.9	1.7	-5.6	-2.1	-2.8	13.3	9	-15.0	15	0	28	-7.8	68	73	-12	19	8	0	409	203	2.7	31	17.4	32	3	6	12	13	6.5	
TRENTON U	17			2.2	-5.6	-1.7	-2.3	14.4	9	-16.1	15	0	29			73	-6	22	8		381	229			16.1	NW	3	9	6	16	6.3	55
NEW MEXICO																																
ALBUQUERQUE	1618	839.1	1019.2	10.0	-2.8	3.8	2.1	20.0	31	-10.0	26	0	26	-5.6	55	12	2	10	3	1	36	T	1.1	36	23.2	NW	22	14	8	9	4.5	77
CLAYTON	1515			11.7	-4.4	3.7	3.0	21.1	24	-11.1	26	0	28			3	-6	2	2		51	51						10	6	15	5.9	
RATON	1944			9.4	-8.3	0.4	2.1	16.7	31+	-17.8	27+	0	30			5	-4	5	3		66	51						8	10	13	6.0	
ROSWELL	1102			16.1	-2.2	6.8	3.5	25.6	31	-8.9	26	0	23			3	-9	3	1	0	30	T			21.0	W	22	14	9	8	4.5	83
SILVER CITY	1638			12.8	-1.7	5.7	1.5	19.4	30	-8.3	27	0	22			22	6	13	5		18	T						13	6	12	5.1	
NEW YORK																																
ALBANY	84	1006.8	1017.8	-2.8	-12.8	-7.7	-2.6	7.8	9	-25.6	31	0	31	-12.8	68	50	-13	22	12	0	521	254	1.7	27	16.1	W	9	6	10	15	6.8	48
BINGHAMTON	485	955.6	1016.8	-2.8	-10.6	-6.8	-2.2	10.6	9	-24.4	17	0	30	-10.0	77	105	42	38	17	0	632	279	2.1	27	15.6	NW	26	4	7	20	7.9	33
BUFFALO	215	989.8	1016.5	-1.1	-8.3	-4.7	-0.5	15.0	9+	-20.0	15+	0	30	-8.9	74	83	11	18	20	0	488	178	3.0	25	22.8	SW	26	1	7	23	8.4	29
NEW YORK U	40	1014.6	1017.9	2.2	-4.4	-1.3	-1.9	12.8	9	-12.8	17	0	28	-8.9	59	78	-6	24	9	0	376	152	2.2	29	16.5	NW	3	9	11	11	5.6	46
J.F. KENNEDY	5	1016.6	1017.2	1.7	-5.6	-1.9	-1.8	15.0	9	-15.0	15	0	28	-7.8	66	76	-6	17	8	0	442	178	2.8	31	16.1	33	3	5	15	11	6.4	
NEW YORK LA GUARDIA	3	1015.6	1017.5	1.7	-3.9	-1.0	-1.9	13.3	9	-12.8	15	0	26	-8.3	60	74	-10	28	9	1	302	127	2.8	32	14.3	NW	23	4	12	15	6.8	
ROCHESTER	167	996.3	1017.5	-1.1	-10.6	-5.8	-2.0	13.9	9	-21.1	15+	0	30	-9.4	74	77	17	19	14	0	676	305	3.0	24	21.0	W	26	3	5	23	8.1	31
SYRACUSE	125	1001.4	1017.0	-1.7	-11.1	-6.4	-1.9	14.4	9	-26.7	17	0	30	-10.0	74	58	-22	11	18	0	808	330	2.1	26	18.8	W	26	2	10	19	7.6	36
NORTH CAROLINA																																
ASHEVILLE	652	941.1	1018.8	9.4	-3.9	2.8		20.6	26	-13.9	31	0	23	-2.8	72	55		27	8	0	140	152	1.4	34	14.3	34	3	14	5	12	4.8	
CAPE HATTERAS R	2	1017.6	1018.0	12.2	3.3	7.7	-0.4	21.1	23	-7.2	20+	0	8	2.8	73	50	-50	16	11	1	8	T	2.0	33	17.0	N	25	10	8	13	5.6	59
CHARLOTTE	224	990.9	1019.0	11.7	-1.1	5.3	-0.7	20.6	23	-10.6	19	0	19	-0.6	68	55	-35	16	8	1	284	254	1.0	26	13.9	N	2	16	2	13	4.7	64

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
NORTH CAROLINA																																
GREENSBORO	273	986.5	1019.1	10.0	- 2.2	3.8	-0.4	20.6	9	-13.3	31	0	22	- 2.8	67	58	- 29	23	6	1	231	152	1.1	26	13.0	NW	27	13	5	13	5.3	65
RALEIGH	132	1002.4	1018.6	11.7	- 2.2	4.7	-0.6	22.8	23	-13.3	19	0	23	- 2.8	63	37	- 44	10	8	2	246	152	1.5	27	13.0	25	24+	11	8	12	5.2	60
WILMINGTON	9	1018.3	1019.8	14.4	1.1	7.9	-0.9	23.3	23+	- 5.6	31	0	14	1.7	69	33	- 40	12	6	0	74	76	1.3	28	14.8	NW	24	12	8	11	5.3	72
WINSTON SALEM	294	982.7	1018.6	10.0	- 0.6	4.7	-0.1	20.6	9	-10.0	31	0	19	- 4.4	54	56	- 37	17	6	1	335	229	1.2	28	8.9	27	29+	13	6	12	5.1	
NORTH DAKOTA																																
BISMARCK	502	957.0	1020.9	-10.0	-22.8	-16.4	-4.1	1.7	21	-37.2	13	0	31	-20.6	66	14	3	6	7	0	259	305	1.1	36	13.9	NW	31	5	13	13	6.6	64
FARGO	273	986.1	1021.6	-12.2	-24.4	-18.4	-4.7	- 1.1	21	-37.2	29	0	31	-21.7	73	3	- 11	2	3	0	30	229	0.7	31	15.2	N	19	10	6	15	5.9	79
WILLISTON	579			-10.0	-22.2	-16.1	-2.9	2.2	16	-38.9	13	0	31			18	4	11	11		180	305			14.3	N	31	3	11	17	7.3	46
OHIO																																
AKRON	368	971.9	1018.0	1.1	- 8.3	- 3.8	-1.7	15.6	8	-22.8	17	0	29	- 7.2	79	133	61	30	17	1	404	229	2.1	25	13.4	27	26	3	4	24	8.1	
CINCINNATI ORS	232			4.4	- 5.0	- 0.1	-1.1	17.8	8	-19.4	31	0	23			106	13	63	13		206	127			12.5	S	16					51
CLEVELAND	237	987.1	1017.2	1.1	- 6.7	- 2.7	-0.2	16.7	8	-18.9	30	0	28	- 6.7	75	113	45	26	22	1	345	254	2.6	23	17.9	W	26	2	4	25	8.6	36
COLUMBUS	247	987.8	1018.9	2.8	- 6.7	- 2.1	-0.9	16.1	9+	-23.9	17	0	27			69	- 12	15	17	0	259	178	1.4	25	19.2	SW	26	5	7	19	7.3	39
DAYTON	305	981.0	1018.3	3.3	- 6.7	- 1.6	-0.2	16.7	8	-21.7	17	0	25	- 7.2	65	59	- 22	22	14	0	221	203	2.0	22	17.9	S	26	4	11	16	7.1	57
MANSFIELD	395			1.1	- 7.8	- 3.4	-0.8	15.6	8	-22.8	17	0	27			76	- 5	24	16		287	152						2	9	20	7.9	
TOLEDO	206	991.5	1017.9	0.0	- 8.3	- 4.1	-0.9	16.7	8	-22.8	17	0	29	- 7.8	75	117	58	33	16	0	229	102	2.1	26	17.9	SW	26	4	8	19	7.4	50
YOUNGSTOWN	359	973.2	1017.7	- 0.6	- 8.3	- 4.5	-1.9	14.4	9+	-22.8	17	0	29	- 7.8	77	122	42	27	21	2	424	152	2.1	25	13.0	27	26	3	3	25	8.4	
OKLAHOMA																																
OKLAHOMA CITY	390	971.2	1018.8	10.0	- 2.2	3.8	1.0	22.8	7	-10.6	10	0	25	- 1.1	75	25	- 8	19	4	0	51	51	0.9	21	18.8	SW	25	9	8	14	5.9	66
TULSA	198	994.2	1019.1	11.1	- 2.2	4.3	2.0	25.0	7	-11.1	16	0	24	- 2.2	67	40	- 4	17	8	2	8	T	0.7	22	15.2	SW	25	8	10	13	5.9	64
OREGON																																
ASTORIA	2	1015.2	1016.0	8.9	2.8	5.7	0.9	16.1	15	- 1.1	3	0	7	2.8	82	421	124	72	23	0	272	102	1.7	15	19.7	18	1	1	4	26	9.0	
BURNS U	1265	873.7	1020.3	2.8	- 6.7	- 1.9	2.1	12.2	30	-17.8	1	0	28	- 4.4	82	61	20	17	17		632	356	1.4	26				3	4	24	8.4	
EUGENE	109	1004.7	1018.4	6.7	2.8	4.9	0.9	13.3	30+	0.0	17+	0	2	3.3	91	252	91	57	21	0	124	152	1.7	19	11.6	18	23	0	2	29	9.4	
MEACHAM	1234			1.7	- 3.9	- 1.2	2.2	10.0	30	-10.6	1	0	29			221	115	49	20		1054	660						1	7	23	8.5	
MEDFORD	396	971.9	1020.5	6.1	1.7	3.9	2.0	13.3	30	- 5.6	1	0	11	1.7	89	109	29	21	18	0	335	127	0.2	27	10.3	14	2	0	2	29	9.6	
PENDLETON	452	963.8	1018.9	4.4	- 0.6	1.9	1.8	17.2	30	- 7.8	12	0	23	- 0.6	85	78	42	18	17	0	178	76	2.3	23	17.9	26	24	1	4	26	8.8	
PORTLAND	6	1016.3	1017.6	7.2	1.7	4.6	1.0	12.8	30+	- 1.7	17	0	11	3.3	88	189	53	39	21	0	T	0	2.6	17	16.5	NW	27	3	1	27	8.9	28
SALEM	60	1010.8	1018.1	7.8	1.7	4.7	1.1	12.2	30+	- 3.9	17	0	8	3.3	92	207	37	49	22	0	T	T	2.8	19	12.5	18	26+	4	1	26	8.6	
SEXTON SUMMIT R	1169			5.0	0.0	2.7	1.5	13.9	15	- 7.2	3+	0	16			163	21	38	18		978	1346			19.7	17	23	6	2	23	7.9	
PACIFIC AREA																																
CANTON ISLAND	2			30.6	25.0	27.8	-0.6	32.2	20	23.9	24	1	0			24	- 42	24	2		0	0						3	20	8	6.3	
ENIWETOK	4	1009.1	1010.0	29.4	24.4	27.1	-0.3	30.6	3	22.8	13	0	0	21.1	71	18	- 8	6	13		0	0	7.2	7								
TAGUAC GUAM R	110			28.3	21.7	24.9	-0.7	30.0	13	18.3	8+	0	0			261	144	97	20		0	0			13.0	NE	21					50
JOHNSTON	2	1011.5	1012.1	26.7	22.2	24.3	-0.8	27.8	23+	20.0	31	0	0	18.3	70	40	- 59	19	11	0	0	0	3.7	5	14.3	NE	30	13	10	8	4.7	59
KOROR R	29	1005.4	1009.0	30.6	23.9	27.2	0.3	31.7	4+	22.2	19+	0	0	23.3	83	163	-135	76	14	1	0	0	2.0	8	9.4	E	9	0	0	31	10.0	67
KWAJALEIN	2	1008.1	1009.1	29.4	24.4	26.9	0.2	30.0	13+	21.7	19	0	0	22.2	77	98	6	47	12	1	0	0	8.2	6	13.9	8	19	1	11	19	7.9	
MAJURO	3	1008.1	1008.4	28.9	25.0	26.8	0.0	29.4	31+	22.2	3+	0	0	22.2	77	250	73	74	14	0	0	0	5.8	6	13.4	NE	21	2	4	25	8.7	62
MARCUS ISLAND	6			23.9	19.4	21.7		26.7	9+	16.1	17	0	0			198	48	85	13		0	0			17.9	NW	25	2	11	18	7.3	39
PONAPE R	37	1002.7	1008.2	29.4	23.9	26.9	-0.1	31.1	25	21.7	21	0	0	22.8	81	298	17	116	24	0	0	0	3.4	5	12.5	NE	21	0	4	27	9.2	42
TRUK MOEN ISLAND	2	1007.5	1007.8	29.4	23.9	26.8	-0.3	31.1	26	22.8	23+	0	0	22.8	78	352	139	158	15	2	0	0	4.7	5	11.2	NE	2	0	8	23	8.4	54
WAKE	3	1013.9	1014.2	26.7	21.7	24.2	-1.0	28.3	31+	20.0	8+	0	0	17.2	67	2	- 27	1	3	0	0	0	3.8	6	11.6	2	1	9	15	7	5.3	
YAP R	17	1006.4	1008.3	30.0	24.4	27.3	0.3	31.7	24+	23.3	16+	0	0	23.9	82	84	-116	20	22	0	0	0	2.9	6	12.1	NE	10	0	2	29	9.8	31
PENNSYLVANIA																																
ALLENTOWN	115	1003.7	1018.2	0.6	- 8.9	- 4.3	-2.6	7.8	9	-19.4	15	0	29	- 9.4	68	69	- 12	19	10	0	297	152	2.5	30	19.2	28	27	9	7	15	6.1	
ERIE	223	989.5	1017.3	0.0	- 7.2	- 3.4	-0.8	15.6	8	-18.9	17	0	29	- 6.7	79	98	30	18	22	1	427	203	3.0	22	17.4	25	26	3	4	24	8.5	
HARRISBURG	102	1005.4	1018.8	1.1	- 7.2	- 3.1	-2.7	10.0	9	-17.8	15	0	29	- 8.9	65	69	- 2	17	10	0	340	178	2.1	27	14.3	NW	2	8	6	17	6.5	49
PHILADELPHIA	2	1016.9	1018.1	2.2	- 5.6	- 1.6	-1.5	13.3	9	-15.0	17	0	29	- 7.8	65	60	- 25	16	8	0	302	152	2.1	32	13.0	NW	16+	8	7	16	6.4	49
PITTSBURGH	347	972.2	1017.7	2.2	- 6.7	- 2.1	-0.4	17.2	8	-22.2	17	0	26	- 7.2	69	98	22	24	19	0	269	127	2.3	26	16.5	28	26	5	5	21	7.9	31
PITTSBURGH U	228			2.8	- 5.0	- 0.9	-1.7	17.2	9+	-18.3	17	0	24			93	22	27	17		191											23
READING U	81			2.2	- 6.1	- 1.9	-2.3	10.6	9	-15.6	15	0	29			60	- 18	15	10		274	178			17.9	NW	3	10	6	15	6.2	46
SCRANTON	283	982.4	1017.9	- 1.1	- 8.9	- 5.0	-2.6	7.2	9	-20.6	17	0	30	- 9.4	71	53	- 6	16	16	0	292	102	1.3	28	10.3	NW	25+	4	5	22	7.5	39
WILLIAMSPORT	161	999.0	1018.8	- 0.6	-10.0	- 5.4	-3.6	5.6	9	-21.7	17	0	30	- 8.3	78	73	5	24	14	0	239	76	1.1	28	12.5	27	20	7	4	20	7.1	
RHODE ISLAND																																
BLOCK ISLAND	34			1.1	- 5.6	- 2.2	-2.2	9.4	9	-15.6	15	0	28			74	- 23	32	9		546	279										
PROVIDENCE	16	1013.5	1016.0	1.1	- 8.9	- 3.9	-2.3	14.4	9	-19.4	18	0	30	-10.0	63	88	- 9	27	11	0	729	279	3.0	31	13.9	22	28+	8	10	13	6.4	53

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	°C.	°C.	°C.	°C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
SOUTH CAROLINA																																
CHARLESTON	12	1018.3	1019.8	16.1	2.2	9.1	-0.8	25.6	23	- 6.1	19	0	12	2.2	67	43	- 22	20	6	2	T	T	1.4	27	17.9	NW	30	10	10	11	5.5	56
CHARLESTON U	3			15.0	5.6	10.3	-0.6	22.8	9+	- 2.2	18+	0	5			36	- 25	14	7		T	T			13.9	NW	30					
COLUMBIA	66	1011.5	1019.6	15.0	0.0	7.6	-0.7	23.9	23	- 7.2	19	0	19	0.6	67	36	- 40	14	9	0	28	T	1.4	26	10.7	25	29+	10	13	8	5.0	63
FLORENCE	45	1013.9	1019.4	14.4	0.6	7.5	-1.1	24.4	9	- 6.1	19	0	14	0.0	64	20	- 47	11	6	1	28	T	1.1	28	11.6	33	30	15	5	11	4.9	
GNVLE SPARTANBURG	292	984.1	1019.3	12.2	0.0	6.0	-0.7	20.0	26+	- 9.4	19	0	18	- 1.1	64	61	- 48	17	10	1	196	152	1.3	25	13.9	NW	24	15	4	12	4.9	59
SOUTH DAKOTA																																
ABERDEEN	395	970.9	1021.1	-10.0	-23.3	-16.6	-4.8	1.7	21	-35.6	13	0	31	-20.0	72	4	- 13	3	3	0	104	127	0.9	35	13.4	36	27	9	8	14	6.2	
HURON	391	971.2	1020.8	- 7.8	-21.7	-14.8	-3.9	1.1	4	-33.9	28	0	31	-17.8	74	6	- 7	3	4	0	91	178	0.6	32	16.1	SE	31	7	9	15	6.4	51
RAPID CITY	965	902.1	1016.9	3.3	-10.6	- 3.7	1.9	13.9	7	-20.0	9	0	31	- 7.8	75	15	6	5	7	0	109	51	1.3	1	25.5	NW	31	5	14	12	6.0	57
SIOUX FALLS	432	965.8	1020.1	- 5.0	-17.2	-11.1	-1.8	6.1	21	-31.7	16	0	31	-15.0	71	6	- 10	3	4	0	84	76	0.9	32	13.4	32	8	9	8	14	5.9	
TENNESSEE																																
BRISTOL	459	963.4	1018.9	7.8	- 2.8	2.5	-1.0	19.4	26	-13.3	31+	0	22	- 2.8	71	82	- 12	42	11	1	191	102	1.1	28	17.9	25	26	9	8	14	6.1	
CHATTANOOGA	204	994.9	1020.4	11.1	- 1.1	4.9	-0.4	20.0	22+	-13.3	31	0	19	0.0	74	89	- 53	52	8	1	46	T	0.7	27	12.1	N	24	9	5	17	6.2	63
KNOXVILLE	299	984.1	1020.1	9.4	- 0.6	4.5	-0.7	20.0	8	-13.3	17	0	19	- 1.1	70	100	- 24	59	9	0	160	102	1.3	28	17.4	N	26	8	8	15	6.4	46
MEMPHIS	80	1009.8	1020.2	12.2	0.6	6.3	1.1	22.8	8	-12.2	31	0	17	- 0.6	66	122	- 33	89	6	3	T	T	1.0	23	15.2	SE	15	10	8	13	5.7	61
NASHVILLE	176	997.3	1019.5	10.6	- 1.7	4.4	0.1	21.1	22	-16.7	31	0	20	- 1.1	69	76	- 64	46	9	0	30	T	1.1	25	17.9	SE	26	5	7	19	6.8	53
OAK RIDGE	276			8.9	- 1.7	3.6	-0.8	18.3	8	-12.8	31	0	20			106	- 45	56	10		109	76			18.3Y		26	8	10	13	6.2	
TEXAS																																
ABILENE	537	956.0	1018.4	16.1	2.2	9.1	2.1	25.6	1	- 5.0	29+	0	14	0.0	60	29	6	15	3	1	0	0	1.4	24	21.0	S	25	11	9	11	5.2	69
AMARILLO	1098	891.0	1016.5	12.8	- 2.8	5.0	2.4	23.3	6	- 8.9	10	0	27	- 3.9	61	14	- 3	8	5	0	142	51	2.5	28	20.1	N	31	8	14	9	5.4	83
AUSTIN	182	997.3	1019.8	17.8	6.1	11.9	1.7	25.6	8	- 3.3	17	0	5	5.0	68	104	44	87	5	2	0	0	0.4	25	13.9	SW	23	10	10	11	5.1	65
BROWNSVILLE	5	1018.3	1018.8	22.8	11.7	17.2	0.9	31.7	30	2.2	17	0	0	12.2	77	13	- 21	8	4	1	0	0	1.3	11	16.1	SE	25	10	9	12	5.1	62
CORPUS CHRISTI	12	1018.3	1019.7	21.1	8.9	15.1	0.9	30.6	25	- 1.1	17	0	2	10.0	76	22	- 20	11	6	2	0	0	1.5	11	16.1	S	25+	13	5	13	5.1	64
DALLAS	147	1001.7	1019.2	15.0	3.3	9.0	1.3	23.9	6	- 6.1	17	0	12	2.8	69	47	- 11	31	7	1	0	0	0.7	22	14.8	S	15	11	9	11	5.6	64
DEL RIO	313	982.4	1019.1	19.4	5.6	12.5		27.2	29+	- 0.6	11	0	3	1.7	55	4	- 59	3	2	0	0	0	0.7	8	12.5	31	25					
EL PASO	1194	883.8	1017.8	15.0	2.8	8.9	2.8	22.2	31	- 6.1	28	0	8	- 1.7	51	5	- 7	4	4	1	0	0	1.3	29	24.1	W	25	9	10	12	5.4	79
FORT WORTH	164	998.6	1019.6	14.4	2.2	8.4		20.6	7	-13.9	30	0	26	2.8	72	70		48	6	1	0	0	0.7	24	13.0	19	31+	11	9	11	5.4	
GALVESTON U	2			17.2	10.6	13.8	1.1	22.8	2	- 0.6	17	0	1			42	- 46	21	4		0	0			13.0	NE	9					58
HOUSTON U	12			20.0	9.4	14.7	2.1	27.2	2	- 2.2	17	0	1			67	- 28	39	5		0	0										
HOUSTON	15	1017.6	1019.8	20.0	7.2	13.3	1.3	27.8	2	- 5.0	17	0	4	7.8	74	47	- 49		5	1	0	0	0.4	24	13.9	20	25	13	6	12	4.8	74
LAREDO	152	1001.0	1019.1	23.3	10.0	16.4	2.2	33.9	25	1.1	17	1	0	5.6	56	1	- 28		1	1	0	0	1.1	13	13.4	35	9					
LUBBOCK	988	904.8	1017.8	15.0	- 1.7	6.8	2.8	23.9	31+	- 8.3	27	0	21	- 2.2	59	2	- 15	2	2	0	5	T	2.2	28	26.4	28	25	11	8	12	5.0	
MIDLAND	869	917.7	1017.0	16.7	0.6	8.7	2.0	25.0	31	- 4.4	11+	0	20	- 1.7	57	2	- 19	1	3	0	0	0	1.3	26	18.3	27	25	13	7	11	4.5	
PORT ARTHUR	5	1019.3	1019.8	19.4	6.1	12.8	0.8	26.7	2	- 6.7	17	0	5	8.3	78	40	- 67	31	3	1	0	0	0.4	19	15.2	S	30	15	4	12	4.9	63
SAN ANGELO	580	950.9	1018.3	17.2	2.8	9.8	1.6	25.6	29	- 4.4	11	0	14	0.6	58	13	- 11	7	3	0	0	0	1.7	25	16.1	29	25	12	9	10	4.7	
SAN ANTONIO	240	991.2	1019.5	19.4	5.6	12.4	1.3	27.2	8	- 3.9	17	0	9	4.4	64	61	17	42	6	1	0	0	0.3	36	15.2	SW	23	15	6	10	4.4	70
VICTORIA	32	1015.9	1020.0	20.0	7.8	13.8	0.8	26.7	7+	- 3.9	17	0	2	8.3	73	53	- 7	36	6	2	0	0	0.2	16	21.9		25	11	6	14	5.5	
WACO	152	1001.4	1019.6	17.2	4.4	10.8	1.9	25.6	8	- 6.1	17	0	12	3.9	68	75	18	56	5	2	0	0	1.1	23	15.6	18	31	12	8	11	4.8	
WICHITA FALLS	303	981.4	1018.7	12.8	- 0.6	6.0	0.0	26.1	7	- 7.2	17+	0	22	0.6	73	44	15	23	4	1	T	T	0.8	25	17.4	30	25	11	10	10	5.1	
UTAH																																
MILFORD	1533			6.7	- 7.2	- 0.2	3.9	17.2	31	-17.2	9+	0	30			15	1	11	4		155	102						7	7	17	6.9	
SALT LAKE CITY	1286	874.4	1022.2	3.9	- 4.4	- 0.6	2.1	11.1	31+	-16.1	22	0	26	- 5.6	71	54	20	13	11	1	399	102	1.8	17	16.1	N	7	1	5	25	8.7	24
WENDOVER	1291			5.0	- 3.3	0.8	3.6	14.4	31+	-10.0	2	0	25			3	- 5	1	3		8	T						4	7	20	7.6	
VERMONT																																
BURLINGTON	100	1003.4	1016.6	- 5.0	-15.6	-10.2	-1.4	8.9	9	-28.3	15	0	31	-15.0	64	15	- 34	9	10	0	300	127	0.6	27	14.3	S	9+	6	6	19	7.0	52
VIRGINIA																																
LYNCHBURG	279			7.2	- 3.9	1.6	-1.5	18.9	8	-12.8	31	0	24			55	- 28	22	10		211	102			12.1	W	16	13	5	13	5.3	58
NORFOLK	8	1018.0	1018.8	9.4	- 1.1	4.3	-0.8	22.8	9	-11.1	17	0	19	- 2.2	66	69	- 15	21	8	0	269	127	1.4	31	15.2	N	3+	10	6	15	5.8	55
RICHMOND	49	1012.5	1018.7	8.3	- 3.9	2.0	-1.7	20.0	9	-16.7	19	0	24	- 5.0	64	64	- 24	19	12	0	315	203	0.8	30	13.4	N	3	11	5	15	5.5	60
ROANOKE	358	975.3	1018.0	7.8	- 3.3	2.2	-1.2	21.1	8	-12.8	31	0	25	- 5.0	62	94	15	34	10	0	307	127	1.7	29	15.6	30	27+	14	5	12	5.4	
WASHINGTON																																
OLYMPIA	59	1008.8	1016.3	6.1	1.1	3.8	0.4	11.7	14	- 5.0	3	0	13	2.8	92	238	39	47	22	0	376	102	2.1	20	16.1	8	18	0	2	29	9.4	
SEATTLE TACOMA	122	999.3	1016.0	7.2	2.2	4.6	1.1	12.8	14	- 1.7	9	0	7	2.8	88	134	- 12	26	19	1	185	51	2.3	21	14.8	22	24	0	2	29	9.4	
SPOKANE	718	931.6	1017.6	0.6	- 4.4	- 1.9	1.8	6.7	30	- 9.4	22	0	30	- 3.3	88	72	10	25	15	0	511	483	2.1	19	16.5	S	27	0	3	28	9.5	8
STAMPEDE PASS R	1206			- 1.1	- 4.4	- 2.9	1.8	11.7	14	-10.0	9+	0	29			473	168	76	25		2530	3073										
TATOOSH ISLAND R	31	1010.8	1014.1	7.2	3.3	5.1	-0.4	10.6	15	- 1.1	23	0	3	3.3	89	324	50	52	22	0	165	102	2.9	11	32.2	W	1	1	2	28	9.0	18

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	°C.	°C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm	M.p.s.		M.p.s.							%
WASHINGTON																																
WALLA WALLA U	289			5.6	0.0	2.6	1.9	16.7	30	- 5.0	12	0	23			84	36	17	16		185	76			15.2	W	3	0	3	28	9.5	
YAKIMA	321	979.3	1018.9	2.8	- 6.1	- 1.7	0.8	12.2	30	-15.0	9	0	28	- 3.9	85	34	4	14	9	0	307	406	0.8	25	15.6	26	26	2	5	24	8.5	
WEST INDIES																																
SAN JUAN P.R.	5	1014.9	1017.3	27.2	20.6	23.7	0.2	28.9	31	16.7	28+	0	0	18.3	72	67	- 53	28	16	0	0	0	3.6	7	13.4	E	21	5	19	7	5.3	61
SWAN ISLAND	9			27.2	22.8	25.0		28.3	15+	21.1	28+	0	0			89	42	68	10	1	0	0						5	19	7	5.5	
WEST VIRGINIA																																
BECKLEY	763	927.2	1018.9	4.4	- 5.0	- 0.4		17.8	26+	-20.6	31	0	26	- 4.4	75	135		45	17	0	541	229	2.4	25	20.6	24	26	6	9	16	7.0	
CHARLESTON	286	982.7	1018.7	6.1	- 4.4	0.7	-1.8	20.0	8	-16.7	31	0	24	- 5.0	68	118	8	35	14	0	348	127	1.7	24	13.0	24	26	5	11	15	7.2	
ELKINS	600	944.8	1018.4	4.4	- 8.9	- 2.2	-2.4	17.8	26	-23.3	31	0	29	- 5.6	78	135	43	38	20	1	549	178	2.1	27	20.6	27	26	5	8	18	7.4	
HUNTINGTON	252	987.8	1018.9	6.1	- 3.9	1.1	-1.5	20.6	8	-18.3	31	0	22	- 3.9	72	85	- 7	27	12	0	254	152	1.3	24	14.3	24	26	6	10	15	7.0	
PARKERSBURG U	187			5.0	- 5.0	- 0.1	-1.6	18.9	8	-16.7	31+	0	24			5	- 26	21	13		170	102			17.9	W	26					37
WISCONSIN																																
GREEN BAY	208	990.9	1017.9	- 5.6	-13.9	- 9.8	-1.3	6.7	7	-29.4	29	0	30	-13.3	72	24	- 6	7	12	0	318	178	2.4	30	17.0	SW	8	10	8	13	6.0	47
LA CROSSE	199	994.2	1020.3	- 6.1	-17.2	-11.7	-3.1	5.6	7	-34.4	29	0	30	-15.0	76	21	- 10	10	8	0	323	178	1.0	30	13.0	30	8	10	6	15	6.0	
MADISON	262	985.1	1018.2	- 3.9	-13.9	- 8.9	-0.9	7.2	7	-31.7	29	0	30	-11.7	78	46	10	17	14	0	465	356	1.6	30	15.2	S	17	9	5	17	6.3	52
MILWAUKEE	205	991.9	1018.2	- 2.8	-11.1	- 6.9	-0.6	13.9	8	-26.7	29	0	29	-10.0	79	85	38	25	15	0	599	305	2.0	28	14.3	S	16+	8	4	19	6.7	49
WYOMING																																
CASPER	1621	834.7	1016.1	4.4	- 6.7	- 1.3	3.5	10.0	16	-23.3	31	0	29	- 8.9	58	20	6	6	8	0	419	127	6.5	24	18.3	26	31	10	4	17	6.1	
CHEYENNE	1867	808.7	1016.0	6.1	- 6.1	0.1	3.7	15.0	18	-13.9	31	0	30	-10.0	51	14	1	6	7	0	216	102	5.5	30	26.8	NW	27	9	6	16	6.3	50
LANDER	1696	826.3	1016.5	5.6	- 7.8	- 1.3	5.8	15.0	14	-17.8	2	0	30	-10.0	54	5	- 7	3	2	0	94	51	1.1	24	26.4	W	27	8	10	13	6.1	70
SHERIDAN	1202	875.7	1016.2	6.1	- 8.9	- 1.2	4.8	16.1	6	-16.7	2	0	30	- 7.2	67	30	14	7	12	0	300	102	2.4	27	27.3	NW	4	8	11	12	6.0	61

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.
A Maximum hourly average.
B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

V Sun below horizon January 1-23, inclusive.
X Sun below horizon January 1-17, inclusive.

HEATING DEGREE DAYS

(Base 65°F.)

State and station	Current season		Normals
	This month	Period July through this month	July through this month
ALABAMA			
BIRMINGHAM	591	1612	1609
HUNTSVILLE	711	2003	1922
MOBILE	387	979	1007
MONTGOMERY	512	1359	1468
ALASKA			
ANCHORAGE PRK STRIP	1703	6855	6469
ANCHORAGE	1701	6947	6469
ANNETTE	1014	4570	3930
BARROW	2676	11890	11028
BARTER ISLAND	2723	11620	10796
BETHEL	2033	7923	7570
COLD BAY	1162	5517	5389
FAIRBANKS	2574	9440	8794
JUNEAU	1291	5505	5140
KING SALMON	1631	6983	6552
KOTZEBUE	2235	9045	8846
MC GRATH	2368	9016	8680
NOME	1992	8057	7918
ST. PAUL ISLAND	1307	6086	6006
SHEMYA	1051	5443	5300
YAKUTAT	1322	5910	5124
ARIZONA			
FLAGSTAFF	1034	3848	3982
PHOENIX	375	1052	1145
TUCSON	348	1029	1133
WINSLOW	849	2722	3024
YUMA	258	735	679
ARKANSAS			
FORT SMITH	705	1972	2074
LITTLE ROCK	639	1810	2073
TEXARKANA	525	1429	1610
CALIFORNIA			
BAKERSFIELD	546	1409	1367
BISHOP	732	2357	2537
BLUE CANYON	807	2922	2761
BURBANK	326	957	893
EUREKA U	544	2586	2573
FRESNO	572	1521	1561
LONG BEACH	352	990	871
LOS ANGELES	291	827	906
LOS ANGELES CIVIC C	224	671	708
MT SHASTA P	887	3172	3169
OAKLAND	478	1491	1592
RED BLUFF	570	1540	1531
SACRAMENTO	602	1570	1647
SANDBERG WB	691	2311	2181
SAN DIEGO	277	752	745
SAN FRANCISCO	505	1665	1638
SAN FRANCISCO U	414	1618	1648
SANTA CATALINA	312	978	872
SANTA MARIA	394	1695	1554
STOCKTON	591	1564	1658
COLORADO			
ALAMOSA	1495	5493	5043
COLORADO SPRINGS	910	3250	3607
DENVER	921	3159	3546
GRAND JUNCTION	1004	3131	3451
PUEBLO	876	2852	3201
CONNECTICUT			
BRIDGEPORT	1190	3166	3053
HARTFORD	1311	3604	3516
NEW HAVEN	1196	3255	3202
DELAWARE			
WILMINGTON	1108	2906	2816
DIST.OF COLUMBIA			
WASH NATL AP	974	2489	2474
FLORIDA			
APALACHICOLA U	338	694	835
DAYTONA BEACH	246	412	534
FORT MYERS	96	122	279
JACKSONVILLE	310	628	798
KEY WEST	10	10	68
LAKELAND U	162	286	416
MIAMI	63	67	139
ORLANDO	178	283	490
PENSACOLA	380	899	967
TALLAHASSEE	450	993	961
TAMPA	204	364	433
WEST PALM BEACH	86	95	158
GEORGIA			
ATHENS	627	1654	1806
ATLANTA	669	1727	1843
AUGUSTA	576	1405	1512
COLUMBUS	530	1310	1515
MACON	559	1420	1375
ROME	717	1973	2070
SAVANNAH	463	1091	1167
IDAHO			
BOISE	951	3300	3469
IDAHO FALLS 42NW R	1442	5021	5125
IDAHO FALLS 46W R	1316	4814	4907
LEWISTON	951	3308	3278
POCATELLO	1082	3850	4055
ILLINOIS			
CAIRO U	826	2239	2360
CHICAGO O HARE	1342	4012	3748
CHICAGO MIDWAY	1250	3585	3482
MOLINE	1344	3773	3712
PEORIA	1254	3656	3509
ROCKFORD	1405	4140	3920
SPRINGFIELD	1158	3244	3217
INDIANA			
EVANSVILLE	1008	2838	2743
FORT WAYNE	1238	3646	3588
INDIANAPOLIS	1155	3241	3293
SOUTH BEND	1244	3742	3612
IOWA			
BURLINGTON	1294	3572	3577
DES MOINES	1465	4043	3888
DUBUQUE	1509	4380	4262
SIOUX CITY	1474	4297	4028
WATERLOO	1582	4568	4262
KANSAS			
CONCORDIA	1088	3204	3224
DODGE CITY	943	2964	2940
GOODLAND	1001	3355	3517
TOPEKA	1044	3095	3101
WICHITA	918	2722	2808
KENTUCKY			
COVINGTON	1058	2952	3053
LEXINGTON	1010	2809	2750
LOUISVILLE	943	2672	2731
LOUISIANA			
ALEXANDRIA	455	1303	1231
BATON ROUGE	367	969	1025
LAKE CHARLES	313	859	951
NEW ORLEANS	315	848	896
SHREVEPORT	446	1240	1373
MAINE			
CARIBOU	1743	5691	5480
PORTLAND	1396	4479	4129
MARYLAND			
BALTIMORE	1052	2696	2738
MASSACHUSETTS			
BLUE HILL OBS R	1299	3668	3464
BOSTON	1220	3404	3059
NANTUCKET	1106	3065	2920
PITTSFIELD	1452	4320	4228
WORCESTER	1362	3965	3854
MICHIGAN			
ALPENA	1506	4646	4610
DETROIT	1215	3421	3454
DETROIT M WAYNE CO	1239	3913	3469
DETROIT WILLOW RUN	1301	3842	3491
FLINT	1326	4058	4065
GRAND RAPIDS	1310	3992	3816
HOUGHTON LAKE	1533		
LANSING	1328	4042	3835
MARQUETTE U	1520	4713	4522
MUSKEGON	1251	3774	3619
SAULT STE MARIE	1636	5200	4903
MINNESOTA			
DULUTH	1854	5915	5599
INTERNATIONAL FALLS	2077	6481	6126
MINNEAPOLIS	1702	4949	4846
ROCHESTER	1711	5091	4755
ST CLOUD	1850	5459	5116
MISSISSIPPI			
JACKSON	512	1320	904
MERIDIAN	521	1463	1481
VICKSBURG U	461	1249	1306
MISSOURI			
COLUMBIA	1023	2835	2999
KANSAS CITY	1033	2796	2808
ST JOSEPH	1107	3204	3270
ST LOUIS	1016	2951	2900
SPRINGFIELD	884	2578	2718
MONTANA			
BILLINGS	1135	4333	4022
GLASGOW	1816	5757	5237
GREAT FALLS	1271	4732	4321
HAVRE	1740	5838	4953
HELENA	1090	4514	4590
KALISPELL	1204	5076	4785
MILES CITY	1591	5309	4460
MISSOULA	1246	4973	4804
NEBRASKA			
GRAND ISLAND	1301	4007	3815
LINCOLN U	1252	3550	3411
NORFOLK	1389	4259	4038
NORTH PLATTE	1189	3924	3891
OMAHA	1298	3671	3670
SCOTTSBLUFF	1010	3768	3832
VALENTINE	1266	4347	4253
NEVADA			
ELKO	1071	4057	4264
ELY	1097	4239	4328
LAS VEGAS	551	1613	1770
RENO	968	3195	3724
WINNEMUCCA	996	3549	3919
NEW HAMPSHIRE			
CONCORD	1418	4378	4158
MT WASHINGTON OBS	1973	7961	7709
NEW JERSEY			
ATLANTIC CITY	1152	2947	2655
ATLANTIC CITY U	1022	[illegible]	2502
NEWARK	1133	2808	2755
TRENTON U	1113	2859	2810
NEW MEXICO			
ALBUQUERQUE	805	2541	2681
CLAYTON	811	2785	2966
RATON	993	3444	3583
ROSWELL	637	2086	2439
SILVER CITY	700	2209	2234
NEW YORK			
ALBANY	1449	3994	3879
BINGHAMTON	1392	3936	4030
BUFFALO	1277	3821	3826
NEW YORK U	1088	2792	2691
J.F. KENNEDY	1126	2806	2810
NEW YORK LA GUARDIA	1072	2732	2638
ROCHESTER	1337	3821	3687
SYRACUSE	1370	3754	3749
NORTH CAROLINA			
ASHEVILLE	863		
CAPE HATTERAS R	588	1330	1452
CHARLOTTE	721	1938	1950
GREENSBORO	803	2219	2300
RALEIGH	754	2114	2076
WILMINGTON	575	1319	1432
WINSTON SALEM	752	2036	2175
NORTH DAKOTA			
BISMARCK	1937	6023	5115
FARGO	2051	6025	5323
WILLISTON	1920	6175	5329
OHIO			
AKRON	1226	3478	3420
CINCINNATI OBS	1026	2850	2805
CLEVELAND	1165	3440	3508
COLUMBUS	1132	3220	3278
DAYTON	1104	3116	3232
MANSFIELD	1208	3524	3589
TOLEDO	1242	3809	3669
YOUNGSTOWN	1266	3608	3601
OKLAHOMA			
OKLAHOMA CITY	808	2267	2311
TULSA	775	2137	2378
OREGON			
ASTORIA	696	2982	2854
BURNS U	1120	4066	4000
EUGENE	744	2630	2670
MEACHAM	1080	4472	4294
MEDFORD	802	2670	2917
PENDLETON	912	3169	3073
PORTLAND	761	3029	2659
SALEM	751	2876	2662
SEXTON SUMMIT R	868	3515	3274
PENNSYLVANIA			
ALLENTOWN	1256	3375	3297
ERIE	1209	3440	3464
HARRISBURG	1192	3194	3046
PHILADELPHIA	1107	2916	2950
PITTSBURGH	1134	3263	3397
PITTSBURGH U	1068	2860	2879
READING U	1122	2895	2848
SCRANTON	1293	3558	3607
WILLIAMSPORT	1317	3514	3407
RHODE ISLAND			
BLOCK ISLAND	1136	3056	2917
PROVIDENCE	1231	3352	3277
SOUTH CAROLINA			
CHARLESTON	507	1180	1299
CHARLESTON U	442	956	1112
COLUMBIA	592	1488	1576
FLORENCE	601	1472	1497
GNVLE SPARTANBURG	681	1805	1837
SOUTH DAKOTA			
ABERDEEN	1951	5792	4941
HURON	1846	5311	4768
RAPID CITY	1218	4240	4083
SIOUX FALLS	1639	4896	4551
TENNESSEE			
BRISTOL	874	2416	2516
CHATTANOOGA	741	2026	2049
KNOXVILLE	765	2121	2147
TENNESSEE			
MEMPHIS	666	1850	2022
NASHVILLE	768	2137	2193
OAK RIDGE	815	2280	2312
TEXAS			
ABILENE	519	1363	1693
AMARILLO	740	2249	2467
AUSTIN	370	960	1112
BROWNSVILLE	127	399	420
CORPUS CHRISTI	219	596	631
DALLAS	514	1309	1508
DEL RIO	326	915	
EL PASO	521	1631	1831
FORT WORTH	550	1447	1539
GALVESTON U	254	654	758
HOUSTON U	234	628	816
HOUSTON	300	760	880
LUBBOCK	635	1891	2249
MIDLAND	535	1351	1711
PORT ARTHUR	322	846	942
SAN ANGELO	469	1305	1489
SAN ANTONIO	346	956	1026
VICTORIA	275	720	770
WACO	427	1126	1305
WICHITA FALLS	679	1835	1810
UTAH			
MILFORD	1029	3551	3802
SALT LAKE CITY	1046	3372	3693
WENDOVER	970	3251	3511
VERMONT			
BURLINGTON	1585	4690	4592
VIRGINIA			
LYNCHBURG	926	2534	2485
NORFOLK	780	1903	1980
RICHMOND	909	2371	2344
ROANOKE	892	2459	2488
WASHINGTON			
OLYMPIA	801	3457	2982
SEATTLE TACOMA	761	3027	2882
SPOKANE	1121	4328	3887
STAMPEDE PASS R	1179	5564	5131
TATOOSH ISLAND R	732	3448	3172
WALLA WALLA U	872	3032	2907
YAKIMA	1114	3890	3636
WEST VIRGINIA			
BECKLEY	1037	1905	
CHARLESTON	974	2656	2653
ELKINS	1134	3427	3298
HUNTINGTON	956	2728	2641
PARKERSBURG U	1021	2820	2777
WISCONSIN			
GREEN BAY	1564	4576	4487
LA CROSSE	1672	4633	4388
MADISON	1517	4586	4446
MILWAUKEE	1404	4170	4239
WYOMING			
CASPER	1084	4289	4139
CHEYENNE	1012	3826	4056
LANDER	1088	4109	4520
SHERIDAN	1078	4483	4317

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

JANUARY 1965

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				∅ ALL OTHER			
								†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS
Alabama *																													
Alaska *																													
Arizona														0	2	0	0									0	0	4	6
Arkansas	2	2	0	0	4																	1	0	6	0				
California *																													
Colorado										0	4	4	4																
Connecticut *																													
Delaware																						0	0	4	0				
Florida *																													
Georgia						0	0	3	0									0	0	4	0								
Hawaii *																													
Idaho																								U		1		6	
Illinois																		0	0	?	0	0	0	6	0				
Indiana	2	1	0	2	4													1		4	0	0		5	0				
Iowa																						0	0	5	0				
Kansas *																													
Kentucky *																													
Louisiana	11	2	0	2	5					0	10	5	0	0	0	3	0									0	0	4	0
Maine *																													
Maryland																						0	0	5	0				
Massachusetts																		0	0	4	0								
Michigan																							0	5	D C				
Minnesota *																													
Mississippi	2	2	0	5	4					0	1	3	0	0	1	1	0									0	0	4	0
Missouri	1	1	0	0	3									0	0	4	0												
Montana *																													
Nebraska *																													
Nevada *																													
New Hampshire *																													
New Jersey *																													
New Mexico *																													
New York											1	5												5					
North Carolina	1	1	0	0	3					0	0	4	0	0	0	5	0	4	U	4	0	5	U	4	0				
North Dakota *																													
Ohio *																													
Oklahoma										0	0	?	0									0	0	?	0	0	0	?	0
Oregon																		0	U	4	3					0	S	7	4
Pacific Area *																													
Pennsylvania										0	1	5	0									0	0	4	0				
Puerto Rico																										0	0	3	C
Rhode Island																		0	0	4	0								
South Carolina										0	0	4	0					1	?	0	0	0	?	0	0				
South Dakota *																													
Tennessee																						0	0	6	0	1	S	?	0
Texas	2	2	0	0	4					0	2	0	0																
Utah *																													
Vermont *																													
U. S. Virgin Is. *																													
Virginia *																													
Washington																										H 2		H 6	
West Virginia *																													
Wisconsin *																													
Wyoming *																													

C	Crop damage
U	Unknown
D	Damage unknown
S	Several
H	Heavy rainfall and melting snow

* No occurrence of storms or unusual weather phenomena.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
∅ For breakdown of "All Others", and for detailed listing of other storms, see the U. S. Weather Bureau monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:

1	Less than $50
2	$50 to $500
3	$500 to $5,000
4	$5,000 to $50,000
5	$50,000 to $500,000
6	$500,000 to $5,000,000
7	$5,000,000 to $50,000,000
8	$50,000,000 to $500,000,000
9	$500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

JANUARY 1965

For the second consecutive month severe floods occurred on the West Coast. Rises in the Sacramento and San Joaquin Basins approached the record high peaks of December at many points. Major damage stages were exceeded on the Santiam at Jefferson, Oreg., and on the Willamette at Salem, Oreg. Near major damage stages occurred on the Willamette below Salem, Oreg. Major flooding resulted on the Grande Ronde, Deschutes, and John Day Rivers during January.

ATLANTIC SLOPE DRAINAGE

All streams in Vermont were frozen at the end of the month. Ice on the Winooski River was 15 inches thick above Essex Junction Dam, Vermont.

The snow cover in the Lackawaxen River Basin at the end of the month ranged from 5 inches at Hawley, Pa., to 9 inches at Pleasant Mount, Pa. In the Lehigh River Basin, snow at the higher elevations averaged 5 inches in depth to 1 inch or less south of the Blue Mountain.

Ice began to form in the Susquehanna River Basin during the first week of January. By the end of the month, the ice was estimated to be 4 to 8 inches thick throughout the basin. The water content of the snowpack averaged 0.50 inch for the basin.

Minor flooding occurred on the Jackson River at Covington, Va., on the 24th. Near flood stages were reached at many downstream points on the James from the 24th through the 26th. This flooding was due to rainfall ranging from an inch to 1.5 inches during the night of the 23d and 24th plus partial melting of several inches of snowfall remaining from the previous weekend. No damages resulted.

The flooding on the Tar, Neuse, and Cape Fear Rivers in eastern North Carolina in the beginning of the month was due to heavy rains during the last week in December. The Neuse River was the last to return within its banks and this occurred on the 8th. No damage was reported from the flooding.

Overflow occurred at several gaging stations in South Carolina during the early part of January due to heavy rainfall during the Christmas holidays. Flooding along the upper Pee Dee had subsided by the end of December, but overflow continued along the middle portion at Peedee, S. C., through the 6th. The Lynches at Effingham rose sharply on the 1st and crested near 15 feet on the 2d, about 1 foot over flood stage. The Edisto at Givhans Ferry rose out of its lower banks on the 1st and returned on the 10th. No damage was reported from the flooding but logging operations in the vicinity of Peedee, S. C., continued suspended until the swamps dried out. Low approach roads and camp sites were inundated along the Edisto in the Givhans area.

Minor flooding occurred on streams in Georgia during the first 10 days of the month. The Savannah River at Clyo, Ga., has been above flood stage since October 29, 1964 and was still above flood stage at the end of December. Flooding on other streams was due to heavy rain during the latter part of December.

EAST GULF OF MEXICO DRAINAGE

The chief rise of the month was the one that began during the last week of December. The overflows were only about a foot or so above flood stage on the Flint River in Georgia except in the Albany, Ga., area where flood stage was exceeded by about 6 feet. Only moderate damages occurred in the Albany area, with little or insignificant losses elsewhere. Combined flows from the Chattahoochee and Flint Rivers produced stages well above flood stage over upper and middle portions of the Apalachicola. Most of the flooded areas were wooded and unpopulated and damages are not believed excessive.

The only rains of much importance during January occurred over the Warrior and Tombigbee Rivers in Alabama, and the Apalachicola River Valley in Florida, and over the Pearl River in Louisiana between the 22d and 24th. The rains averaged approximately 2 inches over the middle section of the Warrior and Tombigbee Rivers on the night of the 22d, bringing sharp rises at stations on the lower rivers. Flood stage was not reached except at Jackson, Ala., where there was a 2.5 foot overflow. The heavy rains (3 to 5 inches) over the Apalachicola River Valley on the 23d-24th caused strong rises but no flooding except at Blountstown, Fla., where flood stage was exceeded by more than 3 feet. The area affected is lowland, wooded and unpopulated, and very limited damages, if any, occurred from this flooding. Very heavy rains in south-central Alabama on the 22d and 23d resulted in near flood stages on the lower Alabama River at Millers Ferry and Claiborne. The Pearl River at Bogalusa, Ala., exceeded flood stage by nearly 2.5 feet on the 25th.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--Precipitation and temperatures over the Upper Mississippi Basin above Guttenberg, Iowa, were below normal during January. Streamflow remains below the long-term mean but in comparison to January 1964 most streams were one-half foot higher.

A comparison of snow depths in the Upper Mississippi Basin on January 31 with that of other years is given in the following table:

COMPARATIVE SNOW DEPTHS (INCHES)

STATION	1965	1964	1963	1962	1961	1960	1959	1958	1957	1956
(Minnesota)										
Bemidji	12	11	2	13	4	8	8	5	11	26
International Falls	16	14	4	16	11	8	20	8	11	22
Duluth	18	9	6	15	9	16	11	11	14	29
Alexandria	5	2	2	9	0	5	0	5	2	16
New Ulm	T	T	4	2	T	1	2	3	T	6
Minneapolis	4	3	4	6	2	2	0	2	2	11
Rochester	3	0	6	3	T	2	3	2	1	10
(Wisconsin)										
Park Falls	15	5	10	19	2	14	12	12	13	21
Wausau	8	3	6	9	T	4	6	5	7	12
Portage	10	0	9	7	1	2	10	4	4	2

Minor flooding occurred on the Rock River in Illinois and on the Skunk River in Iowa from the 24th to the 26th. The overflow was due to rains of 1 1/2 to 2 1/2 inches on frozen ground on the 22d and 23d. Only farmland was inundated. Damages were minor.

Heavy rains on the 1st and 2d in northern Illinois caused light flooding on the Spoon and La Moine Rivers between the 2d and 7th. Minor rises were noted on the upper reaches of the Sangamon above Riverton, Ill., and on the Illinois River at and below Peoria, Ill Additional heavy rainfall up to 2.5 inches on the 23d and 24th caused additional flooding on these rivers and on the Illinois and Salt Rivers between the 25th and 29th. Because of the season of the year, little or no damage resulted from this flooding.

Missouri Basin.--There was very little accumulation of snow in South Dakota during the first 12 days of January. During the remainder of the month, snows were frequent but generally light. Most of the accumulation of snow was in northern and northeastern South Dakota. At the end of January, snow cover varied from 4 to 8 inches in most of the northern half of South Dakota to 2 to 4 inches in southern South Dakota, northwestern Iowa, and southwestern Minnesota. Frequent melting periods kept the snow cover depleted from the Black Hills southward and southeastward toward Valentine, Nebr. Elsewhere in South Dakota and on east through the State, January was quite cold and there was little or no melting. Rivers were frozen over the State. The Missouri was covered with rough ice from Yankton, S. Dak., to well below Omaha, Nebr.

Heavier snowfall totals on the 22d - 23d generally ranged from 3 to 6 inches over the northern portion of western Kansas to 6 to 10 inches across the southern part of western Nebraska. Local snow accumulations were as heavy as 16 inches at Culbertson, Nebr. There were also heavier amounts of 3 to 6 inches on the 25-26th on the lower Smoky Hill and upper Kansas River Valleys. There were only local areas of snow cover remaining at the end of the month. Ice conditions became widespread the middle and latter parts of the month, but there was little or no effect on stages which continued at low flows. Reservoirs were predominately ice-covered.

A minor overflow occurred at Easton, Kans., on the upper portion of Stranger Creek on the 2d. This rise was due to locally heavy rainfall of 2 to 3 inches across the headwaters area.

Heavy rains fell over parts of northern Missouri on the 1st and 2d, with total rainfall of over 4 inches in some localities. This resulted in flooding on the Grand, Chariton, and Wakenda Rivers. Heaviest flooding was along the Grand River. Moderate to heavy rains in west-central and north-central Missouri on the 22d and 23d resulted in some minor flooding on the Grand and Wakenda Rivers. All flooding was over agricultural land, with relatively minor damage. The South Grand River at Brownington, Mo., reached flood stage on the 26th.

Ohio Basin.--The Tug Fork of the Big Sandy River at Williamson, W. Va., reached bankfull stage on the 11th. This rise was due to rainfall averaging 2 1/4 inches over the upper two-thirds of the Big Sandy Basin during the 36-hour period from 7 a.m. the 9th to 7 p.m. the 10th. No damage resulted.

Minor flooding occurred on the Green River at Woodbury, Ky., from the 11th to the 13th. This rise resulted from general rains, averaging 2 inches over the Green River drainage area on the 9-10th.

Ice covered the upper Scioto River in Ohio after the first week in January and covered the entire Scioto by the third week. Several days of mild weather and one day of moderate rain during the last week of the month broke up the ice. The ice rotted and disappeared during the mild period. Ice began forming again at the end of the month.

Minor flooding occurred on the upper Cumberland River below Pineville, Ky., on the 11th and 12th. The rainfall causing this overflow averaged a little over 2 inches in the basin above Williamsburg, Ky. No damage resulted.

Minor overflow occurred in low places on the Elk River at Fayetteville, Tenn., from the 10th to the 12th. Some farmland was inundated but no damage resulted.

White Basin.--Heavy rainfall of about 3 inches over the Cache River Basin during the evening of the 8th until the morning of the 10th caused the Cache at Patterson, Ark., to go above flood stage on the 9th. It crested 2 feet above flood stage on the 12th and continued in flood through the end of the month. No damage resulted.

Arkansas Basin.--The light flooding on the Petit Jean at Danville, Ark., on the 10th and 11th was due to 2 1/2 inches of rain during the night of the 8th. No damage was reported.

Red Basin.--Moderate to heavy rainfall occurred over the upper Ouachita Basin above Arkadelphia, Ark., during the evening of the 8th until the morning of the 10th. The rainfall averaged 2.5 inches over the Caddo, 5.25 inches over the Saline, and 2 1/2 to 3 inches over the Ouachita. Light flooding resulted on the Caddo on the 9th and on the Saline and Ouachita Rivers on the 10th. No significant damages resulted.

WEST GULF OF MEXICO DRAINAGE

Light flooding occurred on the Calcasieu at Hineston, La., from the 24th to the 29th due to rainfall on the 23d ranging from 1.55 inches at Singer, La., to 3.29 inches at De Ridder, La. At Oakdale, La., the river went 1 foot above bankfull stage on the 30th.

Excessive rains began in central Texas on the 21st. The amounts exceeded 5 inches during the 24-hour period ending at 7 a.m. the 22d, in the middle Brazos Basin, with lesser amounts between Valley Junction and College Station, and another 5 inches near Washington extending northeastward to the headwaters of the San Jacinto Basin. This excessive rainfall produced flooding at Cameron, Tex., on the Little River. The Navasota River rose rapidly to a crest of 15.7 feet (flood stage 14 ft.,) on the 25th.

Heavy rainfall of 3 to over 5 inches around Austin, Tex., and in the Colorado River Basin just below Austin on the night of the 21st caused sharp rises on the river on the 22d through the 24th. There was some minor local flooding of low highways and roads just to the east and southeast of Austin on the evening of the 21st. It was of short duration and only minor damage resulted.

Heavy rainfall over the watersheds of the Guadalupe, Lavaca, and Navidad Rivers in Texas on the 21st and 22d caused some flooding of the lowlands along these rivers. Rainfall reports during this period ranged from 2 inches to above 6 inches mainly over the northern and central portions of these rivers. The principal damage was to flooded low pastureland.

PACIFIC SLOPE DRAINAGE

Sacramento and San Joaquin Basins.--The first 7 days of January brought heavy rains throughout the Sacramento and San Joaquin Basins, causing rises on rivers and streams that approached the record high peaks in December at many points.

On the Sacramento River at Red Bluff, Calif., the crest of 25.9 feet shortly before midnight on the 5th was the second highest peak reached there since the completion of Shasta Dam. The highest peak occurred in December 1964. Many reservoirs not specifically under flood control operating criteria were full, or nearly so, from the December rains, and heavy releasen were necessary to prevent uncontrolled spill. On the Mokelumne River the heavy releases from Pardee Reservoir went into Camanche Reservoir, a Corps of Engineers Flood Control reservoir, and thus prevented flood stages from being reached in the Bensons Ferry area in spite of the very heavy flows down the Cosumnes River. Fairly heavy releases were necessary on a number of the tributaries to the San Joaquin. The releases down the Tuolumne River were greater than those in December, and caused more flooding along the lower reaches of this stream to its confluence with the San Joaquin, than in December. The new San Joaquin Flood Control System, not completed, suffered some damage as water was impounded on the landside of the levees. The Tisdale and Fremont Weirs of the Sacramento River Flood Control System were operative the entire month. Moulton and Colusa Weirs came into action for brief periods. Releases from Folsom Reservoir were fairly high, but less than half the volume of the releases in December. The stage at the Eye Street Bridge in Sacramento reached to within 1 foot of the danger level, but no gates of the Sacramento Weir needed to be open..

Following so closely to the December floods, it is likely only a small amount of additional damage resulted. This was mostly in the lower San Joaquin drainage basin where releases were as large or larger than in December. Preliminary estimates of the total damages in the Sacramento and northern San Joaquin Basins for both the December and January floods is in the order of $29,000,000. Much of the damage is to roads and structures, including the rebuilding of the Hellhole Dam on the Rubicon and restoring all the damage its failure caused. Damage above the foothill line was largely to roads, bridges, and a dam under construction (Hellhole). Below the foot-hill line was largely agricultural land, but includes those areas in the lower Yolo Bypass over which the State has "Flowage Rights".

Napa and Russian Basins.--The Russian River again went over its banks throughout much of its length during the 5th through the 7th. Following so closely to the late December 1964 major flooding, little additional damages resulted from the January flooding. Minor flooding occurred on the Napa River during January. The rains which produced this month's floods were from a secondary maximum of the prolonged rain period that began about December 19 and ended January 7. The average rainfall over the Russian Basin from the 2d to the 6th ranged from 5.94 inches at Ukiah to 8.45 inches at Guerneville. Over the Napa River Basin the rainfall ranged from 4.15 inches to 7.63 inches. Little, if any, additional damage resulted to the agricultural lands over and above that caused by the December flood. Much of the damage to roads, bridges, urban real estate, etc., that resulted from the previous flood had not been repaired or reconstructed by the time the second flood occurred. The minor flooding that took place in sections of the Napa River was of the usual type common almost annually or biennially. A number of roads were washed out and some bad mud slides occurred. Most of the damage was to agricultural lands and roads. A few families were evacuated.

Eel Basin.--Moderate to heavy rain occurred over the Eel River Basin during the first few days of January. The Eel River rose to a crest of 19.5 feet (flood stage 17 feet) on the 6th. This was 10 feet lower than the crest of 29.5 feet, which occurred during December 1964. Little additional damage resulted from this minor flooding.

Coquille Basin.--Heavy rainfall during the latter part of January caused flooding along the South and North Fork of the Coquille River during the latter part of the month. The crest along the North Fork was 6 1/2 feet above flood stage near Myrtle Point, Oreg.

Considerable damage resulted to roads, bridges, and farmlands. The high waters along this branch were complicated by numerous log jams remaining from the record December 1964 flooding. Losses in this flood were limited to roads, bridges, and farmlands. The crest on the South Fork was 1/2 foot above flood stage and little or no damage resulted.

Columbia Basin.--No flooding occurred on the main stem of the Snake River during January. However, flash flooding and/or snow and earth slides and ice jams caused damaging floods on normally placid tributary streams at the end of the month. January peak flow in the Grande Ronde River Basin exceeded that for December 1964. Record flow was reported at La Grande, Oreg. In Idaho, streamflow was excessive. It continued high after the December floods and was near January maxima in many streams. Precipitation was well above normal and warm weather developed as the end of the month approached that melted snow as the freezing level lifted. Flooding reached its peak in the Clearwater Basin on the 29th, on the Grande Ronde on the 30th, and on Sand Creek on the 31st. Damage to roads, bridges, and property will run into millions of dollars. A number of mountain communities especially in the Clearwater and Grande Ronde Basins were isolated.

The main stem of the Willamette receded slowly during the first half of January from the record to near record crests of December 1964. By the 23d, flow on controlled tributary streams and upper reaches of the Willamette had dropped to one-third or one-half bankfull levels and reservoirs were near minimum pool.

On the 22d and 23d coastal stations and parts of the Willamette Basin received rather intense rainfall with amounts ranging from 2 to 4 inches during the 2-day period. All streams in western Oregon responded with minor rises. One-inch rainfall amounts were reported at Coast and Cascade Range stations on the morning of the 25th and Willamette Valley locations received about one-half inch amounts. Early on the 26th, another intense storm was beginning to deposit heavy amounts at coastal stations and by afternoon was reaching inland to the Cascade Mountains. One wave after another moved across western Oregon and Washington from the 26th to the 29th. Total rainfall amounts ranged from 3 inches along the valley floor to 10 inches at Coastal and Cascade mountain locations. Streams in northwestern Oregon rose rapidly during the period from the 27-29th to above flood stage. Major damage stages were exceeded on the Santiam at Jefferson, Oreg., and on the Willamette at Salem, Oreg. Near major damage stages occurred on the Willamette below Salem to Oregon City, Oreg.

In northeastern Oregon and southeastern Washington, rainfall during the period from the 26th to the 30th totaled 4 to 5 inches at stations in the Blue and Wallowa Mountains. At Spout Springs, Oreg., located at the headwaters of the Umatilla, Grande Rone, and Walla Walla

Drainages, the 5-day precipitation amount was 11.98 inches, with 3.31 inches reported in the 24-hour period ending the morning of the 29th. Major flooding resulted on the Grande Ronde, Deschutes, and John Day Rivers with flows in some cases higher than in December 1964.

Certain individual properties suffered greater damage in January than in the higher December flood. This was due to the fact that stream banks had been eroded away in December, leaving little or no protection. However, overall January damage in the Willamette and lower Columbia Rivers was considerably less than in December 1964.

GRAYS HARBOR AND PUGET SOUND

Heavy rains and snowmelt from the 27th to the 30th caused flooding on the Chehalis, Snoqualmie, and Snohomish Rivers during the latter part of January. The persistent rains caused numerous earth and rock slides. Heavy damage resulted to roads.

JANUARY 1965

TABLE I PRECIPITATION JANUARY 27-30, 1965

Willamette Basin (Oregon)

STATION	27	28	29	30	TOTAL
Albany	0.87	3.47	0.51	0.12	4.97
Aurora	1.09	1.20	e1.00	.15	3.44
Belknap Springs 8N	.29	3.59	1.60	.85	6.33
Canby	1.10	.45	.50	.14	2.19
Corvallis	.71	3.60	.63	.19	5.13
Cougar Dam	1.74	4.67	2.08	1.05	9.54
Detroit	1.78	5.37	1.85	1.39	10.39
Dilley 1S	1.02	.68	.23	.13	2.06
Eagle Creek	1.09	1.80	1.30	.82	5.01
Falls City	1.58	3.41	.28	.12	5.39
Fall Creek	.08	.38	1.27		1.73
Farmington	1.13	.44	.30	.08	1.95
Hills Creek Dam	.14	.41	1.04	.12	1.71
Holley	.63	1.44	1.44	.41	3.92
Lacomb 1WNW	.65	2.72	1.40	.55	5.32
Leaburg	2.16	2.79	.98	.07	6.00
McKenzie Bridge	1.34	3.70	1.90	1.21	8.15
Mehama	1.20	2.98	1.05	1.00	6.23
Philomath 2SE	.53	1.98	.67	.13	3.31
Portland WBAS	.44	.60	.81	.38	2.23
Santiam Pass	1.79	2.14	.99	.00	4.92
Summit	1.56	5.94	2.18	1.05	10.73
Timber	1.25	1.24	.58	.21	3.28
Waterloo	.70	1.98	1.07	.30	4.05
Whiteson 2NNW	1.21	2.21	.38	.16	3.96
Willamina 2S	.55	2.50	.14	.15	3.34
Willamette Pass	.48	.57	1.69	.83	3.57

FLOOD STAGE DATA

(All dates in January unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest*	
		From—	To—	Stage	Date
ATLANTIC SLOPE DRAINAGE	Ft.			Ft.	
Jackson: Covington, Va.	7	24	24	7.4	24
Tar: Tarboro, N. C.	19	Dec. 30	1	21.6	31
Greenville, N. C.	13	Dec. 30	3	14.8	2
Neuse: Goldsboro, N. C.	14	Dec. 29	5	#19.25	2
Kinston, N. C.	14	1	8	#16.4	5
Cape Fear: Lock No. 2 Elizabethtown, N. C.	20	Dec. 28	1	28.4	Dec. 30
Lynches: Effingham, S. C.	14	2	3	#14.8	2
Pee Dee: Peedee, S. C.	19	Dec. 29	6	#21.4	2
North Fork Edisto: Orangeburg, S. C.	8	Dec. 27	3	#8.85	Dec. 29
Edisto: Givhans Ferry, S. C.	10	1	10	#11.2	6
Savannah: Milhaven, Ga.	15	Dec. 20	21	17.1	1
Clyo, Ga.	11	Oct. 29	31	(12.4 (13.8 (15.7	Dec. 11 Dec. 27 4-5
Ogeechee: Midville, Ga.	6	Dec. 30	2	7.8	Dec. 31
Dover, Ga.	7	2	7	9.1	4
Ocmulgee: Abbeville, Ga.	12	Dec. 30	6	15.65	1
Lumber City, Ga.	15	5	7	16.0	6
Oconee: Dublin, Ga.	21	Dec. 30	2	25.1	Dec. 31
Mount Vernon, Ga.	16	1	6	19.5	2
Altamaha: Charlotte, Ga.	15	3	10	20.1	5
Satilla: Atkinson, Ga.	13	Dec. 9	[illegible]	(16.9 (13.3	Dec.10-16 4
EAST GULF OF MEXICO DRAINAGE					
Flint: Albany, Ga.	20	Dec. 27	3	25.7	Dec. 31
Newton, Ga.	24	Dec. 31	3	25.0	2
Bainbridge, Ga.	25	Dec. 30	4	25.8	Dec. 31
Apalachicola: Blountstown, Fla.	15	Dec. 26 26	10 Feb. 7	22.1 18.3	Dec. 30 28
Choctawhatchee: Caryville, Fla.	12	Dec. 26	2	13.9	Dec. 27
Tombigbee: Jackson L & D, Ala.	43	25	27	45.6	27
Pearl: Bogalusa, La.	15	3 24	E8 28	16.9 17.4	5 25
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Rock: Joslin, Ill.	10	24	26	12.5	26
Skunk: Augusta, Iowa	15	24	26	18.5	24
Salt: New London, Mo.	19	25	25	19.7	25
Fox: Dayton, Ill.	12	3	3	12.0	3
Spoon: Seville, Ill.	20	2 25	3 26	23.4 24.0	2 25
Sangamon: Monticello, Ill.	11	26	27	11.3	27
LaMoine: Ripley, Ill.	22	4 26	7 28	24.2 23.6	5 27
Illinois: LaSalle, Ill.	20	24	25	20.05	24-25
Havana, Ill.	14	26	1/	15.1	28
Beardstown, Ill.	14	28	29	14.3	29
Meredosia, Ill.	428	24	1/	430.4	29
Missouri Basin					
Stranger Creek: Easton, Kans.	15	2	2	16.3	2
Wakenda: Carrollton, Mo.	20	(2 (23	2 23	20.0 20.9	2 23
Grand: Chillicothe, Mo.	24	2	3	27.9	2
Sumner, Mo.	26	2 23	5 24	31.9 28.25	3 24
Chariton: Prairie Hill, Mo.	15	2	2	19.2	2
South Grand: Brownington, Mo.	19	26	26	19.0	26
Ohio Basin					
Tug Fork: Williamson, W. Va.	27	11	11	27.0	11
Green: Lock 4, Woodbury, Ky.	33	11	13	33.3	12
Cumberland: Barbourville, Ky.	27	11	12	29.1	11
MISSISSIPPI SYSTEM (Cont'd.)	Ft.			Ft.	
Ohio Basin (Cont'd.)					
Cumberland (Cont'd.): Williamsburg, Ky.	21	11	12	22.2	11
Elk: Fayetteville, Tenn.	659	10	12	660.9	10
White Basin					
Cache: Patterson, Ark.	7	9	1/	9.0	12
Arkansas Basin					
Petit Jean: Danville, Ark.	20	10	11	20.5	9
Red Basin					
Caddo: Glenwood, Ark.	15	9	9	19.2	9
Saline: Benton, Ark.	20	10	10	21.2	10
Ouachita: Arkadelphia, Ark.	17	10	10	18.2	10
WEST GULF OF MEXICO DRAINAGE					
Calcasieu: Hineston, La.	12	24	29	13.2	27
Little: Cameron, Tex.	30	22	23	35.8	22
Navasota: Easterly, Tex.	14	25	25	15.7	25
Navidad: Ganado, Tex.	21	24	24	21.75	24
Lavaca: Edna, Tex.	21	24	24	22.5	24
Guadalupe: Gonzales, Tex.	20	23	24	26.1	23
Victoria, Tex.	21	25	26	23.85	26
PACIFIC SLOPE DRAINAGE					
Sacramento Basin					
Consumnes: Michigan Bar, Calif.	7	6	8	10.4	6,7
Yuba: Upper Narrows Dam, Calif.	527	1	31	535.3	6
Sacramento: Red Bluff, Calif.	23	5	6	25.9	5
Hamilton City, Calif.	147	6	6	147.5	6
Ord Ferry, Calif.	117	6	7	117.8	6
Moulton Weir, Calif.	77	5	13	82.2	7
Colusa Weir, Calif.	62	1	22	68.7	7
Tisdale Weir, Calif.	45	1	31	49.7	7
Fremont Weir, Calif.	33	1	31	37.7	7
Napa and Russian Basins					
Napa: St. Helena, Calif.				15.0	5
Napa, Calif.				25.1	5-6
Russian: Hopland, Calif.	21	5	5	21.35	5
Healdsburg, Calif.	19	5	6	21.0	5
Guerneville, Calif.	29	5	7	39.2	6
Eel Basin					
Eel: Fernbridge, Calif.	17	5	7	19.5	6
Coquille Basin					
South Fork: Myrtle Point, Oreg.	35	24 29	24 29	35.2 35.5	24 29
North Fork: Myrtle Point(nr), Oreg.	E28	11 24 28	12 25 1/	29.45 28.6 34.6	12 24 29
Columbia Basin					
Portneuf: Pocatello, Idaho	6	31	31	6.3	31
Grande Ronde: La Grande, Oreg.	9	28	31	12.2	30
Marys: Philomath, Oreg.	20	27	29	20.6	28
Santiam: Jefferson, Oreg.	15	27	31	22.1	28
Luckiamute: Suver, Oreg.	27	27	30	31.6	28
South Yamhill: Whiteson, Oreg.	38	27	31	44.2	28
Pudding: Aurora, Oreg.	20	27	Feb. 4	27.4	29
Tualatin: Dilley, Oreg.	13	27	30	13.7	28
Farmington, Oreg.	29	28	Feb. 4	32.6	30
Oswego, Oreg.	20	31	Feb. 1	20.2	31
Johnson Creek: Sycamore, Oreg.	8	27	29	11.3	28
Willamette: Harrisburg, Oreg.	12	28	30	14.4	29
Corvallis, Oreg.	20	29	30	21.4	29

FLOOD STAGE DATA

(All dates in January unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest*	
		From—	To—	Stage	Date
PACIFIC SLOPE DRAINAGE (Cont'd.)	*Ft.*			*Ft.*	
Columbia Basin (Cont'd.)					
Willamette (Cont'd.): Albany, Oreg.	20	28	31	22.6	30
Salem, Oreg.	20	28	31	26.0	29
Oregon City Upper, Oreg.	14	29	Feb. 1	17.2	30
Oregon City LWR, Oreg.	27	28	Feb. 3	39.3	30
Portland, Oreg.	18	29	Feb. 3	23.7	31
Columbia: Vancouver, Wash.	16	28	Feb. 4	22.6	31
St. Helens, Oreg.	17	30	Feb. 2	19.3	Feb. 1
Longview, Wash.	12	29	Feb. 4	16.1	31

River and station	Flood stage	Above flood stages -dates		Crest*	
		From—	To—	Stage	Date
PACIFIC SLOPE DRAINAGE (Cont'd.)	*Ft.*			*Ft.*	
Grays Harbor					
Chehalis: Centralia, Wash.	63	27	31	65.4	30
Grand Mound, Wash.	14	29	31	15.0	30
Puget Sound					
Snoqualmie: Carnation, Wash.	54	28	31	56.9	29
Snohomish: Snohomish, Wash.	25	28	Feb. 1	30.2	31

* Provisional
# Highest stage observed
1/ Continued at the end of month
E Estimated - gage out from Jan. 7 to 11
G Water level above highest value on gage

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb.)	ALBANY, N. Y. 1007 MB						ALBUQUERQUE, N. MEX. 839 MB						AMARILLO, TEXAS 892 MB						ANCHORAGE, ALASKA 1001 MB						* ANNETTE, ALASKA 1005 MB					
					Wind						Wind						Wind						Wind						Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	31	86	- 9.5	72	230	3.3	31	1,619	.0	68	36	1.9	31	1,095	- .5	76	265	5.1	31	29	-11.1	70	18	3.9	31	37	- .3	81	124	6.6
1000	31	140			265	4.1	31	190					31	168					31	50			14	6.6	31	74			141	8.2
950	31	536	- 9.4	63	282	10.7	31	610					31	585					31	449	- 8.6	53	10	8.5	31	483	- 2.1	83	150	17.3
900	31	953	-10.3	63	293	17.1	31	1,053					31	1,027					31	867	- 7.3	49	44	7.8	31	912	- 4.1	88	170	17.7
850	31	1,393	-10.3	60	295	21.2	31	1,517					31	1,482	4.1	54	282	10.5	31	1,311	- 9.4	52	60	7.4	31	1,361	- 6.4	90	189	16.7
800	31	1,859	-11.1	55	291	25.1	31	2,005	1.5	53	305	5.4	31	1,974	2.7	50	296	13.4	31	1,778	-11.7	56	96	9.5	31	1,834	- 8.6	87	210	18.3
750	31	2,355	-12.2	54	285	28.7	31	2,524	- 1.0	53	287	13.4	31	2,492	.6	45	289	16.5	31	2,271	-13.9	57	111	8.5	31	2,331	-11.4	76	221	20.8
700	31	2,881	-13.9	50	282	33.0	31	3,072	- 3.4	49	297	19.2	31	3,046	- 1.9	43	283	19.8	31	2,792	-16.3	58	148	4.5	30	2,860	-14.1	69	228	22.5
650	31	3,439	-15.7	51	276	40.0	31	3,655	- 5.7	42	290	23.5	31	3,627	- 5.4	41	286	22.7	31	3,341	-19.4	60	171	3.7	29	3,417	-17.5	63	237	22.1
600	31	4,042	-18.8	52	272	41.6	31	4,280	- 8.8	36	288	24.5	31	4,255	- 9.2	41	287	25.8	31	3,937	-23.0	57	193	5.2	29	4,014	-21.3	60	241	24.9
550	31	4,687	-22.6	52	271	47.8	31	4,947	-13.1	36	284	27.4	31	4,918	-13.0	R34	284	30.9	31	4,563	-26.6	51	216	5.1	29	4,648	-25.5	55	243	27.8
500	31	5,380	-26.8	48	270	51.1	31	5,669	-18.1	R35	279	33.0	31	5,643	-17.7	R32	283	34.2	31	5,252	-30.7	45	239	7.4	29	5,337	-29.9	53	252	31.7
450	31	6,132	-31.9	45	270	52.1	31	6,444	-23.6	R32	276	33.2	31	6,413	-23.5	R33	281	37.7	31	5,985	-35.8	45	249	8.7	29	6,076	-34.9	52	257	37.5
400	31	6,957	-37.2	45	266	54.8	31	7,301	-29.8	R30	276	34.0	31	7,272	-30.0	R31	279	41.2	31	6,801	-41.3	46	253	11.1	29	6,895	-39.6	52	259	35.2
350	31	7,868	-43.1	51	273	59.4	31	8,238	-37.1	R30	277	34.8	31	8,209	-36.8	34	279	45.3	31	7,698	-46.2		237	15.2	29	7,738	-44.5	52	252	26.0
300	31	8,893	-48.8		273	61.4	31	9,286	-45.1		284	35.7	31	9,257	-44.7	R26	282	48.8	31	8,722	-49.8		241	19.4	29	8,822	-48.4		245	19.2
250	31	10,079	-53.1		272	61.6	31	10,480	-53.0		283	39.2	31	10,454	-52.5		279	55.9	31	9,903	-50.1		248	22.5	29	10,015	-50.5		259	24.5
200	31	11,512	-53.8		280	59.8	31	11,898	-58.4		278	42.3	31	11,877	-57.3		277	60.8	31	11,369	-47.5		260	23.5	29	11,470	-49.8		268	23.1
175	31	12,371	-53.4		273	53.8	31	12,735	-59.7		277	38.5	31	12,716	-59.2		276	55.9	30	12,253	-47.3		263	23.3	29	12,345	-49.5		273	24.3
150	31	13,361	-54.4		278	50.5	30	13,696	-61.5		279	35.4	31	13,677	-60.8		274	52.1	30	13,271	-47.8		264	22.9	29	13,354	-49.8		279	27.8
125	31	14,525	-56.0		271	48.4	30	14,823	-63.3		280	32.8	31	14,806	-62.5		276	43.7	30	14,471	-49.1		262	24.3	29	14,542	-51.6		288	25.6
100	30	15,934	-58.1		272	43.9	30	16,188	-65.3		277	25.1	31	16,177	-63.9		273	36.1	30	15,932	-49.8		256	22.9	29	15,983	-53.1		291	24.1
80	29	17,335	-58.4		270	38.5	30	17,548	-64.4		287	14.4	31	17,541	-64.2		277	25.8	30	17,369	-50.6		267	22.5	29	17,422	-53.0		297	20.0
70	29	18,173	-58.9		273	32.4	30	18,365	-64.0		303	11.5	30	18,356	-63.9		276	18.8	30	18,258	-50.7		268	20.4	29	18,282	-53.0		300	19.8
60	29	19,141	-58.8		274	29.7	30	19,311	-63.2		325	5.8	30	19,303	-62.6		289	11.1	30	19,264	-50.2		269	23.3	29	19,276	-53.3		307	19.6
50	29	20,286	-58.6		278	29.7	30	20,438	-61.3		360	6.6	30	20,431	-61.2		315	6.4	29	20,461	-50.0		266	23.9	29	20,451	-52.9		314	16.5
40	28	21,695	-57.9		280	28.7	30	21,825	-60.2		16	8.0	29	21,820	-59.7		358	5.2	29	21,919	-49.8		280	25.4	28	21,895	-52.5		323	20.4
30	28	23,505	-58.2		279	27.2	30	23,623	-59.1		41	11.3	28	23,622	-58.6		36	4.7	27	23,809	-50.0		288	28.7	28	23,753	-52.9		325	23.3
25	26	24,665	-57.7		282	25.1	30	24,770	-57.7		39	10.9	28	24,771	-57.6		11	4.1	27	25,000	-49.9		289	32.2	25	24,927	-53.1		323	25.1
20	26	26,074	-57.6		276	27.4	24	26,188	-55.8		44	10.7	25	26,184	-56.0		27	7.4	25	26,457	-49.3		287	35.7	25	26,363	-53.6		331	31.3
15	22	27,896	-56.5		261	37.3	11	28,008	-55.0				16	28,028	-54.2		318	9.5	11	28,343	-49.2				23	28,209	-54.1		337	38.3
10	13	30,475	-53.4										7	30,647	-51.3										16	30,803	-53.9		325	42.5
7																									5	33,217	-54.4			

Standard pressure surface (mb.)	ATHENS, GA. 990 MB						* BARROW, ALASKA 1025 MB						BARTER IS., ALASKA 1022 MB						BETHEL, ALASKA 1001 MB						BISMARCK, N. DAK. 956 MB					
					Wind						Wind						Wind						Wind						Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	31	246	3.2	78	290	3.3	30	8	-29.3	58	91	9.1	31	15	-30.1	71	87	4.7	30	39	-18.6	74	29	8.7	31	505	-17.9	68	1	1.7
1000	31	165					30	184	-25.6	63	93	16.5	31	172	-26.7	57	89	10.3	30	46			37	12.2	31	167				
950	31	582	5.2	64	261	12.0	30	566	-20.9	69	93	22.1	31	552	-23.0	59	94	16.3	30	442	-10.3	65	57	11.1	31	555			334	3.3
900	31	1,025	4.3	59	267	16.5	30	960	-18.9	63	92	20.0	31	944	-19.3	59	96	15.5	30	854	- 9.0	58	74	5.8	31	963	-10.1	62	310	8.9
850	31	1,490	3.3	56	267	20.4	30	1,386	-18.6	62	89	17.7	31	1,370	-18.3	54	89	14.4	30	1,296	- 9.6	52	92	4.5	31	1,407	- 7.1	59	298	14.0
800	31	1,981	1.7	52	266	22.5	30	1,838	-19.2	57	86	14.4	31	1,822	-19.2	50	87	13.2	30	1,764	-11.2	52	85	2.7	31	1,881	- 6.9	53	277	19.0
750	31	2,497	- .6	46	264	25.8	30	2,316	-20.8	54	82	13.4	31	2,302	-20.6	48	90	11.1	30	2,261	-13.0	52	200	.6	31	2,378	- 8.9	53	299	23.9
700	31	3,049	- 3.0	45	265	28.4	30	2,825	-22.7	55	78	10.9	31	2,809	-22.7	44	82	7.4	30	2,781	-15.5	50	269	2.1	31	2,914	-11.4	51	299	27.4
650	31	3,629	- 6.0	40	268	32.6	30	3,367	-25.3	54	71	10.1	31	3,351	-25.4	41	66	6.2	30	3,336	-18.4	46	249	2.9	31	3,471	-14.4	50	298	30.3
600	31	4,256	- 9.5	39	267	41.2	30	3,943	-28.4	54	64	8.5	31	3,927	-28.6	39	65	6.4	29	3,933	-21.7	45	218	5.8	31	4,083	-17.9	44	298	32.2
550	31	4,920	-13.7	37	266	43.7	30	4,562	-31.8	53	51	8.4	31	4,544	-32.2	R37	52	5.4	29	4,565	-25.7	47	223	7.8	31	4,720	-22.2	44	296	36.7
500	31	5,642	-18.3	38	267	48.4	30	5,232	-36.5	51	30	6.8	31	5,214	-35.9	R36	25	7.4	29	5,253	-29.9	46	205	10.5	31	5,422	-27.1	46	295	40.8
450	31	6,417	-23.8	38	266	52.1	30	5,958	-39.6	53	335	6.0	31	5,938	-40.3	R39	4	9.1	29	5,993	-35.0	44	204	10.3	31	6,166	-32.5	48	295	44.7
400	31	7,272	-29.6	34	269	57.5	30	6,758	-44.8		334	7.4	31	6,734	-45.4		350	9.5	29	6,808	-40.7	47	203	10.7	31	6,994	-38.3	48	294	47.2
350	31	8,211	-36.4	R32	269	64.1	30	7,640	-50.4		302	11.7	31	7,616	-50.1		335	12.2	29	7,705	-46.5		210	13.8	31	7,899	-44.8	40	290	53.2
300	31	9,263	-43.7	R34	274	70.9	30	8,634	-55.2		321	12.0	31	8,613	-54.1		331	14.6	29	8,716	-51.0		196	19.8	31	8,915	-50.9		290	55.8
250	31	10,468	-51.1		274	77.5	30	9,790	-57.4		302	15.2	31	9,779	-54.4		309	16.5	29	9,898	-51.4		226	19.2	31	10,091	-54.2		294	56.3
200	31	11,902	-55.9		275	70.9	30	11,206	-55.0		278	21.4	31	11,216	-51.9		291	25.4	28	11,345	-48.4		228	22.1	31	11,521	-53.7		291	53.2
175	31	12,746	-58.4		273	68.8	30	12,061	-53.8		271	27.2	29	12,076	-51.4		285	30.7	28	12,226	-47.6		231	22.7	31	12,380	-53.1		290	51.9
150	31	13,711	-60.3		272	64.9	28	13,057	-53.1		274	31.9	28	13,076	-51.5		284	35.5	28	13,244	-48.1		234	21.6	31	13,372	-53.4		291	49.5
125	31	14,842	-63.1		270	57.3	27	14,237	-53.1		270	38.7	28	14,258	-51.7		283	39.8	28	14,444	-48.5		238	21.0	31	14,541	-54.9		295	42.7
100	31	16,205	-65.2		270	47.0	27	15,673	-53.5		272	44.9	27	15,702	-51.9		282	49.1	28	15,910	-49.2		234	21.6	31	15,962	-56.2		297	39.6
80	31	17,561	-66.0		271	38.1	27	17,108	-53.7		270	52.4	26	17,144	-52.5		281	55.6	28	17,370	-50.0		235	21.0	31	17,378	-56.5		302	31.5
70	31	18,370	-65.9		277	30.7	26	17,959	-53.9		272	56.5	26	18,005	-52.8		282	56.3	28	18,242	-49.7		238	22.3	31	18,224	-56.5		299	28.7
60	31	19,309	-64.7		280	22.7	26	18,948	-54.3		270	58.1	24	18,987	-53.5		282	58.5	28	19,251	-49.5		239	22.1	30	19,208	-56.4		306	26.2
50	31	20,427	-62.6		288	14.8	26	20,115	-54.7		270	61.6	24	20,159	-54.0		282	65.9	28	20,446	-48.8		241	23.7	30	20,364	-57.0		309	23.5
40	30	21,806	-60.6		285	13.6	25	21,545	-54.9		272	69.2	24	21,590	-54.5		283	72.5	28	21,913	-48.6		248	22.7	30	21,775	-57.7		323	21.6
30	28	23,605	-58.5		277	13.2	24	23,388	-55.2		282	79.3	22	23,433	-55.3		286	80.6	26	23,808	-48.4		260	24.9	29	23,599	-57.0		332	22.9
25	26	24,751	-56.9		276	18.8	24	24,550	-55.9		282	85.5	16	24,652	-53.5		289	79.6	26	25,010	-47.8		260	24.7	27	24,760	-57.0		339	23.1
20	26	26,170	-55.1		272	22.1	20	26,016	-54.2		286	87.4	14	26,090	-53.7		296	83.7	22	26,488	-48.1		267	28.4	20	26,215	-55.8		353	23.3
15	24	28,016	-52.6		273	26.4	15	27,911	-53.1		288	90.5	5	27,919	-54.7				16	28,395	-48.6		282	30.5	9	28,068	-54.7			
10	17	30,663	-47.7				12	30,617	-51.1																					
7	7	33,034	-45.0																											

Standard pressure surface (mb.)	BOISE, IDAHO 920 MB						* BROWNSVILLE, TEXAS 1018 MB						BUFFALO, N. Y. 990 MB						* BURRWOOD, LA. 1020 MB						*CANTON IS., PACIFIC AREA + 1008 MB					
					Wind						Wind						Wind						Wind						Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	31	868	.6	82	152	1.9	31	7	13.7	88	61	1.0	30	218	- 5.4	76	243	5.2	31	3	12.7	87	354	2.3	31	4	29.4	64	52	10.5
1000	31	190					30	155	15.8	79	123	3.5	30	136					31	169	14.0	76	32	1.7	31	71	28.1	64	53	11.5
950	31	605					30	591	14.7	67	156	7.4	30	538	- 7.2	73	251	10.7	31	601	11.6	73	230	2.9	31	518	22.5	70	62	11.5
900	31	1,039	.1	72	165	1.6	30	1,047	12.5	61	183	8.4	30	958	- 8.6	71	255	16.5	31	1,052	9.9	64	261	9.7	31	992	19.2	66	73	7.8
850	31	1,497	- .8	68	244	6.4	30	1,526	10.8	54	216	7.0	30	1,401	- 9.4	64	267	18.8	31	1,526	8.9	53	264	13.6	31	1,482	17.1	56	77	2.5
800	31	1,980	- 2.3	69	255	10.1	30	2,030	9.4	42	240	7.4	30	1,869	-10.4	58	277	23.3	31	2,026	6.5	53	264	17.5	31	1,999	16.3	37	313	.8
750	31	2,489	- 4.2	67	267	15.2	30	2,559	6.9	39	253	9.5	30	2,366	-11.9	55	271	27.6	31	2,554	4.2	47	266	21.0	31	2,541	13.6	32	292	3.9
700	31	3,033	- 6.9	66	271	18.3	30	3,128	4.1	35	255	12.2	30	2,891	-13.7	50	275	34.6	31	3,113	1.4	39	261	22.0	31	3,123	10.5	32	295	2.9
650	31	3,607	-10.0	62	275	21.6	30	3,720	.5	31	260	15.7	30	3,451	-15.7	50	278	39.6	31	3,705	- 1.0	30	265	26.0	31	3,733	6.9	31	267	4.1
600	31	4,222	-13.5	55	278	25.8	30	4,364	- 3.9	31	260	17.5	30	4,051	-19.4	49	276	41.8	30	4,342	- 4.7	24	270	28.7	31	4,389	3.2	27	253	2.9
550	31	4,875	-17.5	50	284	31.3	29	5,037	- 8.3	27	263	18.8	30	4,692	-23.0	49	275	47.8	30	5,015	- 9.0	25	270	29.7	31	5,079	- .7	23	257	2.7
500	31	5,587	-22.1	45	283	31.9	29	5,778	-13.2	25	264	19.8	30	5,386	-27.1	48	274	51.9	30	5,754	-13.7	26	269	34.8	31	5,845	- 4.7	22	19	.6
450	30	6,353	-27.6	42	285	32.8	29	6,564	-18.4	27	262	25.1	30	6,138	-31.9	50	273	54.6	30	6,543	-19.2	25	270	40.8	31	6,661	- 9.4	22	114	1.6
400	30	7,193	-33.7	37	288	36.3	29	7,443	-24.5	26	259	26.8	30	6,961	-37.3	47	273	59.8	30	7,413	-25.5	26	267	46.2	31	7,569	-15.0	21	7	.6
350	29	8,111	-40.6	R36	292	40.6	29	8,401	-31.9	28	254	30.7	30	7,873	-42.9	39	274	64.9	30	8,367	-32.7	25	268	51.7	31	8,561	-22.1	21	99	2.7
300	29	9,144	-48.1		301	43.9	28	9,473	-40.6	21	257	36.1	29	8,902	-48.3		274	70.5	30	9,434	-40.9	27	271	55.2	31	9,679	-30.5	21	140	10.1
250	29	10,326	-54.9		300	41.0	28	10,688	-50.3		259	41.4	29	10,091	-52.1		274	63.9	30	10,650	-49.6		270	62.5	31	10,947	-40.8	21	151	17.1
200	29	11,744	-56.6		295	34.2	28	12,113	-59.3		254	51.3	29	11,530	-53.1		273	72.3	30	12,086	-57.0		268	66.4	31	12,425	-53.1		162	18.6
175	29	12,593	-55.6		292	32.4	28	12,942	-62.7		250	49.5	29	12,390	-53.2		276	63.1	30	12,926	-59.2		269	60.6	30	13,272	-60.1		162	18.1
150	29	13,575	-55.8		292	30.3	28	13,889	-64.1		249	46.4	29	13,381	-54.2		276	52.4	30	13,885	-62.1		265	58.1	30	14,217	-67.4		151	11.5
125	28	14,732	-57.6		297	25.3	28	14,996	-67.8		248	42.9	28	14,544	-55.7		276	45.1	30	15,001	-65.8		264	54.8	30	15,294	-75.2		132	4.5
100	28	16,136	-58.8		301	22.1	28	16,323	-71.7		251	30.3	27	15,950	-57.2		278	40.6	30	16,345	-68.7		265	40.0	30	16,562	-82.5		175	2.7
80	28	17,538	-58.9		307	15.7	28	17,638	-71.9		249	19.6	26	17,355	-57.8		281	34.0	29	17,678	-69.6		268	28.9	30	17,807	-79.9		195	3.3
70	28	18,376	-58.7		315	13.4	27	18,425	-70.6		241	12.2	25	18,198	-57.9		278	30.3	29	18,476	-68.0		271	20.6	30	18,579	-71.6		268	6.0
60	27	19,344	-57.2		328	10.9	27	19,347	-67.8		223	4.9	25	19,167	-58.1		276	27.6	29	19,405	-66.4		279	12.4	29	19,502	-67.1		269	15.2
50	27	20,498	-56.7		357	10.9	26	20,454	-64.2		321	1.6	25	20,317	-58.1		281	28.4	28	20,517	-62.8		292	6.4	29	20,609	-64.5		266	22.5
40	27	21,916	-56.2		25	9.9	26	21,832	-60.3		62	2.7	24	21,723	-58.9		285	21.8	28	21,901	-60.1		275	7.0	29	21,983	-61.7		267	22.0
30	23	23,747	-55.7		32	16.3	24	23,637	-56.8		272	5.4	23	23,533	-58.4		293	15.5	28	23,710	-56.4		268	10.7	29	23,773	-59.3		281	1.6
25	19	24,928	-54.4		36	22.9	24	24,798	-54.7		268	13.4	21	24,694	-57.8		288	19.0	27	24,871	-54.4		272	15.9	29	24,922	-57.1		91	28.2
20	17	26,365	-54.0		44	25.1	23	26,232	-52.3		271	20.0	20	26,107	-57.1		289	22.5	27	26,308	-52.0		273	21.8	26	26,344	-53.0		90	53.6
15	13	28,264	-51.7				20	28,111	-48.7		267	29.1	13	27,993	-54.4				27	28,187	-48.4		269	30.9	22	28,220	-46.5		88	65.3
10							10	30,780	-44.3				10	30,611	-53.4				25	30,887	-42.8		262	47.6	10	30,925	-40.4			
7							6	33,208	-42.0										16	33,273	-41.7		255	53.8						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JANUARY 1965

CAPE HATTERAS, N. C.
1018 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	4	5.8	78	350	5.4
1000	31	145	7.0	68	324	7.0
950	31	565	5.7	56	297	12.6
900	31	1,008	4.1	52	284	15.7
850	31	1,472	2.6	50	270	20.4
800	31	1,960	.8	44	268	25.6
750	30	2,476	-.8	43	268	30.9
700	30	3,026	-3.4	41	268	35.0
650	30	3,604	-6.5	34	268	37.7
600	30	4,231	-9.5	R30	268	43.9
550	30	4,892	-13.4	R30	269	48.0
500	30	5,617	-18.2	R30	267	55.8
450	30	6,386	-23.6	R30	265	59.4
400	30	7,246	-29.7	R30	264	64.7
350	30	8,185	-36.3	R32	266	68.8
300	30	9,238	-43.7	R31	268	76.0
250	30	10,442	-51.1		270	79.4
200	30	11,876	-55.4		273	77.3
175	30	12,726	-56.5		275	74.8
150	30	13,700	-58.5		277	65.3
125	29	14,839	-61.3		273	58.3
100	29	16,218	-62.8		271	49.5
80	29	17,589	-63.6		276	36.7
70	29	18,408	-63.2		278	29.5
60	28	19,365	-62.0		283	21.6
50	28	20,496	-60.6		279	18.5
40	28	21,891	-58.8		280	14.4
30	28	23,706	-56.7		261	12.0
25	28	24,867	-54.8		267	15.5
20	28	26,298	-53.4		271	20.2
15	28	28,159	-51.1		260	32.4
10	16	30,805	-45.8			
7	6	33,206	-44.1			

CARIBOU, ME.
989 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	191	-14.9	74	286	6.2
1000	31	105				
950	31	496	-14.5	66	294	8.4
900	31	904	-14.5	67	291	12.4
850	31	1,337	-14.7	65	293	17.5
800	31	1,796	-14.9	63	288	20.4
750	31	2,286	-16.0	62	283	22.5
700	31	2,802	-17.5	58	279	25.4
650	31	3,355	-19.7	56	277	29.3
600	31	3,946	-22.6	54	269	33.4
550	31	4,580	-26.1	48	267	40.0
500	31	5,265	-30.0	42	265	44.7
450	31	6,006	-34.7	40	264	49.5
400	31	6,823	-40.2	R37	264	51.5
350	31	7,723	-45.4	R36	262	54.4
300	30	8,737	-49.4		259	56.3
250	30	9,926	-51.2		261	55.4
200	30	11,378	-50.6		261	52.8
175	29	12,255	-50.7		260	49.7
150	29	13,256	-52.1		257	49.3
125	29	14,431	-54.0		258	47.[illegible]
100	29	15,859	-55.3		265	39.6
80	29	17,280	-56.0		265	34.8
70	29	18,127	-56.8		271	35.5
60	29	19,104	-57.7		272	32.6
50	29	20,255	-57.5		274	29.1
40	28	21,665	-57.9		277	29.5
30	28	23,479	-57.6		278	30.3
25	28	24,629	-58.5		281	33.4
20	25	26,026	-58.3		279	40.2
15	23	27,868	-57.5		285	46.4
10	19	30,421	-55.8		274	69.7
7	10	32,640	-53.9			

CHARLESTON, S. C.
1017 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	13	4.4	79	306	2.9
1000	31	164	8.1	69	281	4.5
950	31	589	7.8	58	267	10.9
900	31	1,033	6.3	52	261	14.2
850	31	1,501	4.7	43	259	17.1
800	31	1,993	3.0	38	263	21.2
750	31	2,515	1.1	33	264	25.8
700	30	3,064	-1.8	R31	266	27.8
650	30	3,649	-4.7	R25	266	32.2
600	30	4,276	-8.4	R25	267	36.7
550	30	4,943	-12.7	R25	267	39.0
500	30	5,668	-17.2	R26	268	45.6
450	30	6,444	-22.7	R29	266	50.7
400	30	7,305	-28.3	R30	267	55.8
350	30	8,250	-35.0	R30	267	61.6
300	30	9,308	-42.7	R30	268	68.8
250	30	10,516	-50.6		270	70.7
200	30	11,951	-56.0		269	69.5
175	30	12,796	-58.4		269	68.2
150	30	13,760	-60.7		272	63.5
125	30	14,887	-63.7		269	55.4
100	30	16,247	-66.5		269	48.4
80	30	17,597	-66.7		269	35.5
70	30	18,404	-66.0		272	30.5
60	30	19,341	-64.6		275	19.8
50	28	20,462	-62.5		279	16.3
40	28	21,846	-60.3		278	11.8
30	28	23,651	-57.5		264	12.2
25	28	24,807	-55.4		270	14.8
20	26	26,235	-53.5		267	17.5
15	17	28,101	-50.6		267	28.9
10	5	30,754	-44.0			

CHIHUAHUA, MEXICO
858 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	1,428	4.8	56	225	1.7
1000	28	157				
950	28	584				
900	28	1,036				
850	28	1,508	7.0	50	219	1.9
800	28	2,009	7.8	41	243	7.0
750	28	2,535	5.4	39	256	10.5
700	28	3,101	2.6	34	261	11.8
650	28	3,688	-.9	34	261	12.4
600	28	4,331	-5.3	R34	253	14.2
550	28	4,999	-9.7	R30	254	17.9
500	28	5,738	-14.5	R32	254	22.0
450	28	6,519	-20.0	R33	259	25.3
400	28	7,392	-26.4	R33	258	29.5
350	28	8,343	-33.5	R33	257	36.1
300	28	9,406	-41.8	R30	256	42.9
250	28	10,617	-50.6		263	46.4
200	27	12,041	-58.1		258	52.1
175	26	12,883	-61.4		260	43.5
150	26	13,835	-64.0		258	38.3
125	25	14,948	-66.2		249	40.2
100	25	16,291	-68.7		253	25.8
80	24	17,624	-68.9		250	18.1
70	23	18,421	-67.9		245	8.9
60	21	19,348	-65.5		250	3.3
50	19	20,466	-62.6		279	2.3
40	18	21,857	-60.0		330	1.9
30	17	23,661	-58.1		344	2.9
25	15	24,816	-56.4		291	5.1
20	12	26,242	-53.7		265	13.0
15	7	28,076	-52.2			

* COLD BAY, ALASKA
996 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	30	-2.7	86	232	1.6
1000	31	-1			156	5.2
950	31	409	-2.5	70	285	1.7
900	31	835	-4.1	73	285	2.7
850	31	1,285	-6.1	74	253	4.3
800	31	1,757	-8.8	70	237	4.5
750	31	2,254	-11.3	68	236	5.2
700	31	2,782	-14.1	66	233	5.8
650	31	3,340	-16.9	60	219	8.4
600	31	3,939	-20.5	55	218	9.5
550	31	4,575	-24.5	55	219	11.5
500	31	5,267	-28.6	52	224	13.4
450	31	6,009	-33.6	52	220	13.6
400	31	6,832	-39.4	50	220	18.1
350	31	7,734	-45.2		221	20.0
300	31	8,753	-49.0		219	21.2
250	31	9,946	-49.1		228	22.5
200	31	11,419	-47.2		232	20.6
175	31	12,303	-46.9		221	18.8
150	30	13,326	-47.6		224	20.4
125	30	14,527	-49.1		225	17.1
100	30	15,987	-50.1		224	15.3
80	30	17,443	-50.4		222	14.8
70	30	18,315	-49.8		219	13.0
60	30	19,324	-49.1		228	11.1
50	29	20,524	-48.4		218	10.1
40	29	21,993	-47.9		218	9.1
30	29	23,894	-47.2		224	5.6
25	28	25,098	-46.7		231	2.5
20	28	26,578	-46.5		207	2.1
15	27	28,498	-46.2		310	.4
10	23	31,216	-47.0		15	6.2
7	15	33,605	-47.6		352	11.8

COLUMBIA, MO.
989 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	238	-2.5	82	327	.6
1000	31	151				
950	31	557	-2.1	73	263	6.2
900	31	989	-1.5	63	272	12.8
850	31	1,445	-1.4	56	277	16.1
800	31	1,927	-2.5	54	283	19.8
750	31	2,435	-4.8	51	284	22.9
700	31	2,978	-7.3	50	282	25.6
650	31	3,547	-10.4	49	282	29.7
600	31	4,165	-13.8	46	284	33.0
550	31	4,816	-17.9	41	283	36.5
500	31	5,528	-22.6	40	282	40.8
450	31	6,288	-27.9	41	284	42.9
400	31	7,131	-33.4	40	283	48.2
350	31	8,056	-39.7	R35	284	54.8
300	31	9,096	-46.1		279	64.3
250	31	10,291	-52.1		281	68.4
200	31	11,723	-55.3		281	60.8
175	31	12,573	-56.3		278	58.7
150	31	13,550	-57.3		277	55.0
125	31	14,698	-59.0		283	46.6
100	31	16,089	-61.1		283	40.2
80	31	17,474	-61.4		287	33.0
70	30	18,300	-61.2		287	27.4
60	30	19,257	-60.8		292	23.1
50	30	20,393	-60.4		299	17.3
40	30	21,785	-60.0		313	16.7
30	29	23,586	-58.8		330	13.8
25	27	24,742	-57.9		331	13.4
20	22	26,162	-56.8		319	12.6
15	17	28,013	-55.1		304	13.2
10	5	30,641	-51.9			

CORPUS CHRISTI, TEXAS
1017 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	6	13.7	86	57	2.3
1000	30	149	14.0	84	118	2.3
950	30	582	12.9	76	186	5.1
900	30	1,037	12.2	67	221	8.7
850	30	1,514	10.5	59	239	9.7
800	30	2,018	9.1	52	261	10.3
750	30	2,547	6.4	50	272	12.8
700	30	3,113	3.3	47	266	15.5
650	30	3,705	-.2	45	261	19.6
600	30	4,347	-4.0	44	264	19.2
550	30	5,020	-8.3	46	265	20.6
500	30	5,761	-13.2	44	264	24.1
450	30	6,548	-18.8	46	261	26.6
400	30	7,423	-24.8	40	257	29.9
350	30	8,380	-32.2	43	257	33.8
300	30	9,448	-40.6	43	255	37.3
250	30	10,664	-49.9		253	46.0
200	30	12,093	-58.0		251	51.3
175	30	12,926	-61.6		252	49.0
150	30	13,877	-63.2		252	48.2
125	28	14,988	-66.5		250	40.2
100	26	16,332	-69.4		248	30.1
80	23	17,657	-69.5		254	22.1
70	21	18,450	-68.0		257	19.2
60	21	19,383	-66.0		257	12.4
50	19	20,497	-63.6		272	10.5
40	17	21,880	-60.8		296	9.7
30	14	23,679	-57.5		263	8.0
25	11	24,847	-55.3		271	9.7
20	10	26,290	-51.4			
15	8	28,149	-48.0			
10	7	30,846	-44.4			

DAYTON, OHIO
982 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	297	-3.3	79	251	1.9
1000	31	148				
950	31	555	-3.3	75	248	8.5
900	31	981	-4.2	64	264	15.2
850	31	1,432	-4.7	56	272	20.6
800	31	1,909	-5.6	57	276	24.3
750	31	2,412	-7.3	55	275	27.0
700	31	2,950	-9.3	55	272	30.7
650	31	3,517	-12.2	53	272	35.4
600	31	4,129	-15.5	53	271	39.2
550	31	4,775	-19.6	49	270	43.7
500	31	5,484	-24.3	49	270	48.0
450	31	6,241	-29.3	48	274	52.6
400	31	7,077	-34.9	46	273	55.9
350	31	7,997	-41.1	45	270	62.2
300	31	9,029	-47.9		273	63.7
250	31	10,218	-52.8		280	69.2
200	31	11,651	-54.4		286	68.4
175	31	12,506	-54.6		287	64.7
150	31	13,490	-56.3		283	59.1
125	31	14,642	-58.4		282	49.0
100	31	16,038	-60.7		282	43.9
80	31	17,428	-60.1		284	36.7
70	31	18,260	-60.0		286	30.9
60	31	19,221	-60.3		290	28.4
50	31	20,358	-60.1		288	24.9
40	27	21,750	-58.8		292	20.2
30	26	23,559	-57.9		300	13.6
25	26	24,711	-57.1		303	12.6
20	25	26,120	-57.0		299	19.8
15	19	27,942	-55.6		291	28.0
10	8	30,559	-52.5			

DEL RIO, TEXAS
982 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	314	8.3	67	89	2.3
1000	31	164				
950	31	592	10.3	60	143	4.7
900	31	1,040	10.2	53	218	6.6
850	31	1,515	10.1	45	244	11.1
800	31	2,018	8.2	40	269	12.0
750	31	2,545	5.2	38	276	14.6
700	31	3,109	1.8	36	274	17.9
650	31	3,702	-1.7	32	270	22.1
600	31	4,337	-5.2	R27	265	25.1
550	31	5,008	-9.5	R24	265	26.6
500	31	5,745	-14.5	R25	261	30.5
450	31	6,528	-20.2	R28	261	33.8
400	31	7,400	-26.1	R29	260	37.7
350	31	8,352	-33.1	R29	257	43.1
300	31	9,418	-41.4	R26	261	46.2
250	31	10,630	-50.7		262	55.4
200	31	12,055	-58.5		262	59.8
175	31	12,890	-61.2		259	55.6
150	31	13,843	-62.8		255	53.2
125	31	14,960	-65.4		255	43.1
100	31	16,307	-68.3		256	33.2
80	31	17,642	-68.7		255	20.4
70	31	18,443	-67.4		255	14.4
60	31	19,376	-65.5		262	7.2
50	31	20,491	-62.8		306	3.5
40	31	21,873	-60.5		17	3.5
30	30	23,676	-57.8		318	4.3
25	28	24,829	-55.7		281	8.0
20	27	26,259	-53.3		270	14.6
15	22	28,131	-49.7		264	30.7
10	6	30,764	-46.8			

DENVER, COLO.
835 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,611	-2.0	65	227	3.5
1000	31	152				
950	31	568				
900	31	1,006				
850	31	1,465				
800	31	1,952	2.6	38	280	6.8
750	31	2,472	-.2	39	304	10.9
700	31	3,021	-4.1	43	299	15.7
650	31	3,598	-7.9	45	301	22.3
600	31	4,219	-11.9	45	301	25.4
550	31	4,880	-15.8	42	297	26.4
500	31	5,594	-20.5	39	301	29.3
450	31	6,361	-26.2	40	298	31.7
400	31	7,207	-32.7	41	292	36.3
350	31	8,133	-39.8	41	289	39.8
300	31	9,169	-47.2		283	45.6
250	31	10,357	-53.9		281	50.1
200	31	11,778	-56.4		277	50.9
175	31	12,623	-57.5		276	48.6
150	31	13,594	-58.8		277	44.9
125	31	14,735	-59.9		279	38.9
100	31	16,125	-60.7		281	27.4
80	31	17,513	-61.3		283	20.4
70	31	18,341	-60.9		284	17.1
60	31	19,304	-59.8		298	14.6
50	30	20,451	-59.6		319	10.7
40	29	21,852	-59.0		343	10.5
30	29	23,665	-58.0		18	10.7
25	24	24,805	-57.8		22	13.8
20	23	26,221	-56.7		20	15.2
15	14	28,073	-54.1		24	13.0

DODGE CITY, KANS.
925 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	792	-3.2	79	281	3.5
1000	31	166				
950	31	577				
900	31	1,008	1.5	56	291	6.2
850	31	1,470	3.3	46	290	11.1
800	31	1,961	1.7	41	300	13.8
750	31	2,477	-1.2	43	296	17.7
700	31	3,026	-4.2	43	294	19.6
650	31	3,602	-7.7	44	293	23.5
600	31	4,225	-11.3	42	293	25.3
550	31	4,880	-15.4	42	287	28.9
500	31	5,602	-20.2	43	286	33.4
450	31	6,366	-25.5	40	281	36.7
400	31	7,219	-32.0	41	280	41.4
350	31	8,150	-38.4	36	280	44.9
300	31	9,193	-46.0		277	51.1
250	31	10,387	-52.8		277	58.7
200	31	11,812	-56.5		277	60.6
175	31	12,656	-57.8		279	57.7
150	31	13,626	-58.6		277	52.3
125	31	14,767	-60.4		278	45.8
100	31	16,151	-62.1		282	35.7
80	31	17,527	-62.9		281	27.2
70	30	18,354	-62.3		278	19.8
60	30	19,308	-61.0		290	15.7
50	29	20,440	-60.4		309	10.9
40	28	21,828	-60.0		337	7.2
30	28	23,629	-58.9		360	10.7
25	28	24,775	-58.0		350	11.8
20	25	26,191	-56.7		349	11.1
15	14	28,029	-55.0		325	12.2
10						

EL PASO, TEXAS
885 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,193	5.1	58	327	4.7
1000	31	179				
950	31	602				
900	31	1,052				
850	31	1,522	7.2	44	308	5.6
800	31	2,020	5.2	43	281	9.1
750	31	2,544	2.7	39	277	14.8
700	31	3,100	-.3	33	277	17.3
650	31	3,689	-3.1	30	279	19.8
600	31	4,319	-7.1	R28	270	23.3
550	31	4,985	-11.4	R27	271	24.7
500	31	5,718	-16.3	R26	270	27.4
450	31	6,493	-22.0	R27	268	28.7
400	31	7,359	-28.4	R31	264	31.1
350	31	8,303	-35.4	R32	263	36.5
300	31	9,359	-43.2	R24	264	42.5
250	31	10,565	-51.5		263	52.6
200	31	11,990	-58.1		267	52.3
175	31	12,826	-60.7		267	48.8
150	31	13,782	-62.0		264	43.7
125	31	14,904	-63.9		265	33.2
100	30	16,262	-66.8		270	25.8
80	30	17,610	-66.7		273	16.3
70	30	18,419	-65.3		278	9.7
60	30	19,361	-63.9		300	7.8
50	30	20,482	-62.2		354	3.3
40	30	21,867	-60.4		37	5.6
30	29	23,672	-58.3		44	6.6
25	28	24,829	-56.4		30	6.6
20	25	26,250	-54.5		24	6.2
15	21	28,094	-52.4		292	7.8
10	11	30,724	-49.0			

ELY, NEV.
810 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,908	-4.8	77	190	5.4
1000	31	218				
950	31	633				
900	31	1,071				
850	31	1,525				
800	31	2,006	-2.6	68	218	4.1
750	31	2,520	-2.5	60	257	3.3
700	31	3,064	-5.0	59	281	9.3
650	31	3,644	-7.5	55	291	14.6
600	31	4,264	-11.1	48	292	18.3
550	31	4,922	-15.5	43	292	22.1
500	31	5,639	-20.0	40	295	26.2
450	31	6,407	-25.4	38	298	29.9
400	31	7,257	-31.7	37	293	28.7
350	31	8,187	-39.0	37	291	29.7
300	31	9,226	-47.1		307	31.9
250	31	10,413	-54.1		311	34.2
200	31	11,828	-58.2		300	30.3
175	31	12,668	-58.3		296	26.2
150	31	13,638	-60.6		294	26.4
125	30	14,778	-60.3		298	25.1
100	30	16,163	-62.2		300	15.9
80	30	17,542	-61.9		311	10.7
70	30	18,369	-61.1		325	8.9
60	30	19,329	-59.9		353	8.9
50	30	20,469	-59.3		17	8.9
40	28	21,867	-58.4		32	10.5
30	26	23,687	-56.9		54	16.3
25	24	24,848	-55.9		59	19.4
20	19	26,302	-54.2		59	22.1
15	14	28,161	-52.4			

EMPALME, MEXICO
1015 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	27	12	13.0	68	312	6.4
1000	27	134	16.4	51	320	7.8
950	27	571	17.2	40	337	5.8
900	27	1,031	15.4	39	313	1.9
850	27	1,513	13.2	37	214	3.1
800	27	2,020	10.0	39	225	5.8
750	27	2,551	6.7	38	231	7.8
700	27	3,116	3.1	40	250	8.9
650	27	3,706	-.7	38	256	12.0
600	27	4,346	-4.9	34	264	14.0
550	27	5,019	-9.6	34	264	16.1
500	27	5,753	-14.8	37	266	18.5
450	27	6,538	-20.3	42	272	22.0
400	27	7,407	-26.4	40	271	23.9
350	27	8,357	-33.8	37	274	27.4
300	27	9,419	-42.0	R31	272	35.5
250	27	10,628	-50.9		267	45.8
200	27	12,051	-59.0		266	47.8
175	27	12,885	-61.6		260	43.3
150	27	13,835	-63.8		260	35.9
125	27	14,943	-66.5		266	28.7
100	27	16,286	-68.7		260	23.9
80	26	17,624	-67.9		273	14.4
70	26	18,432	-67.8		272	7.0
60	26	19,358	-65.7		288	4.3
50	25	20,470	-63.0		12	1.2
40	23	21,857	-60.4		66	4.3
30	21	23,667	-58.2		307	2.9
25	20	24,816	-56.2		278	9.5
20	17	26,232	-53.9		280	16.1
15	7	28,113	-50.8			

* FAIRBANKS, ALASKA
997 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	135	-29.3	78	10	1.9
1000	31	108			39	3.1
950	31	493	-16.4	68	87	11.7
900	31	896	-14.9	65	104	16.1
850	31	1,329	-14.2	61	109	15.0
800	31	1,788	-15.3	57	109	10.7
750	31	2,274	-17.3	55	108	8.2
700	31	2,789	-19.8	52	108	5.6
650	31	3,335	-22.5	52	111	3.5
600	31	3,920	-25.7	50	90	.6
550	31	4,540	-29.3	44	308	2.1
500	31	5,221	-33.7	43	314	4.9
450	31	5,949	-38.2	43	326	9.3
400	31	6,756	-43.0	43	317	12.8
350	31	7,647	-47.9		320	14.8
300	31	8,654	-51.8		308	17.5
250	31	9,836	-51.5		291	19.6
200	31	11,293	-49.1		285	22.7
175	31	12,171	-48.5		284	24.7
150	31	13,185	-48.5		279	27.2
125	31	14,381	-49.4		281	29.7
100	31	15,840	-50.2		280	31.3
80	31	17,294	-51.2		282	32.1
70	31	18,161	-51.3		281	32.1
60	31	19,163	-51.4		283	34.6
50	29	20,356	-51.3		283	35.5
40	28	21,810	-51.5		285	40.0
30	27	23,685	-51.5		292	46.8
25	26	24,871	-50.8		299	49.0
20	23	26,335	-50.6		292	56.3
15	18	28,214	-51.8		303	61.0
10	11	30,912	-50.3			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JANUARY 1965

FLINT, MICH.
988 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	234	-6.2	76	264	2.7
1000	31	140				
950	31	542	-7.7	73	268	7.2
900	31	961	-8.3	67	280	12.4
850	31	1,405	-9.0	62	278	18.8
800	31	1,873	-10.0	54	279	22.9
750	31	2,369	-11.1	52	281	26.4
700	31	2,897	-12.8	53	279	28.7
650	31	3,455	-15.6	51	279	33.6
600	31	4,059	-18.7	47	278	38.7
550	31	4,698	-22.7	45	279	42.2
500	31	5,396	-27.1	45	278	46.4
450	31	6,141	-32.0	45	279	51.1
400	31	6,971	-37.7	44	275	58.3
350	31	7,881	-43.1	44	272	65.3
300	30	8,918	-48.6		271	71.1
250	30	10,105	-52.2		273	65.1
200	30	11,542	-53.4		273	64.9
175	30	12,400	-53.5		275	57.1
150	29	13,385	-53.8		278	56.9
125	29	14,550	-55.8		278	47.2
100	28	15,968	-57.4		278	41.6
80	28	17,375	-58.3		282	35.9
70	28	18,214	-58.4		283	32.6
60	28	19,184	-58.2		282	28.9
50	27	20,331	-58.3		291	23.1
40	26	21,734	-58.1		299	22.9
30	22	23,533	-57.5		297	22.0
25	20	24,687	-57.1		302	22.5
20	19	26,097	-56.2		309	20.6
15	11	27,945	-54.5			
10	5	30,544	-52.5			
7						
5						

FORT WORTH, TEXAS
999 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	180	5.3	75	271	1.9
1000	31	167			340	3.9
950	31	593	6.4	67	244	6.6
900	31	1,032	6.7	60	254	9.1
850	31	1,502	6.7	49	265	12.8
800	31	1,999	5.2	42	271	16.7
750	31	2,526	2.5	39	272	19.4
700	31	3,079	-.7	37	272	21.8
650	31	3,669	-4.0	38	271	26.0
600	31	4,295	-7.5	37	268	29.5
550	31	4,966	-11.8	36	270	32.1
500	31	5,690	-17.0	R34	270	36.1
450	31	6,470	-22.2	R30	269	41.2
400	31	7,329	-28.4	R28	268	44.7
350	31	8,274	-35.0	R28	265	50.5
300	31	9,331	-43.3	32	265	56.1
250	31	10,534	-52.0		270	58.7
200	31	11,956	-58.0		271	55.9
175	31	12,793	-60.2		267	55.0
150	31	13,751	-61.5		266	51.1
125	30	14,872	-64.1		266	46.4
100	30	16,229	-66.4		269	37.7
80	30	17,578	-66.4		270	24.7
70	30	18,387	-65.6		273	19.2
60	30	19,329	-63.7		284	12.2
50	30	20,450	-62.3		296	5.8
40	30	21,834	-60.2		337	6.2
30	29	23,634	-58.7		338	5.4
25	29	24,782	-57.2		319	5.6
20	28	26,200	-55.6		310	8.0
15	20	28,050	-52.9		285	15.0
10	10	30,754	-47.8			
7	8	33,106	-46.6			
5	7	35,338	-44.2			

GLASGOW, MONT.
933 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	696	-14.9	70	91	2.9
1000	31	166				
950	31	557				
900	31	970	-9.4	64	317	5.1
850	31	1,415	-5.6	63	301	13.2
800	31	1,891	-5.6	61	300	19.0
750	31	2,392	-7.8	58	301	24.3
700	31	2,929	-10.9	59	300	27.6
650	31	3,490	-14.7	58	297	30.3
600	31	4,096	-18.5	54	298	32.1
550	31	4,739	-22.6	50	301	33.2
500	31	5,433	-27.2	45	303	36.7
450	31	6,178	-32.3	43	304	42.9
400	31	7,006	-38.2	44	304	48.2
350	31	7,912	-44.4	R33	305	50.5
300	31	8,930	-50.6		303	56.9
250	31	10,105	-54.4		302	54.4
200	31	11,532	-54.1		301	49.7
175	31	12,389	-53.7		295	43.7
150	31	13,38[illegible]	-53.4		296	43.1
125	31	14,548	-55.3		302	38.5
100	31	15,968	-56.4		301	33.2
80	31	17,383	-56.7		306	29.5
70	31	18,229	-56.6		309	27.2
60	31	19,206	-56.5		317	24.9
50	29	20,367	-56.5		323	22.1
40	29	21,784	-55.6		338	23.3
30	28	23,620	-56.1		341	20.2
25	27	24,779	-56.4		351	22.7
20	22	26,211	-55.9		353	24.7
15	14	28,082	-54.7			
10						
7						
5						

GRAND JUNCTION, COLO.
854 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,474	-2.7	78	121	2.9
1000	31	208				
950	31	622				
900	31	1,059				
850	31	1,515			129	4.1
800	31	1,999	-1.1	63	159	4.1
750	31	2,511	-3.3	64	233	5.6
700	31	3,055	-6.3	64	268	10.9
650	31	3,631	-9.0	57	281	15.3
600	31	4,249	-12.0	54	294	20.6
550	31	4,907	-15.8	53	295	25.3
500	31	5,623	-20.7	51	292	27.6
450	31	6,389	-26.2	47	293	30.3
400	31	7,236	-32.6	45	290	32.4
350	31	8,164	-39.3	41	288	36.7
300	31	9,203	-46.5		288	42.9
250	31	10,392	-53.8		291	42.7
200	31	11,809	-57.3		286	46.8
175	31	12,652	-58.0		285	41.4
150	31	13,621	-58.6		287	37.3
125	31	14,763	-60.3		289	29.3
100	31	16,146	-62.8		287	22.0
80	30	17,519	-62.6		287	19.6
70	30	18,343	-61.6		297	14.6
60	30	19,302	-60.5		310	10.3
50	30	20,438	-60.0		343	8.2
40	29	21,835	-59.1		3	8.0
30	27	23,650	-58.3		24	12.6
25	25	24,804	-57.0		35	14.6
20	20	26,233	-55.7		39	15.7
15	16	28,083	-53.7		25	15.0
10	5	30,736	-51.5			
7						
5						

GREAT FALLS, MONT.
884 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,123	-6.7	72	230	7.8
1000	31	153				
950	31	558				
900	31	983				
850	31	1,434	-.5	52	249	17.3
800	31	1,917	-2.3	54	267	21.6
750	31	2,421	-5.8	54	274	22.0
700	31	2,964	-9.5	56	286	24.1
650	31	3,526	-13.3	53	289	26.6
600	31	4,139	-16.8	49	293	28.6
550	31	4,784	-21.2	47	292	31.9
500	31	5,485	-25.6	47	295	37.3
450	31	6,239	-30.7	44	293	41.6
400	31	7,069	-36.5	43	292	44.7
350	31	7,982	-43.1	R40	294	49.9
300	31	9,004	-49.7		296	54.8
250	31	10,183	-54.8		297	52.4
200	31	11,608	-54.1		290	48.6
175	31	12,466	-53.4		291	44.1
150	30	13,459	-54.1		290	40.6
125	30	14,627	-55.6		288	33.0
100	28	16,052	-57.1		297	29.5
80	26	17,453	-56.8		301	26.2
70	25	18,301	-56.7		305	22.9
60	25	19,278	-56.6		310	21.6
50	25	20,434	-56.3		318	18.6
40	25	21,852	-56.3		333	19.0
30	21	23,668	-56.5		350	20.2
25	20	24,829	-56.6		353	23.1
20	18	26,261	-56.2		2	22.7
15	14	28,152	-55.0		8	32.2
10	6	30,712	-53.3			
7						
5						

GREEN BAY, WIS.
991 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	210	-11.0	72	300	4.5
1000	31	140				
950	31	535	-10.3	65	298	6.8
900	31	949	-10.3	57	295	9.7
850	31	1,390	-9.6	54	294	14.8
800	31	1,856	-9.9	47	296	19.4
750	31	2,349	-10.8	45	297	23.7
700	30	2,885	-13.2	43	297	27.2
650	30	3,443	-15.8	41	296	30.3
600	30	4,047	-18.8	38	293	33.6
550	30	4,684	-22.9	37	288	36.7
500	30	5,381	-27.5	38	285	40.0
450	30	6,124	-32.5	37	284	43.9
400	30	6,952	-38.2	R37	285	48.4
350	30	7,859	-44.1	43	283	56.5
300	30	8,881	-49.4		282	61.2
250	30	10,064	-52.9		280	65.3
200	30	11,504	-52.5		280	62.4
175	30	12,367	-52.5		284	57.5
150	30	13,362	-53.2		284	52.4
125	30	14,532	-54.7		284	48.4
100	29	15,961	-56.5		287	41.8
80	28	17,372	-57.0		294	36.3
70	28	18,218	-57.0		291	32.1
60	28	19,192	-57.6		294	29.3
50	28	20,342	-57.7		302	25.6
40	28	21,751	-57.5		304	23.9
30	26	23,568	-58.2		313	19.8
25	24	24,722	-58.0		313	18.5
20	21	26,139	-57.6		314	20.4
15	10	27,941	-56.5			
10						

GREENSBORO, N. C.
987 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	273	.3	76	288	2.5
1000	31	164				
950	31	579	2.5	57	272	9.9
900	31	1,015	1.7	57	270	13.8
850	31	1,475	.4	55	269	18.1
800	31	1,961	-.6	49	273	23.1
750	31	2,476	-2.2	43	272	27.0
700	31	3,022	-4.7	39	267	30.3
650	31	3,599	-7.4	35	266	36.3
600	31	4,222	-10.9	R34	267	41.8
550	31	4,882	-15.2	R33	266	45.3
500	31	5,601	-19.9	38	268	51.1
450	31	6,370	-25.3	40	269	53.4
400	31	7,221	-31.3	43	268	60.2
350	31	8,154	-38.1	42	267	63.9
300	31	9,199	-45.3		268	70.9
250	31	10,397	-51.9		270	78.9
200	31	11,828	-55.9		270	80.0
175	31	12,675	-57.0		271	77.5
150	31	13,648	-58.3		273	69.9
125	31	14,787	-61.6		271	60.0
100	31	16,162	-63.8		271	53.2
80	30	17,527	-63.4		273	39.4
70	30	18,347	-63.2		274	33.2
60	30	19,296	-63.1		276	27.8
50	29	20,425	-61.3		281	20.2
40	29	21,815	-59.8		280	14.8
30	27	23,617	-57.7		275	18.1
25	26	24,770	-56.7		274	20.6
20	26	26,190	-54.8		275	23.5
15	17	28,043	-52.8			
10						

GUAM, MARIANA IS.
998 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	111	24.2	89	92	6.0
1000	31	94			84	8.9
950	31	544	22.6	84	86	17.7
900	31	1,015	19.8	81	89	18.1
850	31	1,506	17.2	79	88	16.3
800	31	2,023	15.0	69	87	14.6
750	31	2,568	12.9	57	87	15.2
700	31	3,146	9.7	50	91	12.4
650	31	3,757	6.7	38	103	13.2
600	31	4,412	3.3	R33	108	12.8
550	31	5,110	-.7	R28	110	11.5
500	31	5,867	-5.4	R28	120	13.4
450	31	6,686	-10.5	R33	109	13.0
400	31	7,584	-16.4	R30	117	12.0
350	31	8,575	-23.4	R26	124	11.1
300	31	9,684	-31.8	R26	134	10.3
250	31	10,947	-41.9		143	10.5
200	31	12,419	-54.1		159	11.5
175	31	13,262	-61.0		165	13.2
150	31	14,202	-68.8		161	15.5
125	31	15,270	-77.2		148	18.1
100	29	16,523	-85.1		131	21.6
80	24	17,756	-79.8		124	11.3
70	22	18,525	-74.9		118	2.1
60	20	19,425	-69.8		330	.8
50	19	20,524	-64.9		195	3.9
40	18	21,902	-60.6		114	4.3
30	16	23,706	-56.3		90	18.6
25	15	24,863	-54.4		90	28.2
20	14	26,305	-51.2		90	34.8
15	11	28,193	-46.6			
10						

HILO, HAWAII
1012 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	11	19.8	85	243	4.5
1000	31	116	21.3	78	242	3.9
950	31	557	18.7	79	146	2.9
900	31	1,024	15.7	81	145	3.5
850	31	1,507	12.8	81	157	4.3
800	31	2,016	10.6	75	175	4.3
750	31	2,553	8.7	51	211	4.3
700	31	3,122	6.6	41	228	4.5
650	31	3,725	3.8	35	231	6.2
600	31	4,373	.3	31	251	9.1
550	31	5,059	-3.6	30	251	11.8
500	31	5,813	-8.5	R32	249	15.2
450	31	6,618	-13.7	27	248	17.3
400	31	7,508	-19.7	R30	257	19.2
350	31	8,487	-26.2	R30	263	24.1
300	31	9,584	-34.5	R33	265	28.6
250	31	10,834	-43.8		270	34.2
200	31	12,300	-53.7		274	35.4
175	31	13,147	-59.5		284	33.6
150	31	14,097	-66.0		286	28.4
125	31	15,185	-72.7		287	22.7
100	30	16,479	-78.2		294	16.1
80	28	17,753	-78.1		354	4.1
70	26	18,525	-74.1		55	4.9
60	26	19,435	-68.8		77	7.6
50	26	20,539	-64.3		103	7.4
40	26	21,920	-59.4		92	5.4
30	26	23,743	-54.9		81	6.8
25	25	24,916	-52.7		64	7.6
20	22	26,361	-50.7		59	11.7
15	18	28,237	-48.3		78	10.7
10	11	30,902	-46.0			

HUNTINGTON, W. VA.
989 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	246	-.9	78	225	2.3
1000	31	155				
950	31	564	-.2	64	246	9.1
900	31	997	-1.7	65	252	16.9
850	31	1,451	-2.8	62	264	20.6
800	31	1,931	-4.2	57	270	24.9
750	31	2,440	-5.4	52	270	28.2
700	31	2,979	-8.0	53	271	31.3
650	31	3,546	-10.8	49	272	34.4
600	31	4,164	-14.1	48	272	38.5
550	31	4,815	-18.2	48	271	43.9
500	31	5,526	-22.5	45	269	49.0
450	31	6,287	-27.5	46	268	54.6
400	31	7,131	-33.2	45	269	62.2
350	30	8,063	-39.7	41	273	63.7
300	30	9,100	-47.0		274	71.9
250	30	10,291	-52.7		275	72.3
200	30	11,723	-54.7		277	72.1
175	30	12,575	-56.0		276	70.1
150	30	13,552	-57.5		274	58.5
125	30	14,697	-59.7		273	51.7
100	30	16,082	-62.3		276	46.6
80	30	17,459	-62.0		280	37.3
70	30	18,285	-61.6		277	30.1
60	30	19,242	-61.4		281	25.3
50	29	20,378	-60.3		282	20.8
40	29	21,771	-59.6		283	17.1
30	26	23,581	-58.7		289	15.7
25	24	24,732	-57.0		286	16.1
20	21	26,150	-55.8		287	14.4
15	14	27,974	-53.8		281	21.0
10						

*** INTERNAT. FALLS, MINN.**
973 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	360	-21.2	65	269	3.1
1000	31	158				
950	31	539	-19.1	70	266	6.0
900	31	942	-15.9	74	292	11.8
850	31	1,375	-14.0	68	295	15.0
800	31	1,835	-13.7	61	296	19.2
750	31	2,320	-14.9	60	298	22.1
700	31	2,845	-16.8	55	300	26.4
650	31	3,396	-19.5	53	300	31.3
600	31	3,990	-22.9	51	298	35.2
550	31	4,619	-26.7	48	297	40.4
500	31	5,306	-31.1	46	295	41.2
450	31	6,044	-36.0	45	295	47.2
400	31	6,856	-41.3	45	292	49.5
350	31	7,752	-46.7		293	57.9
300	31	8,762	-51.6		293	59.8
250	31	9,936	-54.3		291	58.7
200	31	11,372	-52.6		291	54.2
175	31	12,235	-52.4		289	53.0
150	31	13,231	-52.7		291	49.3
125	31	14,405	-53.7		292	49.0
100	31	15,834	-55.1		293	44.7
80	31	17,257	-55.5		295	38.7
70	31	18,107	-55.7		297	36.9
60	31	19,088	-56.2		299	35.0
50	31	20,245	-56.7		302	33.6
40	31	21,657	-57.4		307	32.6
30	31	23,472	-58.1		313	29.3
25	30	24,617	-59.1		315	28.7
20	30	26,016	-59.0		315	33.6
15	23	27,821	-59.3		315	33.8
10	19	30,423	-57.5		320	35.2
7	6	32,724	-57.2			
5						

JACKSON, MISS.
1009 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	94	5.9	86	184	1.0
1000	31	165	6.4	78	185	2.5
950	31	585	7.1	63	227	7.4
900	31	1,032	5.7	60	258	9.7
850	31	1,499	4.3	56	269	14.6
800	31	1,991	3.1	43	272	18.5
750	31	2,507	1.1	35	276	21.8
700	31	3,066	-.8	30	275	26.0
650	31	3,647	-3.7	R26	273	30.7
600	31	4,283	-7.5	R29	271	36.1
550	31	4,945	-11.9	R29	271	37.5
500	31	5,678	-16.7	R31	272	41.0
450	31	6,452	-21.9	R31	272	47.0
400	31	7,320	-28.1	R33	271	51.5
350	31	8,265	-34.9	R33	273	55.9
300	31	9,322	-43.0	R28	273	62.0
250	31	10,527	-51.4		274	68.2
200	31	11,955	-56.9		272	70.7
175	31	12,795	-59.4		269	67.6
150	31	13,755	-61.4		266	63.5
125	31	14,878	-64.5		269	55.6
100	31	16,230	-67.2		267	43.1
80	31	17,575	-67.3		272	28.9
70	31	18,380	-66.9		275	22.5
60	31	19,317	-65.2		279	17.7
50	30	20,432	-63.2		296	11.3
40	30	21,811	-61.3		306	9.7
30	28	23,605	-58.7		290	9.1
25	27	24,756	-56.9		276	13.2
20	26	26,173	-54.8		278	17.7
15	22	28,027	-51.6		271	26.8
10	10	30,668	-46.6			
7						
5						

JACKSONVILLE, FLA.
1021 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	5	8.4	86	324	2.3
1000	31	177	11.0	71	302	2.9
950	31	605	9.7	65	253	6.8
900	31	1,053	8.0	58	254	11.3
850	31	1,524	6.8	50	257	15.2
800	31	2,020	5.3	41	265	18.1
750	31	2,545	2.9	37	267	21.8
700	31	3,101	.0	32	267	23.9
650	31	3,686	-3.2	R28	268	29.9
600	31	4,320	-6.3	R25	270	36.9
550	31	4,989	-10.0	R21	268	44.3
500	31	5,724	-14.8	R24	266	46.4
450	31	6,506	-20.1	R25	268	49.9
400	31	7,376	-26.5	R26	268	52.4
350	31	8,327	-33.6	R26	267	56.9
300	31	9,389	-41.8	R28	269	66.2
250	31	10,601	-50.1		272	67.4
200	31	12,035	-56.8		271	71.5
175	31	12,876	-59.1		270	72.7
150	31	13,834	-62.1		272	69.3
125	31	14,951	-65.8		271	56.5
100	31	16,297	-68.4		273	47.0
80	31	17,630	-69.1		276	31.5
70	30	18,428	-67.8		278	22.7
60	30	19,360	-66.2		286	14.6
50	29	20,477	-63.2		297	8.0
40	28	21,861	-60.0		294	6.8
30	28	23,674	-56.2		266	7.4
25	28	24,838	-54.2		263	14.6
20	28	26,277	-52.0		267	22.7
15	28	28,156	-47.8		264	28.0
10	21	30,856	-43.4		264	55.[illegible]
7	6	33,262	-4[illegible]			
5						

JOHN F. KENNEDY INT. ARPT.NY
1018 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	5	-3.0	60	316	7.8
1000	31	145	-3.5	57	315	8.2
950	31	548	-4.9	56	307	12.0
900	31	974	-5.6	52	302	15.7
850	31	1,421	-6.4	50	292	21.2
800	31	1,894	-7.2	45	284	24.7
750	31	2,398	-8.4	43	277	29.5
700	31	2,930	-10.4	43	276	34.4
650	31	3,499	-12.7	48	275	39.6
600	31	4,105	-16.3	48	270	44.7
550	31	4,754	-20.2	47	270	49.3
500	31	5,456	-24.4	43	270	56.1
450	31	6,215	-29.4	41	270	60.0
400	31	7,048	-35.2	41	271	62.5
350	31	7,966	-41.7	44	270	69.0
300	31	8,998	-47.6		274	76.5
250	31	10,186	-53.0		272	73.6
200	31	11,622	-53.6		272	80.2
175	31	12,479	-54.0		268	68.6
150	31	13,466	-55.5		270	64.3
125	31	14,623	-57.4		269	60.4
100	30	16,029	-59.4		270	46.0
80	29	17,421	-60.1		270	41.6
70	29	18,255	-59.6		273	39.0
60	29	19,221	-59.3		275	29.9
50	29	20,366	-58.5		278	24.3
40	28	21,774	-58.5		283	22.5
30	27	23,584	-57.7		284	21.4
25	27	24,738	-56.6		288	20.8
20	26	26,159	-55.9		286	22.3
15	21	27,994	-54.3		284	25.3
10	17	30,616	-51.3		285	34.4
7	7	32,973	-46.1			
5	6	35,269	-43.8			

JOHNSTON IS., PACIFIC AREA
1012 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	3	23.0	71	47	7.0
1000	31	108	22.8	73	52	9.3
950	31	550	19.2	77	54	11.1
900	31	1,017	15.6	79	60	8.4
850	31	1,501	12.9	74	76	4.1
800	31	2,009	11.7	50	86	2.3
750	31	2,547	10.3	34	103	1.0
700	31	3,121	8.2	R28	264	1.9
650	31	3,725	5.3	R22	265	5.1
600	31	4,379	1.5	R20	296	8.4
550	31	5,069	-2.2	R19	305	10.9
500	31	5,826	-6.9	R18	297	12.8
450	31	6,634	-12.5	R19	309	16.3
400	31	7,530	-18.5	R18	309	20.6
350	31	8,518	-25.8	R19	309	22.0
300	31	9,612	-33.4	R24	300	23.5
250	31	10,868	-42.7		294	25.6
200	31	12,338	-54.1		292	27.6
175	31	13,183	-60.4		289	27.4
150	31	14,127	-67.7		286	26.4
125	31	15,204	-75.2		294	20.0
100	30	16,482	-80.7		293	12.8
80	29	17,736	-80.3		324	4.1
70	29	18,496	-76.3		16	2.7
60	28	19,399	-69.7		75	4.5
50	27	20,502	-65.1		115	4.1
40	26	21,879	-60.3		107	5.1
30	25	23,692	-55.7		80	11.5
25	24	24,854	-54.1		81	15.9
20	22	26,295	-50.7		82	23.3
15	10	28,168	-48.1			
10						
7						
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JANUARY 1965

KEY WEST, FLORIDA
1019 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	20	3	20.4	79	44	5.8
1000	20	165	19.7	78	63	9.3
950	20	604	17.3	79	93	8.4
900	20	1,067	14.5	78	128	5.8
850	20	1,548	11.5	82	175	2.9
800	20	2,053	8.9	74	224	5.1
750	20	2,590	7.8	56	253	5.8
700	20	3,154	5.2	56	267	8.0
650	20	3,755	2.5	46	271	10.1
600	20	4,401	-1.0	41	276	14.0
550	20	5,081	-5.2	39	272	17.1
500	20	5,832	-10.5	39	270	21.8
450	20	6,629	-16.4	40	277	22.0
400	20	7,511	-22.9	38	279	22.7
350	20	8,476	-30.2	38	278	25.1
300	20	9,554	-38.7	36	264	28.6
250	20	10,784	-47.1		259	34.8
200	20	12,229	-56.4		255	41.2
175	20	13,070	-60.1		256	46.4
150	20	14,023	-64.1		259	45.8
125	20	15,127	-68.7		266	39.4
100	20	16,449	-72.9		270	29.3
80	20	17,750	-74.5		264	20.8
70	20	18,528	-73.1		255	13.4
60	20	19,436	-70.3		273	5.6
50	20	20,535	-64.7		335	4.1
40	20	21,916	-59.6		22	2.3
30	20	23,735	-54.9		265	3.7
25	20	24,906	-52.9		264	7.4
20	20	26,353	-50.0		272	9.7
15	19	28,252	-45.8		273	12.0
10	14	30,964	-42.7			
7	7	33,374	-40.1			
5						

KING SALMON, ALASKA
1001 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	15	-10.7	76	51	4.3
1000	30	17			10	5.8
950	30	419	-5.8	71	90	7.0
900	30	839	-6.2	67	104	5.8
850	30	1,285	-7.4	62	134	3.7
800	30	1,756	-9.4	62	157	4.1
750	30	2,255	-12.0	60	175	3.7
700	30	2,777	-14.7	56	204	3.1
650	30	3,335	-17.4	50	253	5.1
600	30	3,931	-20.9	48	249	5.8
550	30	4,568	-25.2	47	262	7.2
500	30	5,254	-29.9	47	257	8.9
450	30	5,996	-34.9	44	252	12.0
400	30	6,810	-40.2	43	251	14.6
350	30	7,710	-45.5		247	15.5
300	30	8,727	-49.8		247	15.0
250	30	9,916	-50.2		249	15.5
200	30	11,382	-47.7		256	17.9
175	30	12,264	-47.4		252	17.5
150	30	13,282	-48.1		249	17.5
125	29	14,482	-49.5		254	17.1
100	29	15,940	-50.2		250	17.3
80	28	17,401	-50.0		252	15.3
70	28	18,273	-49.9		252	15.2
60	27	19,281	-49.5		254	14.8
50	27	20,476	-49.3		263	14.0
40	27	21,939	-48.9		270	14.2
30	25	23,829	-48.5		278	15.7
25	25	25,031	-47.6		290	15.2
20	24	26,514	-47.0		296	15.2
15	19	28,409	-48.4		314	21.0
10	6	31,152	-46.1			
7						
5						

+ KOROR, CAROLINE IS.
1007 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	30	27.3	81	76	4.7
1000	31	90	26.7	81	74	5.8
950	31	540	23.0	81	71	9.3
900	31	1,013	19.9	79	74	8.7
850	31	1,505	17.4	69	69	6.4
800	31	2,022	15.0	60	76	6.4
750	31	2,566	12.8	46	86	7.8
700	31	3,144	9.6	44	94	8.7
650	31	3,753	6.1	40	92	8.9
600	31	4,407	2.2	40	100	10.7
550	31	5,102	-1.8	41	98	12.8
500	31	5,857	-6.4	45	97	14.8
450	31	6,676	-11.2	42	96	16.1
400	31	7,570	-16.6	31	98	15.9
350	31	8,560	-23.5	R28	99	15.7
300	31	9,669	-31.8	R27	107	14.8
250	31	10,930	-42.0		116	18.6
200	31	12,400	-54.4		113	23.1
175	31	13,242	-61.5		110	27.8
150	31	14,179	-69.3		115	29.5
125	31	15,245	-77.4		121	32.6
100	31	16,504	-83.2		104	27.6
80	31	17,757	-77.0		116	7.8
70	31	18,535	-71.4		270	6.6
60	31	19,453	-67.7		276	12.6
50	30	20,562	-64.3		275	14.0
40	30	21,937	-60.9		265	6.4
30	29	23,742	-57.6		101	16.7
25	28	24,895	-55.5		96	34.4
20	26	26,334	-52.0		92	49.1
15	21	28,202	-48.5		93	57.3
10	12	30,898	-43.2			
7	6	33,338	-37.7			
5						

KOTZEBUE, ALASKA
1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	5	-21.7	74	85	7.4
1000	31	112			91	10.7
950	31	498	-15.9	60	95	13.4
900	31	905	-15.5	57	96	10.9
850	31	1,336	-15.7	56	85	9.3
800	31	1,793	-16.9	55	85	8.4
750	31	2,277	-18.0	53	80	7.2
700	31	2,791	-20.1	51	99	7.0
650	31	3,335	-22.8	50	108	5.4
600	31	3,921	-25.6	44	137	3.1
550	31	4,547	-29.1	42	173	3.3
500	31	5,224	-33.2	R41	201	2.9
450	31	5,954	-37.5	R41	215	6.0
400	31	6,762	-42.8	51	222	7.8
350	31	7,652	-48.4		229	8.2
300	31	8,655	-53.0		229	10.1
250	31	9,823	-54.9		238	16.7
200	31	11,258	-51.7		239	20.6
175	31	12,127	-50.4		240	24.7
150	31	13,132	-50.2		241	27.0
125	31	14,322	-50.6		241	30.3
100	31	15,775	-50.8		245	34.0
80	30	17,229	-50.8		245	36.5
70	30	18,097	-51.1		248	38.7
60	30	19,101	-51.1		251	40.6
50	30	20,286	-51.3		253	43.7
40	30	21,738	-50.9		255	47.8
30	30	23,611	-51.0		259	52.6
25	30	24,797	-51.0		260	58.9
20	28	26,251	-51.2		263	64.1
15	20	28,186	-50.1		265	71.9
10	10	30,779	-50.0			
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5						

KWAJALEIN, MARSHALL IS.
1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	4	26.1	78	57	15.9
1000	30	90	25.5	77	59	16.9
950	30	540	21.9	82	63	21.4
900	30	1,009	19.0	81	72	19.8
850	30	1,499	16.2	74	81	15.3
800	30	2,014	15.0	54	89	13.2
750	30	2,560	13.4	43	91	13.2
700	30	3,137	10.6	31	85	14.8
650	30	3,751	7.0	31	85	15.9
600	30	4,404	3.1	30	82	18.5
550	30	5,104	-.7	25	82	21.8
500	30	5,859	-5.4	30	75	23.5
450	30	6,677	-10.8	25	75	25.3
400	30	7,573	-16.4	20	78	22.7
350	30	8,566	-22.2	23	76	21.6
300	30	9,680	-30.8	23	74	16.3
250	30	10,947	-41.0	26	86	11.1
200	30	12,424	-53.2	29	106	12.8
175	30	13,269	-60.7	30	99	12.2
150	30	14,211	-68.5	29	99	10.7
125	29	15,283	-76.3		78	10.1
100	28	16,550	-82.1		79	18.3
80	25	17,799	-80.4		105	15.0
70	25	18,566	-74.0		157	1.2
60	25	19,474	-70.2		275	9.3
50	24	20,570	-66.6		264	13.6
40	24	21,932	-62.7		281	5.6
30	24	23,722	-58.4		80	16.7
25	23	24,883	-55.4		91	32.6
20	23	26,314	-52.4		90	47.6
15	22	28,199	-46.6		91	56.7
10	19	30,910	-42.3		89	61.0
7	15	33,357	-37.9		94	47.2
5	8	35,725	-34.0			

LAKE CHARLES, LA.
1020 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	5	9.2	87	75	1.9
1000	31	166	11.0	75	152	2.5
950	31	595	9.8	66	225	7.8
900	31	1,044	8.8	55	246	11.1
850	31	1,517	8.0	44	257	13.8
800	31	2,016	6.1	36	263	16.3
750	31	2,543	4.3	30	270	18.1
700	31	3,102	1.2	R28	271	21.0
650	31	3,695	-1.8	R27	268	24.7
600	31	4,328	-5.6	R24	265	28.2
550	31	5,001	-9.9	R26	266	31.3
500	31	5,735	-14.8	R25	266	35.7
450	31	6,522	-20.3	R25	265	40.8
400	31	7,388	-26.4	R25	265	44.1
350	31	8,340	-33.3	R25	264	50.1
300	31	9,405	-41.4	R24	265	53.0
250	31	10,618	-50.0		267	62.9
200	31	12,051	-57.5		268	63.7
175	31	12,889	-60.3		267	58.9
150	31	13,845	-62.2		263	55.0
125	31	14,964	-65.1		263	48.2
100	31	16,316	-67.5		267	38.1
80	30	17,656	-68.0		264	24.1
70	30	18,459	-67.1		271	17.9
60	30	19,393	-65.9		279	8.7
50	30	20,508	-62.6		292	5.6
40	30	21,893	-60.4		307	5.1
30	30	23,697	-57.6		275	7.6
25	30	24,854	-55.5		277	10.7
20	29	26,286	-53.1		268	16.5
15	25	28,162	-48.8		271	22.9
10	18	30,850	-43.6		261	53.4
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LANDER, WYO.
826 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,696	-3.7	57	242	5.1
1000	31	161				
950	31	569				
900	31	1,008				
850	31	1,468				
800	31	1,950	-.6	43	246	6.6
750	31	2,461	-2.5	43	261	10.5
700	31	3,010	-5.5	41	273	17.3
650	31	3,580	-9.3	41	284	23.9
600	31	4,202	-13.1	41	292	28.0
550	31	4,852	-17.2	40	296	31.9
500	31	5,569	-22.0	39	298	35.5
450	31	6,326	-27.6	38	293	37.1
400	31	7,174	-34.1	39	287	40.8
350	31	8,095	-41.0	R34	289	43.5
300	31	9,126	-48.3		295	51.3
250	31	10,309	-54.1		299	53.6
200	31	11,734	-55.5		302	46.8
175	31	12,584	-56.3		296	42.9
150	31	13,562	-56.6		293	36.9
125	31	14,716	-57.6		297	32.4
100	31	16,117	-59.7		298	26.8
80	31	17,514	-59.3		299	20.0
70	31	18,350	-58.8		304	16.3
60	31	19,321	-58.2		318	13.8
50	30	20,472	-57.8		341	10.5
40	29	21,883	-57.5		3	12.0
30	26	23,710	-57.1		15	18.3
25	20	24,879	-57.1		20	17.5
20	16	26,265	-57.4		19	19.0
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LAS VEGAS, NEV.
943 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	660	4.1	53	260	5.1
1000	31	177				
950	31	601				
900	31	1,044	8.3	41	338	5.2
850	31	1,514	5.8	41	341	7.2
800	31	2,008	3.2	42	324	6.0
750	31	2,528	.4	43	300	5.8
700	31	3,080	-2.3	38	284	7.0
650	31	3,660	-5.5	37	288	10.1
600	31	4,290	-9.2	36	295	12.0
550	31	4,948	-13.5	32	291	15.9
500	31	5,677	-18.3	28	288	17.7
450	31	6,447	-24.0	R28	291	19.4
400	31	7,305	-30.3	R30	292	21.4
350	31	8,241	-37.4	R34	289	24.3
300	31	9,286	-45.5		291	30.5
250	31	10,480	-53.2		286	36.1
200	30	11,908	-58.7		273	35.4
175	30	12,745	-59.3		276	31.1
150	30	13,710	-59.3		278	28.9
125	30	14,847	-61.5		288	23.3
100	28	16,222	-63.4		294	16.3
80	27	17,594	-63.7		289	11.8
70	26	18,417	-62.5		309	9.1
60	26	19,370	-61.3		10	6.8
50	26	20,506	-59.7		39	7.8
40	24	21,909	-58.5		51	11.1
30	23	23,730	-56.7		58	13.8
25	20	24,897	-55.5		65	15.3
20	17	26,315	-54.3		59	16.1
15	13	28,188	-52.2			
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* LIHUE, HAWAII
1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	36	20.6	83	285	1.6
1000	31	119	21.1	80	349	1.6
950	31	560	18.2	81	45	1.7
900	31	1,024	15.1	80	224	1.0
850	31	1,507	12.1	78	191	2.9
800	31	2,013	10.1	66	215	5.1
750	31	2,544	8.5	44	226	5.6
700	31	3,117	6.2	34	240	7.8
650	31	3,717	3.1	31	246	11.1
600	31	4,366	-.6	30	259	16.1
550	31	5,052	-4.2	27	259	17.9
500	31	5,803	-8.9	27	264	20.0
450	31	6,608	-14.0	29	269	24.1
400	31	7,496	-20.4	29	267	27.0
350	31	8,470	-27.6	31	269	29.9
300	31	9,562	-35.5	27	268	34.8
250	31	10,807	-44.4		270	38.5
200	31	12,269	-54.2		273	40.8
175	31	13,115	-59.5		274	42.9
150	31	14,067	-65.2		277	37.7
125	31	15,159	-71.9		272	32.6
100	28	16,459	-78.3		268	27.0
80	26	17,730	-78.0		269	10.3
70	25	18,502	-74.2		249	2.1
60	25	19,414	-68.4		102	4.7
50	24	20,522	-64.7		98	7.6
40	23	21,902	-59.7		94	6.2
30	23	23,718	-55.9		82	3.9
25	23	24,882	-54.1		356	2.5
20	23	26,320	-52.1		357	4.3
15	22	28,194	-49.3		314	2.7
10	19	30,873	-45.5		205	10.3
7	17	33,267	-41.5		252	19.4
5	6	35,568	-41.0			

LITTLE ROCK, ARK.
1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	79	3.3	79	264	1.4
1000	31	161	3.9	70	275	2.5
950	31	580	3.5	66	254	9.7
900	31	1,018	3.3	59	261	13.2
850	31	1,482	3.1	53	269	17.1
800	31	1,972	1.2	49	272	19.4
750	31	2,489	-.4	42	277	23.1
700	31	3,040	-3.0	41	279	26.2
650	31	3,618	-6.3	40	278	30.5
600	30	4,245	-10.2	38	280	35.2
550	30	4,902	-14.3	R35	276	43.1
500	30	5,628	-18.7	R36	277	46.8
450	30	6,400	-23.8	R38	274	53.6
400	30	7,258	-29.7	40	272	57.7
350	30	8,197	-36.8	R37	272	59.2
300	30	9,248	-44.6	R22	270	65.9
250	29	10,446	-52.1		274	70.9
200	29	11,875	-56.1		268	73.2
175	29	12,719	-58.3		273	69.9
150	28	13,685	-59.8		271	61.8
125	28	14,818	-62.5		274	50.7
100	28	16,187	-64.4		271	43.5
80	28	17,549	-64.8		278	29.5
70	27	18,362	-64.4		279	25.4
60	27	19,308	-63.1		280	17.1
50	27	20,434	-61.7		279	12.0
40	25	21,821	-60.2		295	10.1
30	25	23,623	-58.3		315	7.6
25	25	24,773	-57.3		283	6.6
20	20	26,186	-55.7		310	10.9
15	7	28,040	-54.0			
10						
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MCGRATH, ALASKA
998 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	103	-24.9	63	318	1.4
1000	31	81			34	4.1
950	31	464	-18.8	65	76	13.0
900	31	867	-14.0	64	86	14.6
850	31	1,304	-11.7	57	114	9.1
800	31	1,769	-12.5	54	122	6.2
750	31	2,255	-14.6	52	149	5.6
700	31	2,780	-17.1	50	163	4.5
650	31	3,330	-19.9	49	170	1.2
600	31	3,923	-23.2	45	209	1.6
550	31	4,549	-27.2	45	236	2.7
500	31	5,236	-31.4	43	218	5.8
450	31	5,970	-36.3	39	253	5.2
400	31	6,784	-41.6	43	227	4.3
350	31	7,680	-46.5		307	4.9
300	31	8,694	-50.4		292	9.5
250	31	9,880	-51.0		279	11.8
200	31	11,339	-48.6		282	19.8
175	31	12,219	-47.6		281	23.7
150	31	13,236	-48.3		284	24.5
125	31	14,435	-49.0		277	23.5
100	31	15,897	-50.0		276	24.1
80	31	17,355	-50.2		275	25.6
70	31	18,225	-50.4		282	25.3
60	31	19,232	-50.0		279	24.9
50	31	20,425	-49.6		278	27.8
40	31	21,886	-49.6		288	30.3
30	31	23,770	-49.6		291	32.6
25	29	24,963	-49.4		301	37.7
20	23	26,428	-49.5		292	44.3
15	19	28,272	-50.6		280	49.9
10	6	31,071	-47.6			
7						

+ MAJURO, MARSHALL IS.
1009 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	3	28.0	76	55	12.2
1000	31	84	26.9	76	55	13.6
950	31	530	22.9	78	55	19.4
900	31	1,006	19.6	78	66	19.4
850	31	1,498	17.3	75	76	17.3
800	31	2,015	15.5	65	87	14.0
750	31	2,559	13.2	50	89	11.8
700	31	3,139	10.3	41	86	11.5
650	31	3,748	7.0	36	86	14.0
600	31	4,406	3.4	34	85	17.9
550	31	5,101	-.5	R33	80	19.8
500	31	5,863	-4.9	R29	75	23.3
450	31	6,684	-9.8	R28	72	26.2
400	31	7,585	-15.0	R22	72	24.7
350	31	8,582	-21.7	R20	66	21.4
300	31	9,699	-30.0	R21	68	15.9
250	31	10,971	-40.2	R25	82	10.1
200	31	12,454	-52.6		99	11.1
175	31	13,303	-59.6		87	11.3
150	31	14,250	-67.3		72	9.9
125	31	15,328	-75.3		64	10.3
100	31	16,597	-82.7		73	15.0
80	30	17,839	-81.4		91	14.2
70	30	18,608	-72.2		346	.8
60	28	19,528	-67.3		273	11.8
50	28	20,639	-63.2		267	15.9
40	28	22,021	-59.9		262	10.5
30	26	23,828	-57.0		100	10.9
25	26	24,987	-55.3		88	28.4
20	25	26,419	-52.0		89	48.6
15	21	28,307	-47.4		88	55.2
10	9	31,023	-41.8			
7						

* MARCUS IS., N. PACIFIC
1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	9	22.6	66	35	2.9
1000	31	133	20.9	65	79	3.3
950	31	571	17.1	67	122	1.7
900	31	1,034	13.5	72	219	2.1
850	31	1,513	10.4	71	252	7.4
800	31	2,017	8.8	59	247	11.8
750	31	2,551	8.2	40	256	15.9
700	31	3,120	6.5	30	257	24.7
650	31	3,719	3.7	28	260	30.9
600	31	4,370	-.1	25	262	37.7
550	31	5,056	-3.5	26	262	44.3
500	31	5,810	-7.7	26	261	48.2
450	31	6,614	-12.5	27	260	52.1
400	31	7,514	-17.9	24	264	55.4
350	31	8,500	-24.3	21	265	56.7
300	31	9,606	-32.4	20	265	59.6
250	31	10,865	-42.3		264	61.2
200	31	12,337	-53.7		263	65.5
175	31	13,184	-59.9		262	63.5
150	31	14,132	-66.4		260	58.3
125	31	15,218	-73.1		259	53.2
100	31	16,504	-79.1		259	35.7
80	30	17,769	-77.0		257	19.2
70	30	18,543	-73.1		253	10.9
60	30	19,457	-68.3		204	3.7
50	30	20,568	-62.3		113	2.5
40	30	21,962	-57.6		89	8.5
30	30	23,795	-53.9		93	7.8
25	29	24,969	-52.1		100	7.4
20	27	26,420	-49.5		131	6.6
15	22	28,314	-45.9		221	3.7
10	14	31,048	-41.4		245	6.0
7						

MEDFORD, OREG.
972 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	401	2.8	91	262	.8
1000	31	173				
950	31	591	2.4	82	229	1.4
900	31	1,027	3.4	74	184	5.6
850	31	1,491	2.6	68	210	10.5
800	31	1,980	.2	68	233	16.7
750	31	2,495	-2.3	68	246	19.0
700	31	3,041	-5.4	65	262	20.2
650	31	3,617	-8.9	60	265	23.9
600	31	4,235	-12.5	53	266	26.4
550	31	4,888	-16.5	50	272	28.7
500	31	5,605	-21.3	48	269	26.8
450	31	6,370	-26.4	42	273	29.3
400	31	7,218	-32.1	41	271	26.8
350	31	8,147	-39.1	R36	268	28.9
300	31	9,187	-46.4		273	29.7
250	31	10,379	-53.0		282	31.7
200	31	11,806	-55.8		294	28.7
175	31	12,653	-56.7		294	26.8
150	31	13,633	-56.2		293	29.7
125	30	14,785	-57.6		301	26.0
100	28	16,187	-59.5		296	17.3
80	28	17,583	-59.5		305	12.8
70	28	18,420	-58.4		303	8.4
60	28	19,391	-57.9		340	6.2
50	28	20,542	-56.9		358	6.6
40	27	21,958	-56.0		35	10.1
30	26	23,793	-55.3		47	15.0
25	26	24,957	-54.9		56	16.7
20	26	26,386	-54.3		42	20.8
15	21	28,240	-53.4		48	26.6
10	13	30,882	-51.7		52	27.6
7	7	33,253	-52.9			

* MIAMI, FLA.
1020 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	4	16.4	83	6	1.7
1000	31	169	17.7	70	35	2.9
950	31	606	15.5	70	106	1.2
900	31	1,065	12.8	69	242	1.9
850	31	1,543	9.8	70	256	6.2
800	31	2,046	8.0	59	254	8.2
750	31	2,581	6.2	41	254	10.7
700	31	3,141	4.2	35	265	12.2
650	31	3,739	1.0	31	265	15.3
600	31	4,382	-2.3	27	268	19.8
550	31	5,061	-6.6	27	270	22.9
500	31	5,806	-11.6	27	267	28.0
450	31	6,595	-17.4	29	269	32.8
400	31	7,478	-23.9	30	268	36.5
350	31	8,440	-30.8	27	266	41.4
300	31	9,515	-39.3	28	265	42.9
250	31	10,741	-47.8		258	49.0
200	31	12,182	-57.2		259	56.9
175	31	13,020	-60.6		256	57.7
150	31	13,972	-64.1		262	54.8
125	31	15,077	-68.6		265	44.7
100	31	16,400	-72.2		267	36.3
80	30	17,708	-73.3		268	21.0
70	30	18,490	-72.0		266	13.0
60	30	19,406	-68.5		277	7.0
50	30	20,512	-63.6		301	4.1
40	30	21,896	-59.0		307	3.5
30	29	23,718	-54.8		270	5.8
25	26	24,884	-53.2		266	10.7
20	25	26,327	-50.5		268	12.2
15	22	28,222	-46.4		270	21.2
10	20	30,943	-42.2		252	30.3
7	14	33,359	-40.7		261	48.6

See reference note at end of table

RAWINSONDE DATA

Average monthly values

* MIDLAND, TEXAS
917 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	874	3.3	68	290	2.7
1000	31	168				
950	31	589				
900	31	1,031	5.9	58	287	4.3
850	31	1,502	8.0	45	291	11.7
800	31	2,001	6.3	40	286	14.8
750	31	2,526	2.9	39	277	17.5
700	31	3,083	- .2	39	274	21.2
650	31	3,670	- 3.6	34	272	23.9
600	31	4,302	- 7.0	30	272	27.2
550	31	4,972	-11.1	30	271	29.9
500	31	5,701	-16.3	28	270	29.5
450	31	6,480	-22.0	30	268	33.6
400	31	7,342	-28.4	31	264	37.7
350	31	8,285	-35.6	34	265	39.8
300	31	9,341	-43.3		264	49.3
250	31	10,545	-51.9		268	58.1
200	31	11,966	-58.6		265	58.7
175	31	12,800	-61.0		264	56.7
150	31	13,754	-62.6		262	47.8
125	31	14,872	-65.1		260	42.5
100	31	16,224	-67.3		264	33.0
80	31	17,558	-67.3		265	21.6
70	31	18,373	-66.8		266	14.6
60	31	19,308	-65.4		267	7.6
50	30	20,422	-63.0		310	3.9
40	30	21,800	-61.5		16	3.1
30	28	23,594	-59.5		355	3.7
25	27	24,739	-58.4		317	4.5
20	27	26,148	-56.5		300	7.2
15	20	27,972	-54.4		278	15.0
10	14	30,581	-51.0		274	30.7
7	6	32,903	-47.5			
5						

MONTGOMERY, ALA.
1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	61	5.5	81	253	.6
1000	31	170	7.2	74	242	1.2
950	31	595	7.3	65	256	8.2
900	31	1,038	6.2	57	262	12.2
850	31	1,507	5.4	49	269	15.9
800	31	2,001	3.2	49	269	19.6
750	31	2,522	.8	43	264	25.6
700	31	3,074	- 1.4	39	263	28.9
650	31	3,661	- 4.3	34	264	32.8
600	31	4,289	- 7.6	R28	269	35.7
550	31	4,960	-11.7	R26	269	39.8
500	31	5,685	-16.6	R28	271	44.3
450	31	6,466	-21.8	R30	273	48.0
400	31	7,327	-27.7	R32	273	53.0
350	31	8,273	-34.8	R32	272	58.3
300	31	9,331	-42.8	R29	273	64.9
250	31	10,539	-50.7		273	66.4
200	30	11,974	-56.6		272	64.5
175	30	12,816	-58.9		272	62.5
150	30	13,777	-61.2		269	58.1
125	30	14,901	-64.0		269	55.0
100	30	16,257	-66.8		272	45.1
80	29	17,601	-66.9		270	32.8
70	29	18,407	-66.9		274	26.0
60	29	19,343	-65.1		282	17.9
50	29	20,462	-62.3		289	13.4
40	29	21,846	-60.3		296	10.1
30	27	23,648	-57.3		280	11.3
25	27	24,806	-55.1		276	15.3
20	27	26,237	-53.1		272	19.0
15	26	28,097	-50.9		270	29.1
10	20	30,772	-45.5		263	46.2
7						
5						

NANTUCKET, MASS.
1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	14	- 2.4	70	325	7.6
1000	31	124	- 3.0	65	320	8.2
950	31	528	- 5.0	67	311	13.4
900	31	953	- 6.0	58	308	15.9
850	31	1,401	- 6.5	53	295	20.0
800	31	1,874	- 7.2	49	281	25.8
750	31	2,375	- 8.6	50	273	31.7
700	31	2,910	-10.7	48	271	36.7
650	31	3,473	-13.5	49	272	41.6
600	31	4,083	-16.6	48	269	46.0
550	31	4,726	-20.4	46	266	50.5
500	31	5,432	-24.9	43	266	54.8
450	31	6,183	-29.6	40	265	63.3
400	31	7,023	-34.6	R38	268	69.7
350	31	7,943	-41.0	R36	264	74.4
300	30	8,973	-47.5		265	75.0
250	30	10,164	-52.0		266	77.3
200	30	11,604	-53.3		269	76.9
175	30	12,462	-54.2		267	69.9
150	29	13,440	-54.5		265	67.4
125	29	14,601	-56.8		265	56.7
100	28	16,013	-58.5		266	48.8
80	28	17,411	-59.3		267	38.9
70	28	18,246	-59.4		269	35.7
60	28	19,212	-59.3		267	31.3
50	28	20,354	-59.1		270	26.2
40	28	21,755	-58.2		269	25.1
30	27	23,568	-57.2		270	24.3
25	27	24,721	-57.3		270	23.7
20	27	26,134	-56.5		268	27.8
15	24	27,974	-54.8		275	32.8
10	21	30,582	-50.5		266	49.5
7	11	33,006	-47.4			
5						

NASHVILLE, TENN.
998 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	177	1.5	80	249	1.7
1000	31	162			36	1.6
950	31	578	1.2	67	244	10.3
900	31	1,010	.5	63	260	15.5
850	31	1,469	- .1	60	270	18.3
800	31	1,954	- 1.3	57	271	19.6
750	31	2,466	- 3.0	53	269	22.7
700	31	3,011	- 5.5	52	269	27.4
650	31	3,586	- 8.6	49	269	32.8
600	31	4,207	-12.2	43	267	38.7
550	31	4,863	-16.0	41	269	41.2
500	31	5,579	-20.5	43	270	46.8
450	31	6,345	-25.4	44	270	53.6
400	31	7,196	-31.2	44	269	61.2
350	31	8,130	-37.7	42	273	67.2
300	31	9,174	-45.3		274	72.3
250	31	10,372	-51.8		276	74.4
200	31	11,803	-55.3		277	72.8
175	31	12,652	-57.1		275	72.7
150	31	13,623	-58.7		276	66.8
125	30	14,757	-61.0		275	52.8
100	30	16,135	-63.1		276	43.7
80	28	17,505	-63.7		278	33.2
70	27	18,323	-62.8		278	27.0
60	27	19,275	-61.8		281	22.7
50	25	20,409	-60.7		291	16.7
40	25	21,801	-59.6		304	12.6
30	23	23,607	-57.8		303	10.7
25	22	24,761	-56.2		294	13.0
20	21	26,185	-54.6		294	14.8
15	20	28,034	-52.4		286	19.2
10	19	30,675	-48.4		276	30.5
7	13	33,024	-45.9			
5	6	35,251	-43.6			

NOME, ALASKA
1012 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	7	-17.9	70	63	7.4
1000	30	92			71	9.1
950	30	482	-15.0	53	79	11.7
900	30	889	-15.0	55	85	9.5
850	30	1,322	-14.2	54	70	8.0
800	30	1,781	-14.9	49	67	6.4
750	30	2,267	-16.6	45	77	6.0
700	30	2,784	-19.0	40	72	4.7
650	30	3,329	-21.5	41	95	4.1
600	30	3,920	-24.0	R41	15	2.1
550	30	4,545	-27.4	R39	246	2.9
500	30	5,230	-31.7	R38	212	4.5
450	30	5,965	-36.7	R39	204	5.1
400	30	6,775	-42.1	42	234	5.8
350	30	7,667	-47.8		215	14.2
300	30	8,672	-52.5		219	15.0
250	30	9,845	-53.5		222	19.8
200	30	11,294	-49.9		231	20.4
175	30	12,169	-49.2		237	23.5
150	30	13,181	-48.7		238	26.4
125	30	14,378	-49.5		239	27.6
100	30	15,839	-49.8		245	29.3
80	30	17,296	-50.3		241	30.3
70	30	18,167	-50.3		242	31.1
60	30	19,175	-49.8		246	32.8
50	30	20,368	-49.7		250	34.2
40	30	21,834	-49.2		254	37.5
30	29	23,732	-48.8		265	42.3
25	27	24,932	-48.9		262	45.3
20	22	26,431	-47.3		266	49.9
15	12	28,315	-46.7			
10						
7						
5						

NORFOLK, VA.
1018 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	9	2.0	73	321	4.5
1000	31	156	2.7	63	307	7.0
950	31	572	2.1	51	289	12.6
900	31	1,007	.8	49	280	14.8
850	31	1,465	- .2	48	273	18.1
800	31	1,950	- 1.7	46	273	22.9
750	31	2,459	- 3.3	47	271	28.6
700	31	3,006	- 5.8	42	268	35.2
650	31	3,580	- 8.6	36	268	41.6
600	31	4,200	-11.8	R32	271	45.6
550	31	4,856	-15.9	R32	271	50.7
500	31	5,573	-20.4	R31	270	55.2
450	31	6,337	-25.7	34	269	62.5
400	31	7,188	-31.7	39	268	69.3
350	31	8,119	-38.5	R35	269	68.8
300	31	9,161	-45.8		271	74.6
250	31	10,356	-52.2		270	86.6
200	31	11,789	-54.9		275	80.2
175	31	12,639	-56.2		276	73.6
150	31	13,615	-58.0		273	69.9
125	31	14,756	-60.6		272	57.5
100	31	16,139	-61.9		270	52.6
80	31	17,516	-62.8		269	37.5
70	31	18,338	-62.3		270	33.0
60	31	19,292	-61.5		275	25.8
50	31	20,425	-60.2		278	19.2
40	31	21,821	-58.5		278	15.7
30	31	23,636	-57.0		280	13.8
25	31	24,794	-55.6		281	14.2
20	28	26,216	-54.2		264	23.7
15	16	28,050	-52.5			
10						

*1/ NORTH PLATTE, NEBR.
916 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	848	- 8.4	81	335	3.1
1000	31	161				
950	31	565				
900	31	986	- 3.8	73	308	5.2
850	31	1,442	- .2	57	296	12.2
800	31	1,927	- .8	54	305	16.3
750	31	2,440	- 3.5	51	304	19.4
700	31	2,983	- 6.5	49	304	21.2
650	31	3,557	- 9.9	46	300	23.1
600	31	4,172	-13.8	47	298	25.1
550	31	4,829	-18.1	44	298	27.8
500	31	5,534	-22.5	41	296	31.5
450	31	6,297	-27.8	41	295	38.1
400	31	7,136	-34.1	41	294	42.3
350	31	8,058	-40.9	43	292	46.6
300	31	9,091	-48.1		291	51.9
250	31	10,276	-53.8		286	58.7
200	31	11,700	-55.7		285	62.5
175	31	12,551	-55.5		283	56.3
150	31	13,531	-56.6		283	51.5
125	31	14,683	-58.5		286	44.7
100	31	16,080	-59.9		289	35.7
80	31	17,471	-60.3		292	29.1
70	29	18,301	-59.4		293	24.1
60	28	19,268	-58.9		301	19.4
50	27	20,414	-59.1		324	16.1
40	26	21,822	-57.7		338	12.6
30	25	23,634	-57.6		360	13.4
25	25	24,788	-56.7		3	13.6
20	18	26,186	-56.3		10	14.4
15	13	28,031	-56.1		357	13.8
10	7	30,596	-54.5			

* OAKLAND, CALIF.
1020 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	6	8.2	82	132	2.1
1000	31	171	8.9	70	104	1.7
950	31	596	8.8	61	21	1.6
900	31	1,044	7.8	54	301	3.7
850	31	1,513	5.9	55	268	6.6
800	31	2,008	3.3	55	273	8.4
750	31	2,526	.4	46	272	9.9
700	31	3,079	- 2.4	40	275	11.5
650	31	3,659	- 5.6	38	279	14.2
600	31	4,288	- 9.8	40	282	16.3
550	31	4,949	-14.2	38	280	17.7
500	31	5,670	-19.4	43	282	22.0
450	31	6,440	-24.9	44	288	25.3
400	31	7,292	-31.2	43	292	26.4
350	31	8,225	-38.0	40	289	28.7
300	31	9,269	-45.6		293	33.6
250	31	10,463	-53.6		300	35.4
200	31	11,880	-57.8		299	32.4
175	31	12,722	-58.1		300	28.2
150	31	13,692	-58.7		296	25.6
125	31	14,832	-60.9		301	23.5
100	31	16,210	-63.3		306	16.3
80	31	17,581	-63.1		319	9.7
70	31	18,404	-61.9		330	7.4
60	31	19,362	-60.9		354	6.8
50	31	20,499	-59.4		20	5.8
40	28	21,894	-58.6		52	8.4
30	28	23,707	-57.3		62	11.5
25	24	24,873	-56.1		63	17.3
20	23	26,295	-55.1		63	18.6
15	21	28,130	-53.9		64	20.4
10	13	30,780	-49.9		69	20.8

OKLAHOMA CITY, OKLA.
972 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	392	1.0	84	234	2.5
1000	31	160				
950	31	575	2.6	72	242	5.1
900	31	1,013	4.5	55	257	11.5
850	31	1,479	4.3	45	274	12.8
800	31	1,971	2.2	44	269	17.1
750	31	2,488	.1	44	267	20.4
700	31	3,041	- 2.6	42	267	23.3
650	31	3,621	- 5.9	41	268	27.6
600	31	4,249	- 9.5	39	270	29.3
550	31	4,911	-13.9	41	271	34.6
500	31	5,634	-18.8	37	270	39.6
450	31	6,405	-24.4	37	272	44.9
400	31	7,259	-30.4	35	273	49.9
350	31	8,196	-37.0	R33	272	55.8
300	31	9,244	-44.5		273	61.4
250	31	10,445	-52.0		272	69.0
200	31	11,871	-57.1		274	69.3
175	30	12,718	-58.6		275	66.4
150	30	13,683	-59.9		274	57.9
125	30	14,816	-62.2		274	50.7
100	30	16,187	-63.8		273	39.2
80	30	17,551	-64.6		279	27.0
70	29	18,368	-63.7		281	22.0
60	28	19,316	-62.5		292	16.1
50	28	20,443	-61.4		305	11.7
40	27	21,829	-60.3		332	9.5
30	24	23,629	-58.6		344	7.4
25	18	24,783	-57.1		339	7.0
20	13	26,194	-56.2		307	6.2
15	8	28,065	-53.3			
10						

OMAHA, NEBR.
970 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	403	- 9.0	80	313	1.4
1000	31	160				
950	31	559	- 7.5	74	291	3.5
900	31	983	- 3.9	57	303	9.7
850	31	1,436	- 2.1	49	304	13.8
800	31	1,917	- 3.3	46	299	18.1
750	31	2,423	- 5.1	43	293	23.5
700	31	2,966	- 7.8	41	292	25.4
650	31	3,533	-11.3	42	291	27.4
600	31	4,148	-15.1	41	290	29.9
550	31	4,798	-19.1	39	291	33.8
500	31	5,504	-23.5	36	292	35.2
450	31	6,261	-29.0	37	293	38.9
400	31	7,099	-34.8	R37	288	45.6
350	31	8,018	-41.5	39	286	49.7
300	31	9,048	-48.3		285	56.9
250	31	10,234	-53.1		282	62.2
200	31	11,663	-54.5		282	63.7
175	31	12,518	-54.6		284	61.4
150	31	13,501	-56.0		283	57.7
125	31	14,654	-58.2		285	46.6
100	31	16,055	-59.0		286	39.2
80	31	17,453	-59.6		289	32.2
70	31	18,289	-59.2		294	25.3
60	31	19,253	-59.2		299	21.8
50	30	20,399	-58.4		308	18.5
40	28	21,798	-58.3		314	14.0
30	23	23,599	-57.8		323	15.5
25	21	24,755	-58.1		339	14.2
20	16	26,184	-56.6		344	15.7
15	8	28,045	-55.4			
10						

* 2/ PEORIA, ILL.
994 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	200	- 6.1	81	349	6.0
1000	31	147				
950	31	555	- 5.2	72	275	7.8
900	31	978	- 4.2	61	285	13.2
850	31	1,430	- 3.4	49	287	18.1
800	31	1,909	- 4.6	45	287	21.2
750	31	2,415	- 6.6	46	288	23.9
700	31	2,952	- 8.9	44	285	27.6
650	31	3,519	-11.9	42	285	32.4
600	31	4,132	-15.5	40	284	35.4
550	31	4,782	-19.6	38	286	38.5
500	31	5,486	-24.1	39	286	42.2
450	31	6,240	-29.3	41	284	46.2
400	31	7,078	-34.8	40	281	52.1
350	31	7,998	-40.9	44	274	57.3
300	31	9,032	-47.1		274	66.8
250	31	10,224	-52.0		275	74.0
200	30	11,651	-54.1		276	74.2
175	30	12,507	-54.1		279	65.9
150	30	13,494	-55.0		278	61.6
125	30	14,652	-57.1		279	53.8
100	30	16,056	-59.0		281	45.8
80	30	17,454	-58.8		282	38.1
70	30	18,291	-59.0		285	31.3
60	30	19,259	-59.1		291	24.3
50	30	20,402	-58.9		299	20.6
40	27	21,794	-58.4		306	15.9
30	25	23,611	-57.3		316	14.8
25	25	24,765	-56.8		315	15.5
20	24	26,181	-55.8		315	16.3
15	24	28,019	-54.4		302	19.8
10	21	30,624	-51.5		288	28.2
7	16	32,988	-48.1		290	37.3
5	13	35,275	-45.5			

PITTSBURGH, PA.
974 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	353	- 4.6	75	236	3.5
1000	31	151				
950	31	556	- 4.2	74	251	8.4
900	31	981	- 5.1	70	261	18.1
850	31	1,430	- 5.8	61	271	22.5
800	31	1,904	- 7.3	59	276	25.1
750	31	2,404	- 8.9	58	275	29.3
700	31	2,938	-10.9	58	272	33.8
650	31	3,501	-13.2	56	274	38.1
600	31	4,111	-16.6	55	275	42.2
550	31	4,756	-20.8	54	277	47.4
500	31	5,459	-25.2	52	277	52.3
450	31	6,212	-30.1	49	274	57.9
400	31	7,048	-35.2	48	271	65.1
350	31	7,966	-41.6	43	269	70.9
300	31	8,997	-47.8		271	73.0
250	31	10,187	-52.3		272	80.4
200	30	11,616	-53.8		277	73.2
175	28	12,464	-53.8		277	64.1
150	28	13,450	-55.7		275	61.2
125	28	14,604	-57.8		275	59.1
100	28	16,006	-59.4		276	49.7
80	27	17,403	-59.0		275	39.2
70	27	18,239	-59.5		277	32.4
60	26	19,197	-59.5		276	28.6
50	25	20,336	-59.1		284	25.6
40	25	21,737	-58.5		284	23.7
30	25	23,549	-57.3		286	19.2
25	25	24,703	-56.5		287	17.5
20	24	26,124	-55.8		286	24.1
15	23	27,950	-53.9		283	30.1
10	20	30,602	-50.4		277	38.5
7	12	32,961	-47.2		281	46.2
5	8	35,234	-45.0			

* POINT ARGUELLO, CALIF.
1006 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	113	8.4	89	79	2.7
1000	31	165	10.7	74	76	3.3
950	31	597	11.8	53	22	4.9
900	31	1,046	10.3	46	2	3.7
850	31	1,519	7.7	43	335	5.8
800	31	2,017	5.5	43	337	6.8
750	31	2,539	3.0	39	321	8.4
700	31	3,098	- .3	38	300	9.5
650	31	3,678	- 4.0	35	288	11.5
600	31	4,314	- 7.9	37	283	11.7
550	31	4,977	-12.3	35	281	12.6
500	31	5,707	-17.0	32	284	15.9
450	31	6,479	-22.9	38	284	17.3
400	31	7,341	-29.6	41	287	20.4
350	31	8,279	-36.8	41	286	23.3
300	31	9,327	-44.9		285	25.6
250	31	10,524	-53.0		279	28.2
200	31	11,941	-58.5		273	28.9
175	31	12,780	-58.6		275	27.0
150	31	13,746	-59.9		281	29.7
125	31	14,879	-62.1		283	24.7
100	31	16,250	-63.8		285	19.8
80	31	17,616	-64.4		300	11.7
70	31	18,432	-63.7		303	9.9
60	31	19,382	-62.0		335	3.7
50	31	20,513	-60.5		68	6.2
40	31	21,909	-58.7		60	9.1
30	31	23,719	-57.7		60	13.8
25	31	24,872	-56.8		61	15.0
20	31	26,291	-55.0		59	16.3
15	28	28,140	-52.8		61	17.7
10	24	30,757	-49.7		35	11.8
7	9	33,129	-46.5			
5						

PONAPE, CAROLINE IS.
+ 1004 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	28	39	27.5	77	55	8.0
1000	28	78	27.1	77	58	10.1
950	28	524	23.4	80	71	18.6
900	28	1,002	19.9	81	78	19.2
850	28	1,494	17.0	78	86	17.9
800	28	2,011	15.5	61	87	15.2
750	28	2,555	13.4	44	88	14.8
700	28	3,135	10.3	38	91	13.6
650	28	3,746	6.6	38	93	16.3
600	28	4,401	2.9	38	93	20.4
550	28	5,099	- .7	37	89	23.3
500	28	5,858	- 5.0	R30	87	27.0
450	28	6,678	- 9.9	R33	87	28.7
400	28	7,582	-15.5	R32	92	27.0
350	28	8,577	-22.0	R30	95	26.6
300	28	9,693	-30.2	R27	96	23.3
250	28	10,964	-40.3	R32	102	22.1
200	28	12,445	-52.8		107	24.3
175	28	13,294	-59.8		109	21.6
150	28	14,239	-67.7		100	23.5
125	28	15,314	-75.7		90	24.5
100	28	16,579	-83.4		88	26.2
80	27	17,824	-79.4		105	15.0
70	27	18,598	-71.6		216	2.3
60	27	19,516	-67.8		268	12.2
50	27	20,623	-64.2		272	14.8
40	27	22,002	-60.7		262	9.9
30	25	23,804	-57.9		91	14.4
25	23	24,963	-55.7		90	29.9
20	19	26,393	-53.2		87	44.9
15	13	28,270	-48.7		91	57.5
10						
7						
5						

PORTLAND, ME.
1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	20	- 9.6	71	311	3.9
1000	31	120	- 9.5	52	306	4.9
950	31	517	- 9.5	54	298	9.9
900	31	934	- 9.6	56	303	12.6
850	31	1,375	-10.0	49	302	16.1
800	31	1,842	-10.8	51	292	19.4
750	31	2,335	-12.1	50	286	23.7
700	31	2,864	-14.0	46	278	27.4
650	31	3,420	-16.4	49	274	32.8
600	31	4,023	-19.6	50	276	36.7
550	31	4,660	-23.2	47	269	41.0
500	31	5,357	-27.9	46	267	43.5
450	31	6,099	-32.6	42	268	48.2
400	31	6,929	-37.4	40	269	54.8
350	31	7,840	-42.8	38	266	62.2
300	31	8,867	-47.9		267	67.0
250	31	10,059	-51.4		265	69.5
200	31	11,505	-52.1		268	62.9
175	31	12,369	-52.5		266	54.6
150	31	13,362	-53.7		267	52.4
125	31	14,529	-55.2		265	49.7
100	31	15,947	-56.6		265	44.9
80	31	17,358	-57.5		265	36.7
70	31	18,201	-57.8		266	33.6
60	31	19,174	-57.8		269	32.2
50	31	20,324	-57.8		271	26.2
40	30	21,729	-58.3		273	27.0
30	29	23,544	-57.6		276	28.2
25	29	24,697	-56.9		276	29.9
20	24	26,107	-57.0		274	33.2
15	18	27,922	-56.1		271	42.3
10	9	30,571	-52.5			
7	7	32,864	-48.2			
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JANUARY 1965

RAPID CITY, S. DAK.
901 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	966	- 5.2	77	358	2.9
1000	31	144				
950	31	551				
900	31	978			344	4.3
850	31	1,434	.1	51	298	12.6
800	31	1,918	- 2.0	50	301	20.4
750	31	2,425	- 4.8	48	302	26.2
700	31	2,968	- 7.8	45	302	28.4
650	31	3,534	-11.3	46	298	30.1
600	31	4,150	-15.3	42	296	31.7
550	31	4,796	-19.7	41	295	33.0
500	31	5,503	-24.5	40	294	36.3
450	31	6,257	-29.6	42	293	42.5
400	31	7,092	-35.8	37	295	45.6
350	31	8,007	-42.9	R29	294	51.3
300	31	9,030	-49.7		293	58.5
250	31	10,207	-54.8		286	59.4
200	31	11,631	-54.9		284	55.9
175	31	12,486	-54.3		286	52.6
150	31	13,474	-54.8		286	48.6
125	31	14,634	-56.9		288	42.5
100	31	16,042	-58.5		290	32.4
80	31	17,445	-58.4		297	26.6
70	31	18,285	-58.3		303	21.2
60	30	19,256	-57.8		306	16.3
50	30	20,407	-57.6		316	16.5
40	28	21,810	-57.7		327	16.5
30	26	23,630	-56.9		355	15.9
25	24	24,778	-57.4		5	18.6
20	14	26,217	-56.0		9	22.7
15	8	27,984	-55.7			
10						

ST. CLOUD, MINN.
980 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	316	-17.0	72	289	2.7
1000	31	159				
950	31	548	-14.9	68	302	6.0
900	31	958	-11.1	61	311	11.5
850	31	1,400	- 8.4	51	301	15.7
800	31	1,870	- 8.9	44	298	19.0
750	31	2,367	-10.1	38	300	23.9
700	31	2,899	-12.7	36	298	28.0
650	31	3,456	-15.8	37	297	30.9
600	31	4,061	-19.4	39	299	34.8
550	31	4,700	-23.3	42	298	39.0
500	31	5,395	-27.9	44	298	40.8
450	31	6,139	-33.1	39	297	45.5
400	31	6,963	-38.6	34	297	50.9
350	31	7,867	-45.2		295	52.4
300	31	8,883	-51.1		294	56.5
250	31	10,058	-54.4		291	57.3
200	31	11,491	-53.2		292	54.6
175	31	12,352	-53.0		287	51.5
150	31	13,344	-54.1		294	49.7
125	31	14,510	-55.5		293	46.2
100	31	15,930	-56.0		296	41.2
80	31	17,345	-56.9		297	36.3
70	31	18,189	-57.2		299	31.9
60	31	19,166	-57.1		304	29.5
50	31	20,319	-57.3		311	23.3
40	31	21,727	-58.1		323	22.5
30	29	23,546	-57.6		327	19.2
25	28	24,711	-57.4		337	19.8
20	25	26,121	-57.3		339	19.4
15	11	27,956	56.9			
10						

ST. PAUL IS., ALASKA
1000 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	10	- 4.9	87	35	9.1
1000	31	13			66	13.8
950	31	414	- 7.5	80	55	8.2
900	31	835	- 8.3	75	61	5.8
850	31	1,278	- 9.0	64	99	3.5
800	31	1,746	-10.9	57	165	1.6
750	31	2,244	-13.3	53	202	3.1
700	31	2,763	-16.1	50	207	4.9
650	31	3,318	-19.0	49	211	5.2
600	31	3,910	-22.8	49	212	8.2
550	31	4,541	-26.6	46	217	10.5
500	31	5,226	-31.3	44	208	10.1
450	31	5,965	-36.1	46	210	11.3
400	31	6,776	-41.1	48	214	13.2
350	31	7,673	-46.5		221	15.0
300	31	8,688	-50.0		222	19.2
250	31	9,877	-50.1		220	22.1
200	31	11,344	-47.6		208	21.2
175	31	12,228	-47.1		209	20.2
150	31	13,247	-47.9		210	21.2
125	29	14,455	-48.9		212	21.2
100	29	15,917	-49.4		217	20.4
80	29	17,380	-49.3		218	18.1
70	29	18,254	-49.4		219	18.6
60	29	19,266	-48.7		220	17.3
50	29	20,466	-48.1		220	16.3
40	29	21,938	-47.3		226	13.4
30	27	23,851	-46.6		228	12.0
25	27	25,061	-46.1		229	12.4
20	25	26,538	-45.8		231	10.7
15	17	28,466	-45.9		224	19.4
10	8	31,170	-45.4			

SALEM, OREG.
1011 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	61	3.7	94	187	5.6
1000	31	147			184	6.6
950	31	564	4.4	77	214	12.8
900	31	1,004	3.7	73	230	17.5
850	31	1,467	1.5	73	240	21.0
800	31	1,953	- 1.0	70	248	22.7
750	31	2,462	- 3.7	63	249	24.5
700	31	3,006	- 7.2	59	253	25.1
650	31	3,575	-10.5	59	258	24.7
600	31	4,192	-14.1	54	262	26.6
550	31	4,842	-17.8	51	268	28.7
500	31	5,555	-22.4	49	270	32.8
450	31	6,314	-27.8	45	276	36.3
400	31	7,157	-34.0	46	275	39.4
350	31	8,080	-40.5	43	278	43.3
300	31	9,114	-47.3		282	40.4
250	31	10,302	-53.1		287	41.0
200	31	11,730	-55.5		286	36.9
175	31	12,581	-55.5		284	32.4
150	30	13,575	-55.7		287	31.7
125	30	14,732	-57.2		291	29.7
100	30	16,138	-58.7		298	18.3
80	30	17,538	-59.0		304	14.6
70	30	18,376	-57.9		321	10.9
60	30	19,350	-57.4		341	8.7
50	29	20,501	-56.4		6	9.1
40	29	21,919	-55.7		25	11.3
30	24	23,765	-54.6		45	17.7
25	23	24,936	-54.3		47	22.5
20	21	26,368	-54.4		42	28.2
15	16	28,237	-53.9		39	28.4
10	5	30,996	-52.3			

SALT LAKE CITY, UTAH
874 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,288	- 1.2	73	163	4.1
1000	31	205				
950	31	617				
900	31	1,057				
850	31	1,514	.2	67	176	8.7
800	31	1,999	- 1.0	64	202	9.3
750	31	2,511	- 3.3	61	244	10.7
700	31	3,056	- 6.2	62	284	13.8
650	31	3,630	- 9.3	59	293	16.7
600	31	4,248	-12.9	62	292	21.8
550	31	4,902	-16.9	57	293	25.8
500	31	5,615	-21.7	53	294	30.9
450	31	6,380	-26.9	47	294	35.0
400	31	7,224	-32.7	47	296	36.7
350	31	8,150	-39.7	44	294	39.2
300	31	9,187	-47.2		295	42.3
250	31	10,373	-53.8		299	41.2
200	31	11,794	-56.9		291	38.3
175	31	12,638	-57.2		290	35.0
150	31	13,613	-57.6		286	30.1
125	31	14,758	-59.5		291	26.6
100	30	16,143	-61.2		293	23.5
80	27	17,525	-61.0		305	15.3
70	25	18,353	-60.2		315	11.5
60	24	19,319	-59.5		326	11.7
50	24	20,461	-59.0		350	6.8
40	21	21,859	-58.1		26	9.7
30	18	23,692	-56.9		40	16.1
25	17	24,849	-56.1		41	19.8
20	16	26,271	-55.0		43	24.1
15	11	28,133	-53.7		32	26.0
10	5	30,722	-53.9			

SAN ANTONIO, TEXAS
991 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	243	7.9	77	345	1.9
1000	31	165				
950	31	592	10.2	63	204	4.9
900	31	1,041	9.8	61	226	11.8
850	31	1,515	8.6	54	243	13.4
800	31	2,016	7.1	42	263	13.0
750	31	2,543	4.6	39	274	15.7
700	31	3,104	1.6	35	269	18.8
650	31	3,693	- 1.7	R27	265	21.6
600	31	4,332	- 5.3	R26	262	24.1
550	31	5,003	- 9.6	R24	261	27.8
500	31	5,740	-14.8	R26	260	30.9
450	31	6,522	-20.4	R29	256	35.9
400	31	7,393	-26.5	R29	263	40.2
350	31	8,344	-33.6	R28	263	42.7
300	31	9,408	-41.9	R24	263	49.7
250	31	10,618	-50.9		265	59.2
200	31	12,044	-58.8		261	63.7
175	31	12,876	-62.0		256	62.2
150	31	13,827	-63.1		257	55.8
125	31	14,941	-66.2		255	46.8
100	31	16,284	-68.9		257	33.8
80	31	17,614	-69.4		258	22.0
70	31	18,412	-68.2		256	17.9
60	31	19,343	-66.0		260	8.2
50	31	20,455	-63.6		326	2.7
40	30	21,833	-61.1		346	2.5
30	29	23,630	-58.1		276	5.6
25	28	24,782	-56.4		277	8.9
20	26	26,205	-54.0		267	13.0
15	18	28,061	-50.9		272	23.5
10						
7						
5						
4						

SAN DIEGO, CALIF.
1004 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	124	8.0	80	49	1.9
1000	31	157	10.3	69	50	1.7
950	31	589	12.1	48	1	.8
900	31	1,039	10.5	42	318	1.2
850	31	1,514	8.4	37	318	3.1
800	31	2,013	5.9	37	305	5.2
750	31	2,536	3.1	32	299	8.0
700	31	3,095	.3	28	296	8.2
650	31	3,682	- 3.2	R26	294	11.3
600	31	4,316	- 7.2	R25	281	14.0
550	31	4,979	-11.8	R27	275	14.8
500	31	5,713	-16.8	R29	274	17.7
450	31	6,487	-22.5	R29	273	19.0
400	31	7,351	-28.9	R29	275	20.2
350	31	8,292	-35.8	R29	278	25.8
300	31	9,347	-43.7	36	282	29.5
250	31	10,548	-52.4		274	35.9
200	31	11,969	-58.3		261	37.1
175	31	12,806	-59.7		263	33.6
150	31	13,767	-61.0		262	31.5
125	31	14,896	-62.9		272	24.5
100	31	16,262	-65.1		269	17.1
80	31	17,621	-64.9		275	10.7
70	31	18,436	-63.7		298	6.4
60	31	19,385	-62.6		330	3.1
50	31	20,515	-60.7		56	4.9
40	29	21,909	-58.8		61	8.0
30	27	23,720	-57.3		63	10.5
25	23	24,890	-55.8		64	12.4
20	21	26,321	-53.9		60	14.2
15	15	28,187	-50.7		54	12.4
10	5	30,813	-48.2			
7						
5						
4						

* SAN JUAN, P. R.
1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	6	21.5	81	84	4.1
1000	31	147	21.7	76	81	10.5
950	31	591	18.3	79	77	14.0
900	31	1,052	15.0	77	77	14.0
850	31	1,535	12.2	69	77	12.0
800	31	2,042	10.1	62	77	9.9
750	31	2,579	8.6	44	79	8.2
700	31	3,147	6.5	33	60	7.2
650	31	3,748	3.8	29	41	4.9
600	31	4,399	.1	25	1	5.2
550	31	5,086	- 4.2	23	347	6.8
500	31	5,835	- 9.1	22	329	8.5
450	31	6,638	-14.5	22	313	11.8
400	31	7,525	-21.1	23	299	15.0
350	31	8,497	-27.8	22	290	24.3
300	31	9,588	-35.3	21	283	33.6
250	31	10,835	-43.9		273	42.2
200	31	12,298	-54.5		273	45.3
175	31	13,141	-60.4		271	42.7
150	31	14,088	-66.0		278	37.9
125	31	15,179	-71.6		284	25.4
100	31	16,479	-76.2		295	17.7
80	30	17,760	-77.2		329	7.2
70	30	18,530	-74.5		350	4.3
60	30	19,436	-69.4		18	4.9
50	30	20,541	-63.1		45	4.3
40	30	21,933	-58.0		72	6.4
30	28	23,769	-52.5		87	13.6
25	27	24,952	-50.6		92	16.5
20	25	26,411	-49.1		97	19.4
15	24	28,301	-47.0		97	23.5
10	16	31,003	-41.8		88	18.5
7	8	33,421	-37.8			
5						
4						

SAN NICOLAS, CALIF.
998 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	174	11.2	72	318	6.8
1000	31	154				
950	31	582	13.1	46	337	7.2
900	31	1,038	10.7	41	343	4.1
850	31	1,512	8.2	41	343	4.1
800	31	2,010	5.8	39	324	4.9
750	31	2,535	3.4	36	309	6.6
700	31	3,093	.5	33	292	7.6
650	31	3,678	- 3.1	32	287	9.1
600	31	4,313	- 7.3	35	278	10.1
550	31	4,973	-11.8	35	274	12.4
500	31	5,707	-17.0	34	283	13.6
450	31	6,479	-22.7	37	286	15.3
400	31	7,343	-29.0	37	288	17.5
350	31	8,284	-36.3	41	280	18.6
300	31	9,335	-44.4		280	25.8
250	31	10,534	-52.7		273	33.2
200	30	11,956	-58.7		282	34.2
175	30	12,794	-59.0		279	29.7
150	30	13,758	-60.6		284	27.4
125	30	14,887	-62.9		292	22.7
100	30	16,253	-65.0		295	17.7
80	30	17,612	-65.2		300	11.7
70	30	18,426	-64.0		309	7.8
60	30	19,375	-62.8		344	3.5
50	30	20,502	-61.0		39	4.3
40	29	21,896	-59.8		56	7.2
30	29	23,701	-58.1		53	11.8
25	29	24,852	-57.2		59	12.4
20	26	26,274	-55.3		61	13.0
15	25	28,127	-52.2		54	12.4
10	22	30,787	-47.7		45	5.8
7	19	33,154	-45.4		282	4.3
5	12	35,425	-43.5		270	15.9
4	5	36,860	-43.4			

SANTA MONICA, CALIF.
1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	38	11.2	58	34	5.2
1000	31	156	12.9	51	28	4.3
950	31	587	12.4	43	43	2.7
900	31	1,040	10.5	39	359	1.4
850	31	1,514	8.0	41	303	1.2
800	31	2,012	5.4	41	329	4.1
750	31	2,535	2.8	38	320	5.8
700	31	3,093	- .1	34	296	8.5
650	31	3,680	- 3.7	30	291	9.7
600	31	4,310	- 7.9	33	284	11.3
550	31	4,972	-12.5	34	277	14.4
500	31	5,703	-17.5	34	285	14.6
450	31	6,475	-23.1	R33	291	15.7
400	31	7,337	-29.6	R32	293	15.5
350	31	8,276	-36.9	R35	289	20.4
300	31	9,326	-44.7		292	23.7
250	31	10,522	-53.2		281	31.3
200	31	11,938	-58.6		283	30.7
175	31	12,774	-59.9		283	28.4
150	30	13,731	-60.2		284	26.4
125	30	14,862	-62.7		290	23.5
100	30	16,228	-64.8		292	15.9
80	30	17,589	-64.7		300	11.7
70	30	18,404	-64.1		314	9.1
60	30	19,352	-62.0		333	4.3
50	30	20,484	-60.6		27	5.1
40	28	21,877	-59.2		48	8.9
30	28	23,686	-57.6		52	12.8
25	27	24,842	-56.7		59	14.0
20	23	26,278	-54.6		55	16.9
15	21	28,123	-52.6		58	17.1
10	11	30,796	-49.3			
7						
5						
4						

SAULT STE. MARIE, MICH.
988 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	221	-11.9	82	337	1.6
1000	31	127				
950	31	517	-11.8	74	283	4.9
900	31	934	-12.7	70	279	10.3
850	31	1,369	-13.7	62	286	15.3
800	31	1,829	-14.8	56	290	18.8
750	31	2,317	-15.7	52	288	21.8
700	31	2,836	-17.1	50	287	26.4
650	31	3,386	-19.6	47	287	29.5
600	31	3,980	-22.6	44	288	34.6
550	31	4,611	-25.7	43	290	39.6
500	31	5,299	-29.9	41	290	43.5
450	31	6,038	-34.5	38	288	48.0
400	31	6,857	-39.8	42	287	53.8
350	31	7,758	-45.4		284	58.5
300	31	8,774	-50.3		281	62.4
250	31	9,956	-52.5		279	69.2
200	31	11,400	-51.7		275	66.4
175	31	12,265	-51.6		279	59.6
150	31	13,264	-52.1		279	53.6
125	31	14,441	-53.3		282	51.9
100	30	15,879	-54.9		283	44.5
80	30	17,302	-55.4		287	38.9
70	29	18,148	-55.6		289	34.6
60	28	19,130	-56.1		288	31.9
50	28	20,287	-56.8		292	31.9
40	26	21,707	-56.6		298	28.4
30	23	23,522	-57.2		303	26.6
25	22	24,687	-56.9		310	26.0
20	18	26,114	-56.5		313	25.1
15	13	27,939	-55.3		312	26.6
10	9	30,587	-52.6			
7	5	32,892	-51.2			

SHEMYA, ALASKA
996 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	38	- .6	80	64	3.5
1000	31	7			35	6.6
950	31	416	- 3.7	75	64	2.5
900	31	840	- 7.0	78	150	2.1
850	31	1,283	- 9.7	75	135	3.3
800	31	1,749	-12.4	69	106	2.9
750	31	2,240	-15.0	59	125	2.3
700	31	2,759	-17.8	50	212	1.2
650	31	3,310	-20.8	48	248	2.1
600	31	3,898	-24.5	44	220	3.3
550	31	4,524	-28.6	42	210	5.8
500	31	5,204	-33.1	44	201	7.6
450	31	5,934	-38.1	46	208	12.6
400	31	6,739	-43.4	57	200	11.5
350	31	7,626	-48.8		214	11.7
300	31	8,630	-52.6		215	16.3
250	31	9,808	-51.7		223	19.6
200	31	11,266	-48.6		214	20.4
175	31	12,146	-47.6		218	21.8
150	31	13,165	-47.3		218	22.7
125	30	14,361	-47.5		222	22.7
100	30	15,833	-48.1		218	19.6
80	30	17,301	-48.6		220	20.4
70	30	18,179	-48.2		211	18.1
60	29	19,189	-48.5		206	15.9
50	28	20,385	-48.2		196	15.9
40	28	21,855	-48.1		184	14.0
30	28	23,752	-47.3		172	14.0
25	28	24,959	-46.8		163	13.6
20	27	26,436	-46.6		151	14.6
15	23	28,368	-46.2		129	16.5
10	18	31,044	-47.0		126	14.6
7	7	33,306	-47.3			

* SHREVEPORT, LA.
1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	79	7.1	87	167	1.0
1000	31	163	7.5	80	183	3.5
950	31	593	7.4	71	222	10.3
900	31	1,032	6.1	64	242	14.2
850	31	1,500	5.5	53	260	15.5
800	31	1,995	4.1	43	273	16.5
750	31	2,517	1.9	45	275	20.2
700	31	3,072	- .7	42	271	24.7
650	31	3,662	- 4.1	39	270	29.1
600	31	4,288	- 7.9	37	269	34.6
550	31	4,956	-12.2	37	268	37.1
500	31	5,683	-16.6	37	267	43.3
450	31	6,462	-22.1	39	268	45.6
400	31	7,324	-27.8	35	269	51.9
350	31	8,270	-34.8	33	266	54.8
300	31	9,327	-43.0	23	267	60.0
250	31	10,532	-51.2		272	63.5
200	31	11,958	-57.3		268	65.9
175	31	12,797	-59.7		267	61.0
150	31	13,757	-60.8		265	55.8
125	31	14,982	-63.9		266	50.5
100	31	16,240	-66.5		267	41.0
80	31	17,589	-66.8		269	26.8
70	31	18,395	-66.5		277	18.5
60	31	19,332	-64.7		286	12.4
50	29	20,451	-62.3		294	8.7
40	29	21,834	-60.5		299	5.6
30	27	23,634	-58.4		293	6.4
25	27	24,783	-57.1		287	11.1
20	25	26,201	-55.5		277	16.1
15	23	28,041	-53.4		272	24.9
10	16	30,675	-48.2		267	35.2
7	9	33,042	-43.9			

SPOKANE, WASH.
932 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	722	- 2.2	88	155	3.1
1000	31	158				
950	31	569				
900	31	999	- 1.2	81	187	8.4
850	31	1,455	- 1.4	77	217	12.8
800	31	1,937	- 2.9	72	241	15.0
750	31	2,441	- 5.8	66	252	17.7
700	31	2,983	- 8.7	65	264	20.6
650	31	3,549	-11.9	63	271	23.3
600	31	4,163	-15.5	61	272	26.8
550	31	4,809	-20.0	60	273	30.9
500	31	5,515	-24.3	57	273	35.4
450	31	6,267	-29.6	54	275	38.3
400	31	7,106	-35.4	50	278	43.9
350	31	8,023	-41.8	45	281	47.2
300	31	9,052	-48.4		284	49.1
250	31	10,237	-53.6		289	49.7
200	31	11,669	-53.4		293	45.8
175	30	12,526	-52.9		289	38.7
150	30	13,520	-53.3		289	32.4
125	30	14,689	-55.1		287	29.7
100	29	16,118	-56.7		298	24.9
80	29	17,535	-56.0		300	20.6
70	29	18,383	-56.1		308	18.1
60	29	19,363	-55.4		320	15.5
50	29	20,526	-54.8		338	14.0
40	28	21,961	-54.5		350	14.0
30	28	23,805	-54.1		9	17.7
25	28	24,974	-54.4		12	17.5
20	21	26,387	-54.7		11	21.0
15	16	28,213	-54.9			
10						
7						

SWAN ISLAND, W. I.
1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	10	23.8	78	63	8.4
1000	31	132	23.3	76	62	11.3
950	31	578	19.9	77	72	13.8
900	31	1,043	16.6	75	76	12.8
850	31	1,529	13.7	69	77	11.1
800	31	2,038	10.8	67	74	9.3
750	31	2,578	9.9	40	79	7.6
700	31	3,146	7.4	39	81	5.4
650	31	3,753	4.8	R28	90	4.9
600	31	4,401	.9	R25	110	3.5
550	31	5,089	- 3.5	R22	127	2.5
500	31	5,840	- 8.9	R23	182	1.2
450	31	6,643	-14.9	R22	257	4.5
400	31	7,528	-21.5	R24	262	8.5
350	31	8,497	-28.9	R27	256	14.2
300	31	9,581	-37.0	R27	247	21.6
250	31	10,818	-45.8		243	32.1
200	31	12,271	-55.2		241	39.8
175	31	13,113	-60.5		239	41.2
150	30	14,063	-66.2		240	37.1
125	30	15,152	-71.9		243	25.3
100	28	16,446	-76.7		240	8.7
80	25	17,722	-78.3		98	5.4
70	25	18,487	-75.9		89	7.2
60	25	19,390	-70.4		79	6.4
50	25	20,489	-64.8		73	5.6
40	23	21,872	-58.7		73	8.0
30	23	23,696	-54.3		78	10.7
25	22	24,873	-52.2		86	15.2
20	22	26,325	-49.9		84	19.6
15	18	28,217	-47.4		104	27.8
10	9	30,884	-43.4			
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JANUARY 1965

TAMPA, FLA.
1020 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	8	11.6	91	47	3.7
1000	31	172	13.9	75	73	3.9
950	31	601	12.3	69	211	1.9
900	31	1,057	10.8	57	251	7.4
850	31	1,532	9.0	56	259	11.5
800	31	2,033	7.1	46	261	14.6
750	31	2,562	5.2	36	266	18.3
700	31	3,123	2.6	R33	262	21.6
650	31	3,714	- .3	R27	266	25.8
600	31	4,356	- 3.8	R24	265	29.1
550	31	5,030	- 8.0	R21	264	33.8
500	31	5,773	-12.8	R21	265	37.9
450	31	6,561	-18.3	R23	265	41.0
400	31	7,437	-25.0	R26	265	46.6
350	30	8,390	-32.1	R24	265	51.3
300	30	9,460	-40.3	R23	264	56.7
250	30	10,681	-48.4		259	62.0
200	30	12,119	-57.0		260	65.1
175	30	12,959	-59.8		262	66.8
150	30	13,914	-63.0		261	65.7
125	30	15,025	-66.6		263	55.4
100	30	16,362	-70.1		266	43.5
80	30	17,684	-71.0		267	29.3
70	30	18,476	-69.8		264	20.2
60	30	19,400	-66.6		272	10.1
50	30	20,509	-63.2		281	8.7
40	30	21,893	-59.5		287	6.0
30	27	23,705	-54.9		269	10.7
25	27	24,875	-53.2		267	14.8
20	27	26,321	-50.4		266	18.3
15	23	28,222	-45.1		268	27.6
10	5	30,978	-42.5			
7						

* TATOOSH IS., WASH
1011 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	31	5.3	89	111	6.6
1000	30	117			144	6.6
950	30	534	3.4	83	207	9.7
900	30	974	1.5	80	228	13.0
850	30	1,433	- 1.0	79	233	13.8
800	30	1,915	- 3.4	72	242	15.7
750	30	2,422	- 6.2	68	249	18.1
700	30	2,961	- 8.9	65	257	20.2
650	30	3,528	-12.3	62	260	24.3
600	30	4,140	-15.8	61	262	28.2
550	30	4,787	-19.7	59	263	30.7
500	30	5,494	-24.4	55	264	33.2
450	30	6,245	-29.8	54	265	35.9
400	30	7,085	-35.4	52	268	39.2
350	30	8,002	-41.5	49	269	43.5
300	30	9,033	-48.1		272	47.6
250	30	10,218	-53.8		271	43.3
200	30	11,646	-54.2		275	39.4
175	30	12,502	-54.0		273	38.1
150	30	13,491	-54.3		279	36.1
125	29	14,654	-55.4		283	31.3
100	29	16,070	-57.1		287	27.4
80	28	17,478	-56.9		293	21.4
70	28	18,323	-56.6		299	16.3
60	28	19,303	-56.0		316	13.2
50	25	20,471	-55.3		339	11.3
40	25	21,896	-54.8		349	14.4
30	25	23,737	-54.4		12	19.6
25	25	24,904	-54.6		18	21.6
20	24	26,331	-54.6		15	26.2
15	19	28,165	-55.1		18	33.0
10	8	30,851	-52.7			
7						

TOPEKA, KANS.
987 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	269	- 3.4	81	319	.6
1000	31	159				
950	31	566	- 2.6	70	258	3.1
900	31	998	.0	55	277	9.9
850	31	1,456	.3	47	283	13.8
800	31	1,942	- 1.1	44	287	15.9
750	31	2,450	- 3.6	45	286	18.8
700	31	2,996	- 6.5	46	288	22.1
650	31	3,569	- 9.5	44	290	24.1
600	31	4,188	-13.1	43	286	28.6
550	31	4,841	-17.1	41	286	32.4
500	31	5,554	-22.1	39	285	36.5
450	31	6,317	-27.4	37	285	41.4
400	31	7,160	-33.5	35	285	47.6
350	31	8,084	-40.1	37	284	54.2
300	31	9,120	-46.8		281	61.2
250	31	10,313	-52.2		278	68.0
200	31	11,744	-55.7		280	67.4
175	31	12,594	-56.1		280	63.3
150	31	13,570	-57.6		282	57.7
125	31	14,716	-59.3		284	47.6
100	31	16,106	-61.4		285	41.0
80	31	17,492	-60.8		288	30.1
70	31	18,321	-61.1		290	25.4
60	31	19,281	-60.1		297	19.4
50	31	20,419	-60.2		306	14.2
40	30	21,813	-59.6		322	13.4
30	28	23,614	-58.7		330	11.7
25	28	24,761	-57.9		338	11.7
20	26	26,181	-56.2		324	13.4
15	20	28,032	-54.6		333	13.8
10	7	30,743	-50.7			
7	7	33,082	-46.7			

TRUK, CAROLINE IS.
+ 1009 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	2	27.6	75	55	9.7
1000	31	81	27.1	75	60	11.8
950	31	525	23.6	77	78	17.3
900	31	1,006	20.3	76	81	16.9
850	31	1,498	17.5	71	84	15.7
800	31	2,016	15.3	60	89	15.0
750	31	2,559	13.4	48	94	14.2
700	31	3,140	10.2	41	98	15.7
650	31	3,750	6.9	40	101	17.9
600	31	4,408	3.1	41	104	19.6
550	31	5,102	- 1.0	38	103	22.5
500	31	5,863	- 5.1	R34	105	26.8
450	31	6,678	- 9.8	R33	101	27.8
400	31	7,585	-15.8	R31	104	23.9
350	31	8,579	-22.3	R27	107	23.3
300	31	9,693	-30.7	R26	109	20.2
250	31	10,961	-40.6	R25	109	22.3
200	31	12,441	-53.1		116	24.5
175	31	13,287	[illegible]		116	25.3
150	31	14,232	-67.7		115	25.8
125	31	15,306	-76.1		107	27.6
100	31	16,569	-83.2		99	29.5
80	31	17,818	-77.5		117	11.3
70	31	18,597	-73.7		230	2.7
60	31	19,518	-67.4		278	9.1
50	31	20,626	-63.8		278	12.0
40	31	22,005	-60.7		282	3.9
30	27	23,811	-57.5		96	18.3
25	27	24,969	-55.1		97	34.8
20	25	26,404	-51.9		97	49.5
15	15	28,288	-48.1		98	63.9
10	5	30,949	-43.6			
7						

TUCSON, ARIZ.
927 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	789	6.5	66	153	5.4
1000	31	159				
950	31	584				
900	31	1,033	[illegible]	48	[illegible]	6.0
850	31	1,508	9.6	41	147	2.1
800	31	2,008	7.0	[illegible]	231	5.6
750	30	2,535	4.1	37	244	8.0
700	30	3,096	.8	34	256	10.5
650	30	3,683	- 2.8	35	257	15.7
600	30	4,318	- 6.8	R33	256	17.9
550	30	4,983	-11.3	R29	261	19.4
500	30	5,716	-16.2	R29	266	22.0
450	30	6,492	-22.0	R31	270	24.5
400	30	7,357	-28.4	R29	268	27.0
350	30	8,300	-35.4	R31	266	28.6
300	30	9,356	-43.3		271	32.1
250	29	10,556	-51.6		264	42.5
200	29	11,980	-58.1		261	43.7
175	29	12,816	[illegible]		261	42.2
150	29	13,774	-61.7		263	36.7
125	29	14,898	-63.7		264	28.9
100	29	[illegible]	[illegible]		266	23.5
80	29	17,614	-65.4		[illegible]	15.9
70	28	18,429	-64.4		266	10.9
60	28	19,375	-62.7		288	4.9
50	27	20,502	-61.0		16	5.2
40	26	21,891	-59.5		51	5.6
30	22	23,700	-58.1		51	8.9
25	22	24,852	-56.6		58	9.1
20	21	26,275	-54.4		47	7.4
15	17	28,124	-51.7		[illegible]	6.6
10	6	30,790	-47.6			
7						

* WAKE IS., PACIFIC AREA
1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	5	23.1	71	63	8.0
1000	31	132	22.4	69	68	10.1
950	31	575	18.8	76	77	11.8
900	31	1,039	15.2	77	77	10.5
850	31	1,522	13.1	63	76	10.1
800	31	2,032	12.9	35	58	8.0
750	31	2,573	12.4	24	19	5.4
700	31	3,150	9.8	23	343	7.6
650	31	3,757	6.6	23	321	8.7
600	31	4,415	2.9	23	299	9.1
550	31	5,110	- 1.0	20	300	11.5
500	31	5,869	- 5.9	24	299	14.8
450	31	6,681	-11.1	19	297	15.7
400	31	7,583	-16.8	19	300	16.9
350	31	8,572	-23.6	18	296	20.8
300	30	9,681	-31.9	17	291	23.1
250	30	10,943	-41.8		297	24.7
200	29	12,416	-53.6		298	27.2
175	29	13,262	-60.2		295	27.0
150	29	14,207	-67.4		291	25.4
125	29	15,284	-75.2		282	21.6
100	28	16,554	-82.0		274	11.7
80	24	17,803	-80.6		225	2.1
70	23	18,564	-76.3		119	4.1
60	22	19,465	-70.3		99	6.8
50	21	20,564	-64.5		105	7.4
40	21	21,945	-59.5		107	9.3
30	21	23,766	-54.9		89	10.9
25	21	24,937	-53.0		78	12.6
20	20	26,388	-51.1		79	15.0
15	20	28,271	-48.1		81	17.7
10	14	30,998	-42.0		88	16.7
7						

* WALLOPS IS. VA. NASA
1020 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	16	3	.1	79	280	3.7
1000	16	160	1.3	62	270	8.2
950	16	577	.7	47	295	17.1
900	16	1,007	.5	43	291	17.9
850	16	1,465	- .5	40	286	19.6
800	16	1,948	- 2.0	35	279	23.7
750	16	2,458	- 3.9	34	278	27.6
700	16	3,002	- 6.5	30	278	32.2
650	16	3,576	- 9.0	29	276	39.6
600	16	4,195	-12.4	31	274	45.6
550	16	4,847	-16.9	32	274	50.1
500	15	5,561	-23.0	32	272	60.2
450	15	6,323	-26.8	37	274	66.8
400	15	7,172	-32.7	41	275	73.4
350	14	8,093	-39.5	39	275	81.4
300	14	9,133	-46.4		276	84.9
250	14	10,327	-51.7		281	89.4
200	13	11,764	-52.2		282	83.3
175	12	12,626	-52.9		278	74.8
150	12	13,614	-55.7			
125	12	14,765	-59.2			
100	12	16,154	-61.4			
80	12	17,533	-62.0			
70	12	18,359	-61.8			
60	12	19,312	-61.1			
50	12	20,446	-60.3			
40	12	21,843	-58.8			
30	11	23,655	-57.8		275	24.1
25	11	24,807	-56.9		274	25.8
20	11	26,226	-55.4		272	23.7
15	10	28,066	-53.6			
10	8	30,684	-51.1			
7	6	33,029	-48.3			

WASHINGTON, D. C.
1009 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	84	- 4.0	78	311	[illegible]
1000	31	151	- 2.7	73	292	3.1
950	31	560	- 2.2	60	284	9.7
900	31	989	- 3.1	56	290	15.0
850	31	1,441	- 3.9	53	293	20.0
800	31	1,919	- 4.5	47	287	23.1
750	31	2,426	- 6.1	45	280	26.2
700	31	2,964	- 8.6	45	276	32.4
650	31	3,533	-11.5	42	275	36.9
600	31	4,145	-14.8	42	273	42.5
550	31	4,795	-18.6	39	272	48.0
500	31	5,504	-23.2	42	270	53.2
450	31	6,263	-28.2	44	270	56.7
400	31	7,104	-33.9	46	270	62.7
350	31	8,026	-40.6	47	271	66.6
300	31	9,060	-47.6		270	71.7
250	31	10,247	-53.1		275	76.9
200	31	11,678	-54.7		276	74.8
175	31	12,531	-55.6		276	68.8
150	31	13,510	-57.2		272	62.9
125	31	14,656	-59.4		273	58.9
100	31	16,048	-61.0		272	45.3
80	30	17,431	-61.5		270	38.5
70	30	18,258	-61.4		271	31.1
60	29	19,213	-60.9		277	27.4
50	29	20,347	-60.4		279	22.0
40	29	21,741	-59.3		278	16.3
30	27	23,556	-57.9		282	18.3
25	26	24,706	-57.3		273	21.2
20	25	26,116	-56.0		273	26.2
15	24	27,953	-54.2		271	35.7
10	16	30,576	-49.5		274	38.7
7	5	32,980	-44.2			

WINNEMUCCA, NEV.
872 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,310	- 1.2	80	180	5.1
1000	31	202				
950	31	618				
900	31	1,058				
850	31	1,511	- .6	65	189	7.4
800	31	1,997	- .9	62	215	11.3
750	31	2,511	- 2.6	58	247	13.6
700	31	3,056	- 5.1	54	264	17.3
650	31	3,632	- 7.9	49	279	20.8
600	31	4,254	-11.7	46	279	23.1
550	31	4,912	-15.8	43	278	24.9
500	31	5,629	-20.4	44	281	26.6
450	31	6,394	-25.9	41	284	26.6
400	31	7,244	-32.4	40	287	29.9
350	31	8,171	-39.6	R36	286	33.0
300	31	9,208	-47.0		286	34.8
250	31	10,394	-54.0		300	34.4
200	31	11,815	-56.8		294	29.3
175	31	12,661	-56.4		300	30.1
150	31	13,639	-57.0		300	27.2
125	30	14,790	-59.0		299	22.7
100	29	16,184	-60.4		295	17.1
80	28	17,574	-60.3		305	10.5
70	28	18,406	-59.7		320	9.1
60	27	19,374	-58.8		345	7.0
50	27	20,520	-57.9		22	7.8
40	27	21,931	-56.8		41	10.1
30	22	23,765	-55.4		49	15.9
25	20	24,934	-54.8		50	20.8
20	15	26,384	-53.7		55	22.9
15	7	28,293	-51.0			

WINSLOW, ARIZ.
854 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,492	- 1.4	90	199	[illegible]
1000	31	213				
950	31	630				
900	31	1,068				
850	31	1,526			[illegible]	[illegible]
800	31	2,015	2.0	57	259	4.5
750	31	2,531	.4	47	270	8.4
700	31	3,086	- 2.0	39	268	12.2
650	31	3,666	- 5.2	38	272	15.9
600	31	4,297	- 9.0	38	271	19.0
550	31	4,957	-13.3	36	270	19.6
500	31	5,684	-18.0	36	270	24.3
450	31	6,454	-23.4	R35	273	27.2
400	31	7,315	-30.0	R34	272	30.5
350	31	8,252	-37.0	R31	275	31.1
300	31	9,302	-44.7		274	38.9
250	31	10,501	-52.2		273	46.8
200	31	11,922	-58.4		277	43.7
175	31	12,759	-59.9		279	44.1
150	31	13,720	[illegible]		277	37.1
125	31	14,849	-62.5		274	28.9
100	31	16,218	-64.8		277	21.2
80	31	17,581	-64.2		279	15.2
70	31	18,398	-63.3		290	9.9
60	30	19,349	-62.0		[illegible]	6.6
50	29	20,479	-60.7		17	6.8
40	27	21,873	-59.6		37	8.2
30	26	23,678	-58.5		45	11.1
25	26	24,828	-57.1		43	12.2
20	22	26,254	-55.5		46	15.3
15	17	28,092	-53.3		28	[illegible]

YAKUTAT, ALASKA
1004 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	12	- 5.6	80	104	3.9
1000	31	44			94	5.6
950	31	448	- 3.5	70	112	12.2
900	31	877	- 5.8	69	125	12.0
850	31	1,323	- 8.2	70	133	9.1
800	30	1,790	-11.0	69	152	7.4
750	30	2,282	-13.8	67	176	7.2
700	30	2,806	-17.0	62	184	8.0
650	30	3,357	-20.2	58	206	5.8
600	30	3,949	-23.5	53	229	8.2
550	30	4,575	-27.5	52	231	9.3
500	30	5,261	-31.9	52	241	9.9
450	30	5,994	-36.6	46	268	12.6
400	30	6,808	-41.5	42	269	18.5
350	30	7,706	-45.9		288	23.3
300	30	8,723	-49.4		295	23.9
250	30	9,915	-49.5		299	26.0
200	30	11,383	-47.1		295	29.3
175	30	12,268	-47.0		299	27.0
150	30	13,287	-48.0		294	28.2
125	30	14,486	-49.1		294	25.8
100	30	15,946	-50.4		295	24.3
80	30	17,399	-50.8		297	23.7
70	30	18,268	-50.9		298	24.1
60	30	19,272	-50.8		294	23.5
50	30	20,458	-50.9		300	23.9
40	29	21,911	-50.5		300	27.4
30	28	23,793	-51.1		313	30.3
25	27	24,983	-51.0		314	33.8
20	27	26,434	-51.6		321	35.0
15	22	28,297	-52.6		317	48.6
10	13	30,954	-51.0			

YAP, CAROLINE IS.
+ 1008 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	17	28.0	78	65	6.4
1000	31	87	27.2	79	67	8.2
950	31	532	23.4	79	74	10.5
900	31	1,010	20.1	77	75	12.4
850	31	1,503	17.9	66	72	13.2
800	31	2,020	15.5	56	71	11.8
750	31	2,564	12.8	49	73	11.7
700	31	3,142	9.9	45	78	11.1
650	31	3,751	6.6	39	76	11.3
600	31	4,407	2.6	36	89	12.0
550	31	5,101	- 1.7	39	96	14.2
500	31	5,859	- 5.9	38	94	13.8
450	31	6,676	-10.7	35	99	15.2
400	31	7,575	-16.3	R31	99	15.0
350	31	8,566	-23.1	R28	102	14.8
300	31	9,676	-31.4	R27	101	12.0
250	31	10,939	-41.8		112	14.6
200	31	12,411	-54.1		106	17.7
175	31	13,254	-61.2		108	19.6
150	31	14,193	-68.9		111	21.6
125	31	15,261	-76.8		112	23.9
100	31	16,522	-83.7		107	19.8
80	30	17,767	-78.3		112	8.5
70	30	18,539	-72.4		221	1.4
60	30	19,453	-68.1		280	4.7
50	30	20,558	-64.8		262	5.8
40	30	21,931	-60.9		66	3.1
30	29	23,738	-56.8		97	18.3
25	25	24,900	-55.0		93	29.1
20	23	26,336	-52.0		88	43.7
15	14	28,210	-48.6		85	54.0

YUCCA FLAT, NEV.
884 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,196	- 1.5	65	256	2.7
1000	31	197				
950	31	612				
900	31	1,049				
850	31	1,512	4.6	48	4	1.7
800	31	2,005	2.6	44	312	1.4
750	31	2,522	.1	44	243	2.3
700	31	3,075	- 2.2	42	287	6.8
650	31	3,656	- 5.4	38	286	10.1
600	31	4,285	- 9.4	38	290	15.2
550	31	4,945	-13.8	38	289	16.5
500	31	5,670	-18.4	R32	295	20.2
450	31	6,439	-24.1	R30	294	22.5
400	31	7,296	-30.6	R30	296	20.0
350	31	8,230	-38.1	R31	298	24.3
300	31	9,274	-46.1		290	28.2
250	31	10,465	-53.7		293	33.6
200	30	11,884	-58.9		283	30.7
175	30	12,721	-58.8		280	27.0
150	30	13,689	-59.3		283	26.4
125	30	14,827	-61.2		288	23.5
100	30	16,204	-63.5		290	16.3
80	30	17,576	-62.9		290	11.3
70	30	18,400	-61.5		290	6.8
60	30	19,358	-60.3		10	3.9
50	30	20,497	-59.2		51	5.8
40	30	21,897	-58.4		45	9.9
30	27	23,703	-57.2		58	10.9
25	24	24,857	-56.4		59	13.2
20	22	26,286	-55.0		57	15.5
15	18	28,126	-53.7		32	13.0
10	5	30,783	-49.2			

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Relative humidity averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.
The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Relative humidity data are not published for standard pressure surfaces for which less than 5 observations are available.
Relative humidity data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from lithium chloride hygristors.
These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature in degrees Celsius, relative humidity in percent, and resultant winds in degrees and knots.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. They were also equipped with carbon hygristors. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.C.T.

R More than half of the observations are from statistical values.

1/ began December 30, 1964

2/ began January 21, 1965

See reference note at end of table

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun.

JANUARY 1965

ALBUQUERQUE, N. MEX.

Date	Sun's zenith distance								
	A.M.				*	P.M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Jan.									
2-----	1.02	1.14	1.25	1.41	1.42	1.37	1.18	1.04	0.92
3-----	----	----	----	----	----	1.30	1.17	1.01	----
4-----	----	----	----	1.35	1.38	1.35	1.17	----	.94
9-----	.95	1.05	1.20	1.36	----	----	----	----	----
10----	----	----	1.17	1.33	1.35	1.34	1.20	1.07	.97
11----	.97	1.07	1.17	1.37	1.38	1.39	1.23	1.11	.99
12----	----	----	----	1.30	1.34	1.30	1.16	1.01	.86
13----	.99	1.10	1.21	1.34	1.35	1.32	1.18	1.02	.92
14----	.95	1.07	1.18	1.35	1.35	1.32	----	----	----
16----	.93	1.03	1.15	1.31	1.32	1.31	1.15	1.02	.90
17----	.89	1.00	1.12	1.29	----	----	----	----	----
18----	.95	1.05	1.15	1.30	1.39	1.35	1.15	----	----
19----	----	----	1.20	----	----	----	----	----	----
22----	.93	----	----	----	----	----	----	----	----
23----	.95	1.06	1.18	1.32	1.36	1.32	1.18	1.07	.97
24----	1.00	1.08	1.19	1.32	1.37	1.32	1.17	1.04	.93
25----	----	----	----	----	----	----	----	1.06	.93
26----	.95	1.05	1.17	----	----	----	1.17	1.04	.93
27----	----	1.09	1.16	1.36	1.38	----	1.17	1.03	.93
28----	----	1.07	1.18	1.34	1.40	1.34	1.16	----	----
29----	----	1.08	1.13	1.35	----	----	----	----	----
31----	----	----	1.21	1.36	----	----	----	----	----
Averages	0.96	1.07	1.18	1.34	1.37	1.33	1.17	1.04	0.93

MADISON, WIS.

Date	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Jan.									
2-----	----	----	----	----	----	----	----	M 0.93	M 0.82
9-----	S 0.84	S 0.94	S 1.07	----	----	----	----	----	----
13----	I .86	I .97	I 1.12	----	M 1.25	----	S 1.12	S 1.00	S .88
16----	M .81	M .93	M 1.05	----	M 1.16	----	----	----	----
18----	S .81	S .92	----	----	----	----	----	----	----
21----	M .66	M .59	M .97	----	M 1.18	----	M 1.10	S .90	----
28----	----	S .94	S 1.08	----	S 1.25	----	S 1.05	----	----
29----	S .79	S .91	S 1.06	----	S 1.24	----	S 1.09	S .95	S .87
30----	----	----	----	----	S 1.22	----	S 1.04	S .89	----
Averages	0.80	0.89	1.06	----	1.22	----	1.08	0.93	0.88

TUCSON, ARIZ.

Date	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Jan.									
2-----	0.81	----	----	----	----	----	----	0.91	0.82
3-----	.86	----	----	----	----	----	----	----	----
8-----	----	----	----	----	----	----	----	1.00	.89
9-----	----	----	1.16	----	----	----	----	----	----
10----	----	----	----	----	----	----	1.18	----	.93
11----	.89	.99	----	----	----	----	----	----	----
12----	----	----	----	----	----	----	1.09	----	----
13----	----	----	1.09	----	----	----	----	----	----
17----	.83	.93	1.07	1.23	----	----	1.05	----	----
18----	.86	----	----	----	----	----	----	----	----
21----	.77	.87	----	----	----	----	----	----	----
22----	.72	----	----	----	----	----	----	----	.86
23----	.83	.93	----	----	----	----	----	----	----
24----	.89	.98	----	----	----	----	----	----	----
25----	----	----	----	----	----	----	----	----	.71
26----	.78	.89	----	----	----	----	----	----	.88
29----	----	.99	----	----	----	----	----	----	----
30----	----	----	----	----	----	----	----	----	.89
31----	.88	.98	1.12	----	----	----	----	----	.83
Averages	0.83	0.94	1.11	1.23	----	----	1.10	0.95	0.85

H	Haze	S	Slight haze - indeterminable
HS	Slight haze	M	Moderate haze - indeterminable
HM	Moderate haze	I	Intense haze - indeterminable
( )	Clouds present	*	Values corresponding to true solar noon

BLUE HILL OBS., MASS.

Date	Sun's zenith distance								
	A.M.				*	P.M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	Air mass								
	4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
Jan.									
1-----	0.88	1.00	1.15	----	1.27	----	1.18	1.04	----
3-----	----	----	----	----	1.16	----	1.05	.89	0.79
4-----	----	----	----	----	1.23	----	1.15	1.01	.91
5-----	.77	.89	1.04	----	1.18	----	1.06	.88	.74
6-----	.67	.86	1.04	----	1.21	----	1.11	----	----
7-----	.82	.93	1.07	----	1.21	----	1.08	.88	----
14----	.94	1.01	1.16	----	1.25	----	1.12	1.04	.87
15----	.93	1.01	1.16	----	1.25	----	----	----	----
19----	----	.58	.79	----	1.06	----	.91	.79	.70
21----	.89	.99	1.12	----	1.28	----	1.12	1.00	.88
22----	.84	.94	1.06	----	1.17	----	.94	.77	.65
31----	.79	.96	1.08	1.23	1.24	1.23	.99	.84	.70
Averages	0.84	0.92	1.07	1.23	1.21	1.23	1.06	0.91	0.78

OMAHA, NEBR.

Date	Air mass								
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Jan.									
2-----	HS0.78	HS1.02	HS1.20	----	HS1.31	----	HS1.18	HS1.07	HS0.94
3-----	HS .96	HM1.08	HM1.24	----	----	----	----	----	----
8-----	HS .83	HS .98	HS1.35	----	----	----	----	----	----
10----	HS .86	HS .98	HM1.07	----	1.24	----	HS1.10	HS .89	HS .83
16----	----	----	----	----	HM1.21	----	HM1.06	HM .91	HM .83
18----	HS .94	HS1.03	HS1.16	----	----	----	----	----	----
26----	----	----	----	----	HS1.32	----	HS1.10	HS .99	HS .84
28----	HM .80	HM .94	HS1.08	HS1.28	HS1.29	HS1.24	HS1.04	HS .91	HS .80
30----	HS .82	HS .94	HS1.06	HS1.29	HS1.30	HS1.29	----	HS .93	----
Averages	0.86	1.00	1.17	1.29	1.28	1.27	1.10	0.95	0.85

MAUNA LOA OBS., HAWAII

Date	Air mass								
	3.36	2.69	2.01	1.34	*	1.34	2.01	2.69	3.36
Jan.									
1-----	1.17	1.27	1.37	1.50	(1.57)	----	----	----	----
2-----	1.18	1.26	1.37	1.48	1.57	1.47	1.35	1.25	1.15
4-----	1.14	1.23	1.34	1.48	1.57	1.43	1.29	1.19	1.09
5-----	1.14	1.22	1.35	1.47	1.56	----	----	----	----
8-----	1.15	1.24	1.34	1.47	----	----	----	----	----
9-----	HS1.12	HS1.23	HS1.32	----	----	----	----	----	----
11----	----	----	----	----	1.52	----	----	----	----
12----	1.09	1.18	1.29	1.43	1.54	1.40	1.28	1.16	1.07
13----	HS1.06	HS1.16	HS1.27	HS1.42	(1.53)	----	----	----	----
14----	HS1.10	HS1.19	HS1.32	HS1.44	1.61	1.50	1.37	1.27	1.18
15----	1.17	1.25	1.37	1.50	1.61	1.51	1.38	1.29	1.19
16----	1.25	1.34	1.44	1.56	1.65	1.57	1.43	1.32	1.23
17----	1.24	1.32	1.43	1.49	1.65	1.54	1.41	1.31	1.23
18----	1.23	1.33	1.43	1.55	1.63	H 1.46	H 1.34	H 1.23	H 1.15
19----	1.23	1.31	1.43	1.55	1.62	HS1.52	HS1.39	HS1.29	HS1.20
20----	1.24	1.33	1.43	1.55	1.60	HS1.50	HS1.39	HS1.29	HS1.19
21----	1.25	1.34	1.45	1.57	1.64	H 1.50	H 1.36	H 1.27	H 1.18
22----	1.16	1.25	1.36	1.49	1.60	1.48	1.35	1.24	1.14
25----	H 1.05	H 1.16	H 1.28	H 1.42	----	----	(1.27)	(1.15)	(1.06)
26----	H 1.04	H 1.14	H 1.25	H 1.42	----	----	----	----	----
27----	H 1.05	H 1.15	H 1.28	H 1.43	----	----	----	----	----
28----	HS1.10	HS1.22	HS1.33	1.47	----	----	----	----	----
29----	1.17	1.25	1.36	1.50	1.65	1.56	1.43	1.31	1.22
30----	1.17	1.27	1.38	1.50	1.60	1.45	1.42	1.21	1.12
31----	1.19	1.29	1.40	1.53	1.63	1.47	1.32	1.21	1.12
Averages	1.15	1.25	1.36	1.44	1.60	1.49	1.37	1.26	1.16

GUAM, M. I.

Date	Air mass								
	4.92	3.93	2.95	1.97	*	1.97	2.95	3.93	4.92
	No observations due to cloudiness								

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

JANUARY 1965

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	170	296	268	285	50*	102	226	105	306	298	321	290	310	310	309	313	319	323	317	142	129	329	349	350	212	256	368	366	343	331	315	271*
AMES IOWA	17	210	213	93	112	38	27	122	178	207	174	135	228	76	230	240	201	248	112	255	227	17	47	221	76	264	239	273	142	289	71	161
ANNETTE ALASKA	30	77	45	55	79	64	46	18	27	40	10	7	14	11	---	18	27	4	14	22	29	54	105	113	57	12	34	46	14	46	109	41
APALACHICOLA FLORIDA	335	328	167	359	141	328	343	---	356	231	199	363	203	55	188	362	397	398	404	382	390	298	224	248	395	248	423	444	409	286	455	312
ARGONNE NAT. LAB.	20	105	204	156	159	191	28	15	208	209	158	214	263	187	115	251	92	268	174	266	258	17	23	48	50	130	309	323	---	---	---	159
ASTORIA OREGON	18	4	146	66	---	---	96	27	45	73	65	138	124	165	160	156	187	169	37	79	88	162	36	110	82	37	22	10	25	28	101	85
ATLANTA GEORGIA	137	120	133	327	292	186	95	288	230	210	84	315	145	336	82	98	344	357	358	272	309	310	---	---	368	266	395	390	292	192	409	253
BARROW ALASKA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	4	4	6	1
BETHEL ALASKA	52	13	17	20	17	64*	80	48	29	40	25	23	28	40	83	30	15	42	31	25	48	36	31	109	97	110	108	82	122	99	57	52*
BISMARCK N.DAK.	213	---	---	165*	173	143	---	171*	128	192*	165	184	195	90	160	188	180	155	217	238	120	182	145	113	175	206*	217	239	242	266*	222	181*
BLUE HILL MASS.	215	55	204	207	197	197	213	51	78	46	209	190	119	237	233	40	126	113	229	118	253	242	68	53	114	215	237	210	222	218	278	167
BOISE IDAHO	176	53	73	114	81	93	149	96	120	89	58	184	131	76	174	62	42	44	46	42	185	142	34	87	149	160	38	46	73	66	246	101
BOSTON MASSACHUSETTS	220	55	212	189	184	196	209	42	95	44	211	162	---	---	---	---	---	---	---	---	249	233	47	45	141	183	246	201	224	208	276	168
BROWNSVILLE TEXAS	311	348	50	124	211	369	344	231	137	405	417	128	107	274	327	427	455	446	433	345	204	277	317	460	453	443	434	453	461	471	438	332
BURLINGTON VERMONT	218	44	194	212	94	181	219	41	93	88	160	92	53	166	240	110	247	167	191	77	256	37	103	52	192	67	182	181	177	289	228	150
CAPE HATTERAS N.C.	185	174	303	303	266	159	295	176	269	120	66	115	222	292	35	46	65	182	336	336	325	---	246	84	330	240	337	369	344	62	228	217
CARIBOU MAINE	138	160	109	164	169	161	173	106	52	113	167	141	93	125	199	100	93	156	133	112	219	124	227	112	138	237	125	244	216	229	236	154
CHARLESTON S.C.	153	272	160	352	233	188	302	315	306	189	175	296	238	282	134	34	182	365	342	362	330	338	219	84	381	254	382	405	376	163	306	262
CLEVELAND OHIO	43	4	180	83	45	143	84	21	49	170	165	159	44	232	79	81	193	155	185	119	254	9	3	31	33	80	104	151	183	271	152	113
COLUMBIA MISSOURI	95	87	271	140	70	60	185	13	231	268	160	221	241	84	93	276	237	278	204	227	223	28	32	59	242	170	298	245	136	339	198	174
DODGE CITY KANSAS	21	230	231	178	128	218	---	174	241	243	182	238	246	210	192	153	252	240	188	266	190	128	136	238	69	305	306	185	258	241	250	205
E. LANSING MICHIGAN	34	79	161	227	32	176	57	24	134	206	135	216	133	227	96	237	62	173	120	157	271	24	42	57	69	37	196	294	300	267	241	145
EL CENTRO CALIF NARF	266	251	194	209	154	65	199	256	219	314	230	263	270	---	136	237	288	233	273	233	244	290	297	293	327	331	279	339	336	331	330	256
EL PASO TEXAS	155	233	135	312	315	305	116	263	357	311	356	250	322	322	328	360	375	375	365	56	285	322	394	393	372	413	421	421	418	382	418	316
ELY NEVADA	301	172	198	97	211	171	150	292	179	296	252	280	277	282	284	282	255	202	242	282	183	230	223	171	175	310	322	224	149	251	323	234
FORT WORTH TEXAS	74	41*	166	263	105	310*	---	68	58	280	354	318	329	287	335	372	354	368	345	267	46	258	204	389	332	403	396	400	396	361	405	276*
FRESNO CALIFORNIA	257	220	60	63	69	67	264	278	242	199	223	66	229	57	76	133	112	181	63	83	219	227	269	277	247	84	228	85	161	132	129	161
GLASGOW MONTANA	171	163	159	131	156	157	74	144	169	127	179	164	126	108	150	176	235	160	207	233	---	---	130	159	226	236	197	176	123	147	184	164
GRAND JUNCTION COLO.	144	337	193	413	158	261	134	298	162	274	162	233	240	272	287	286	296	277	272	194	71	298	299	99	312	349	---	250	193	248	288	243
GREAT FALLS MONTANA	127	124	156	121	138	115	114	67	156	75	149	124	123	30	153	155	158	125	152	161	49	164	130	102	209	158	97	111	51	60	164	123
GREENSBORO N.C.	84	209	189	304	299	243	222	246	199	32	225	311	189	311	169	75	321	318	336	300	338	312	85	85	333	143	357	354	262	100	385	237
GRIFFIN EXP.STA.GA.	151	241	135	406	357	183	205	348	263	328	131	393	180	408	113	82	425	432	432	314	393	398	35	288	442	370	464	466	357	214	479	304
INDIANAPOLIS INDIANA	18	27	263	---	102	223	44	56	78	224	---	---	---	238	99	311	190	280	240	289	329	79	59	30	270	46	340	215	310	365	362	188
INYOKERN CALIFORNIA	327	283	182	290	---	---	326	361	311	348	344	342	361	297	248	270	311	293	284	346	---	346	378	406	408	410	308	420	361	399	425	335
ITHACA NEW YORK	128	29	114	54	202	138	148	17	71	53	86	166	97	174	139	148	281	137	211	102	236	44	42	42	151	51	160	212	175	271	201	132
LAKE CHARLES LA.	320	253	51	345	326	142	314	207	169	83	335	147	98	274	227	387	397	364	356	289	257	41	250	391	267	389	407	414	394	341	421	279
LAKELAND FLORIDA	266	363	315	314	351	232	392	350	286	365	104	231	373	262	120	224	246	409	426	409	388	386	308	160	440	361	340	459	476	450	499	332
LANDER WYOMING	227	204	203	186	184	111	130	224	213	171	194	208	181	186	232	243	249	173	248	250	143	202	236	188	207	286	194	247	174	237	121	202
LARAMIE WYOMING	381	426	423	392*	111	211	194	243	133	186	121	139	106	137	79	260	266	247	253	305	110	151	313	140	177	280	147	266	93	263	178	217*
LAS VEGAS NEVADA	268	220	175	292	203	188	170	321	294	308	309	306	318	277	281	304	294	230	263	101	313	320	334	323	363	358	329	356	311	356	354	285
LITTLE ROCK ARKANSAS	139	181	244	---	---	---	---	---	24	301	317	294	297	145	54	344	342	347	329	195	280	47	251	153	---	341	365	356	338	273	370	253
LOS ANGELES CALIF.	301	254	235	261	210	257	295	281	273	320	264	272	298	241	77	285	297	245	266	271	169	111	223	351	332	349	211	359	356	344	325	269
LOS ANGELES CALIF. U	335	231	268	276	242	282	290	271	261	284	260	291	309	281	96	325	321	237	259	250	102	145	284	372	362	362	222	380	378	320	352	279
MADISON WISCONSIN	19	178	209	122	159	59	31	20	218	206	104	---	262	189	201	256	111	250	166	229	251	---	---	---	74*	194	295	310	318	315	254	185*
MANHATTAN KANSAS	14	265	272	172	201	71	182	90	188	280	161	194	231	216	145	288	264	300	181	262	235	33	32	304	149	283	315	216	123	285	201	198
MATANUSKA ALASKA	24	24	23	26	26	23	28	16	18	30	16	11	18	7	23	23	22	6	---	28	23	23	79	81	64	63	61	67	68	36	28	33
MAUNA LOA OB.HAWAII	528	526	372	535	517	187	406	460	278	151	490	541	536	567	574	583	585	577	585	586	588	578	519	225	450*	416	357*	313	618	601	619	479*
MEDFORD OREGON	123	98	82	114	67	25	205	86	136	49	64	71	39	57	135	63	62	72	47	52	61	77	25	139	94	74	78	64	88	100	243	87
MIAMI FLORIDA	300	362	349	269	230	299	173	329	289	339	304	308	355	347	316	264	366	403	401	298	183	283	309	307	382	349	325	175	238	365	325	308
MIDLAND TEXAS	151	81	322	290	210	263	287	286	336	289	340	227	283	304	305	345	332	339	280	277	71	297	366	345	240	376	388	380	371	279	364	291
NASHVILLE TENNESSEE	132	38	245	245	229	235	96	207	29	68	296	297	143	274	164	152	316	257	324	263	226	229	58	42	336	154	351	348	171	234	350	210
NEW YORK N.Y. U	146	26	216	230	176	205	160	18	66	29	217	101	81	232	180	44	230	142	257	123	252	194	19	28	127	74	169	204	191	119	286	146
NORTH OMAHA NEBRASKA	---	---	---	---	---	---	44	161	170	257	210	100	106	132	262	279	251	280	120	289	268	53	81	301	105	314	262	---	139	349	197	197
OAK RIDGE TENNESSEE	47	18	179	254	214	166	34	154	36	56	241	202	98	224	160	49	154	218	272	222	223	233	49	79	275	199	304	282	136	129	311	168
OKLAHOMA CITY OKLA.	37	87	268	94	92	111	221	46	39	290	258	245	267	252	249	292	287	294	269	276	35	188	45	284	257	319	331	302	273	297	227	211

Note. --Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

JANUARY 1965

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
PAGE ARIZONA	231	273	130	177	120	64	222	204	208	279	256	264	245	262	247	248	251	206	237	25	84	182	242	215	287	290	281	252	205	257	282	217
PHOENIX ARIZONA	278	290	280	290	62	31	69	304	270	304	305	294	301	293	222	295	302	243	302	161	287	291	318	194	---	345	345	348	315	342	344	267
PORTLAND MAINE	197	66	174	176	149	192	207	42	43	69	176	165	69	203	216	40	178	128	218	60	248	192	91	50	154	165	234	204	190	281	270	156
RAPID CITY S.DAK.	150	211	202	134	127	81	172	191	166	184	186	138	136	74	36	193	188	198	106	220	192	101	228	156	156	217	105	211	43	219	178	158
RIVERSIDE CALIFORNIA	285	274	262	316	265	256	166	327	324	353	333	296	351	246	94	320	324	282	283	198	107	143	320	290	382	394	279	400	388	385	367	291
SAINT CLOUD MINN.	51	206	180	163	180	140	51	137	194	102	161	150	225	144	234	238	209	198	133	234	223	92	106	181	123	261	149	272	279	272	76	173
SALT LAKE CITY UTAH	239	260	178	164	210	106	57	279	154	168	55	257	260	242	249	201	156	83	49	41	37	206	176	38	214	208	206	80	---	---	---	163*
SAN ANTONIO TEXAS	184	105	313	72	89	139	316	259	294	386	231	233	256	246	317	409	397	394	369	263	81	351	406	397	389	429	431	435	447	423	431	306
SANTA MARIA CALIF.	284	238	204	120	202	144	293	291	251	287	197	286	297	278	74	276	260	247	196	306	301	274	212	262	279	332	237	341	317	328	331	256
SAULT STE MARIE MICH	41	103	68	71	63	152	18	32	113	198	131	197	162	218	205	241	106	209	70	136	170	225	94	104	118	75	224	141	264	94	188	136
SEATTLE TACOMA WASH.	17	83	74	74	55	88	45	45	113	104	37	90	29	129	62	51	64	85	55	55	80	93	21	164	46	20	26	15	49	78	160	68
SHREVEPORT LOUISIANA	138	138	98	337	295	115	212	167	40	80	363	322	245	189	251	376	382	360	364	207	204	70	349	358	227	400	401	395	373	388	406	266
SPOKANE WASHINGTON	146	104	86	120	73	91	128	54	189	91	78	78	92	119	85	89	70	60	111	43	76	122	58	141	122	91	75	136	120	141	199	103
STATE COLLEGE PENN.	58	20	256	258	208	240	149	25	38	56	180	195	100	256	129	165	304	205	267	111	277	27	14	37	125	73	212	141	241	302	283	160
STERLING VIRGINA	51	44	261	252	255	190	164	70	---	47	295	226	134	251	213	146	314	272	318	258	304	287	77	44	295	119	276	267	215	138	346	204
STILLWATER OKLAHOMA	78	134	285	179	58	65	223	40	59	322	269	248	295	266	189	308	294	314	261	317	51	177	38	301	286	339	350	236	264	281	291	220
SWAN ISLAND W.I.	488	386	461	443	485	408	402	265	514	440	514	508	483	436	492	465	229	264	342	87	444	453	448	355	534	542	490	503	559	556	554	437
TAMPA FLORIDA	268	368	399	321	363	223	357	374	355	384	172	171	360	240	129	205	66	414	427	415	411	---	---	---	---	---	---	461	460	441	487	331
TUCSON ARIZONA	211	274	---	---	---	---	---	---	---	---	---	---	188	301	---	---	---	---	---	---	---	311	331	321	339	361	354	---	364	360	340	---
WAKE ISLAND,PACIFIC	387	218	382	396	402	394	417*	398	366	401*	375*	410	298	415*	209	330	363	362	301	392	354	392	348	452*	412	385	388	371	438	403	434	374*

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (midnight to midnight) at Huntley, Mont.

JANUARY 1965

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	-68	-27	-39	-60	-26	-25	3	-39	-10	-21	-30	-7	-15	25	35	-38	-11	-17	7	-1	38	-1	10	48	-30	-1	-15	5	-63	-9	-31	-13

The measurement is made with a Beckman and Whitley net exchange radiometer over a plot of sod. **The value represents the total incoming minus the total outgoing radiation of all wave lengths.**

These data are of an experimental nature and are published as received from the Huntley Exp. Station. **The instrument with which they were measured has not been checked by the Weather Bureau.**

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λ s Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3
															Data will be delayed																	

The spectrophotometer measures the total amount of ozone in the atmosphere, i.e., the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e.g., 350 milli-atmo-cm ozone implies an ozone layer 0.350 centimeter thick. The code λ s designates the type of measurement made.

DESCRIPTION of CHARTS

CHART I., A. AVERAGE TEMPERATURE (°F.) AT SURFACE. B. DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL. -The average monthly temperature presented in Chart I-A is computed from the average daily maximum and the average daily minimum temperatures reported by some 870 Weather Bureau and cooperative stations. The departures from normal are presented in Chart I-B. They are based on the 30-year normals (1931-60) for the first-order Weather Bureau stations.

CHART II. TOTAL PRECIPITATION. - Chart II is based on daily precipitation records at about 870 Weather Bureau and cooperative stations.

CHART III. PERCENTAGE OF NORMAL PRECIPITATION. -In this chart the anomaly in the month's precipitation is shown as a percentage of the normal total. This anomaly shows the deviation from the 30-year normal (1931-60) for about 270 first-order Weather Bureau stations.

CHART IV. TOTAL SNOWFALL. CHART V. A. PERCENTAGE OF MEAN MONTHLY SNOWFALL. B. DEPTH OF SNOW ON GROUND. -Chart IV gives the total depth in inches of unmelted snowfall as reported during the month by Weather Bureau and cooperative stations. This is converted in Chart V-A into a percentage of the mean monthly total amount computed for each Weather Bureau station having at least 10 years of record. The depth of snow on ground is that reported by both Weather Bureau and cooperative stations as of 7:00 a. m. Eastern Standard Time on the Monday nearest the end of the month. This is reported only for the months December through March. The snowfall charts are presented each month November through April.

Isolines for Charts I, II, III, IV, and V, are drawn through points of approximately equal value. Caution should be used in interpolating on these charts, particularly in mountainous areas.

CHART VI. A. PERCENTAGE OF POSSIBLE SUNSHINE. B. PERCENTAGE OF MEAN MONTHLY SUNSHINE. -CHART VI-A shows the amount of sunshine received in terms of percentage of the total hours of sunshine possible during the month. In Chart VI-B this is shown as a percentage of the mean number of hours of sunshine received. Means are computed for Weather Bureau stations having at least 10 years of record.

CHART VII. A. AVERAGE DAILY VALUES OF SOLAR RADIATION, LANGLEYS. B. PERCENTAGE OF MEAN DAILY SOLAR RADIATION. -Shown on Chart VII-A are the monthly averages of daily total solar radiation, both direct and diffuse, in langleys (gm. cal. cm. $^{-2}$) for all Weather Bureau stations which record this element.

CHART VII-B shows the percentages of the mean based on at least 5 years of record during the period 1950-1960, and corrected to the International Pyrheliometer Scale of 1956.

CHART VIII. -TRACKS OF CENTERS OF ANTICYCLONES AT SEA LEVEL.

CHART IX. TRACKS OF CENTERS OF CYCLONES AT SEA LEVEL. -Centers which can be identified for 24 hours or more are tracked in these charts. Semi-permanent features such as the Great Basin and Pacific Highs and Colorado and Mexico Lows are not shown. The 7:00 a. m. EST positions are shown by open circles, with the intermediate positions at 6-hour intervals shown by solid dots. The date is given above the circle and the central pressure to whole millibars below. A dashed track indicates a regeneration rather than actual movement to the next position. Solid squares indicate position of stationary center for period shown beside it.

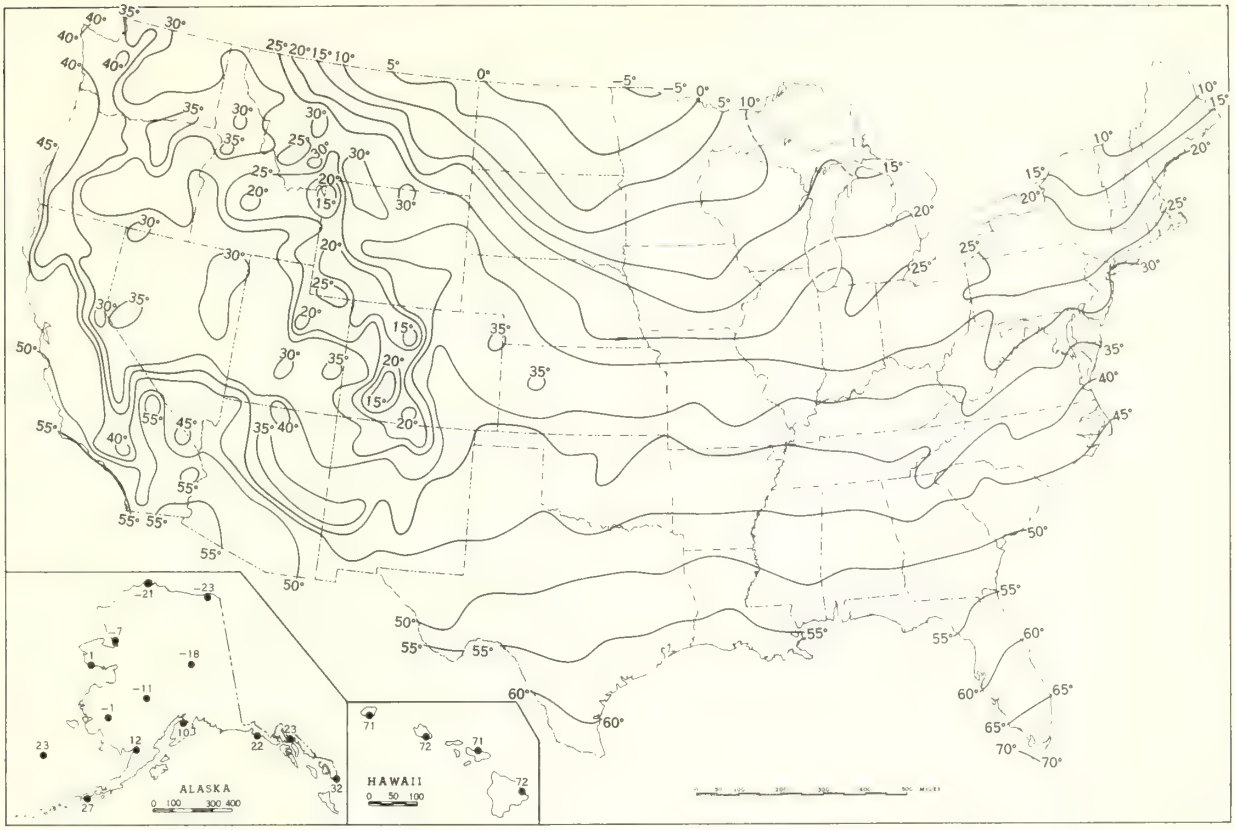
CHART X. AVERAGE SEA LEVEL PRESSURE (mb.) AND RESULTANT SURFACE WIND.-The average monthly sea level pressures are obatined from the eight daily 3-hourly observations reported at Weather Bureau Stations. Resultant surface wind directions (to 36 points of the compass) for the month are shown by arrows. Resultant speeds are indicated by the length of arrow shafts. Constancy ratios (resultant surface wind divided by average surface wind for month) are shown to two decimal places. The inset shows the departure of the average pressure based on 30-year normals for first-order Weather Bureau Stations, other stations having at least 10 years of record; and for each 10° intersection in a diamond grid over the oceans.

CHARTS XI-XVI. AVERAGE HEIGHT, TEMPERATURE, AND RESULTANT WINDS, 850, 700, 500, 300, 200, and 100 mb. -Height is given in geopotential meters and temperature in degrees Celsius. These are the averages of the 1200 GMT radiosonde reports. Wind speeds are given in knots; flag represents 50 knots, full feather 10 knots, and half feather 5 knots. Directions are shown to 360° of the compass. Winds are based on rawins at the indicated pressure surface and at 1200 GMT.

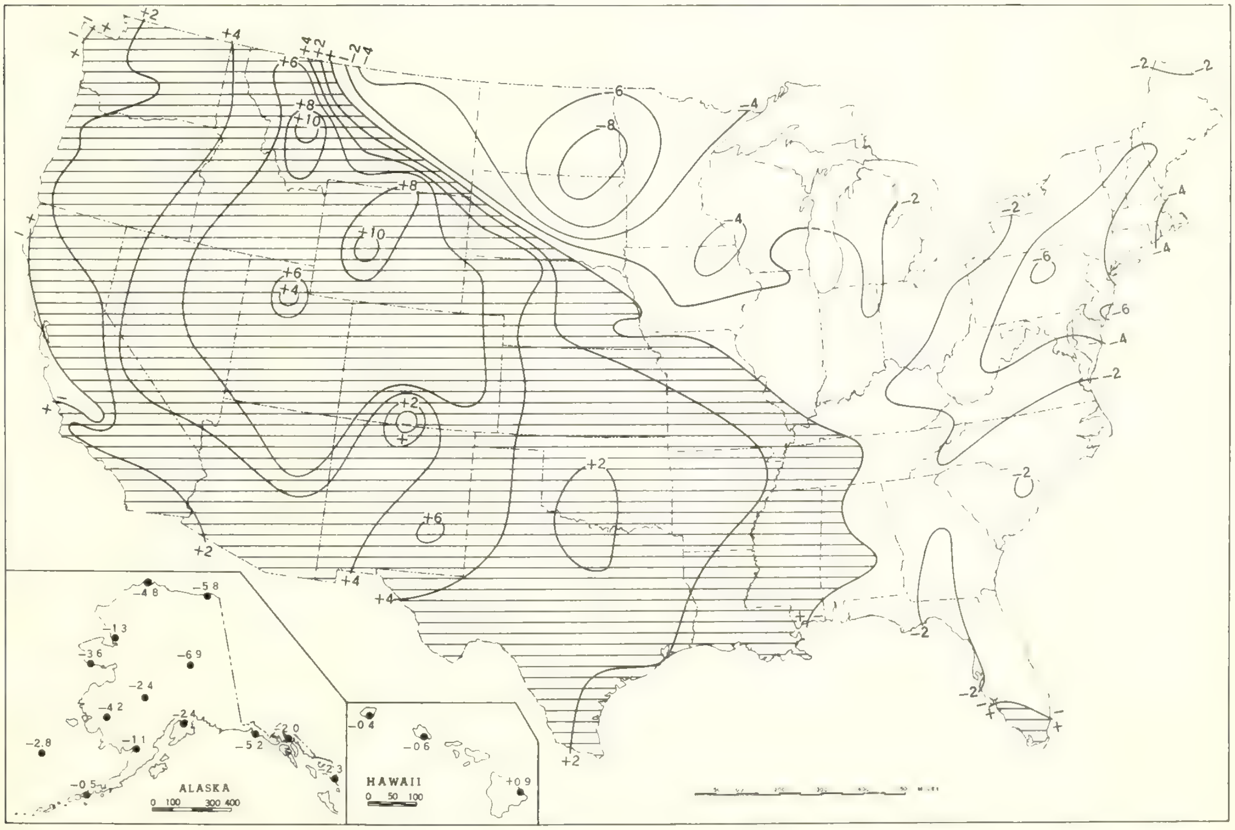
CHART XVII. A. 50-MB. RESULTANT WINDS. B. 30-MB. RESULTANT WINDS. -Wind speed (isotachs) in knots. Arrows show resultant wind direction. Winds are based on rawins at the indicated pressure surface and at 1200 GMT.

Exact values of most of these charted elements for Weather Bureau stations are printed each month in tabular form in CLIMATOLOGICAL DATA, NATIONAL SUMMARY. Extreme values of temperature and precipitation for each state are included in the tables, Condensed Climatological Summary. Annual averages for surface elements are presented in the CDNS Annual Issue each year.

Chart I. A. Average Temperature (°F.) at Surface, January 1965.



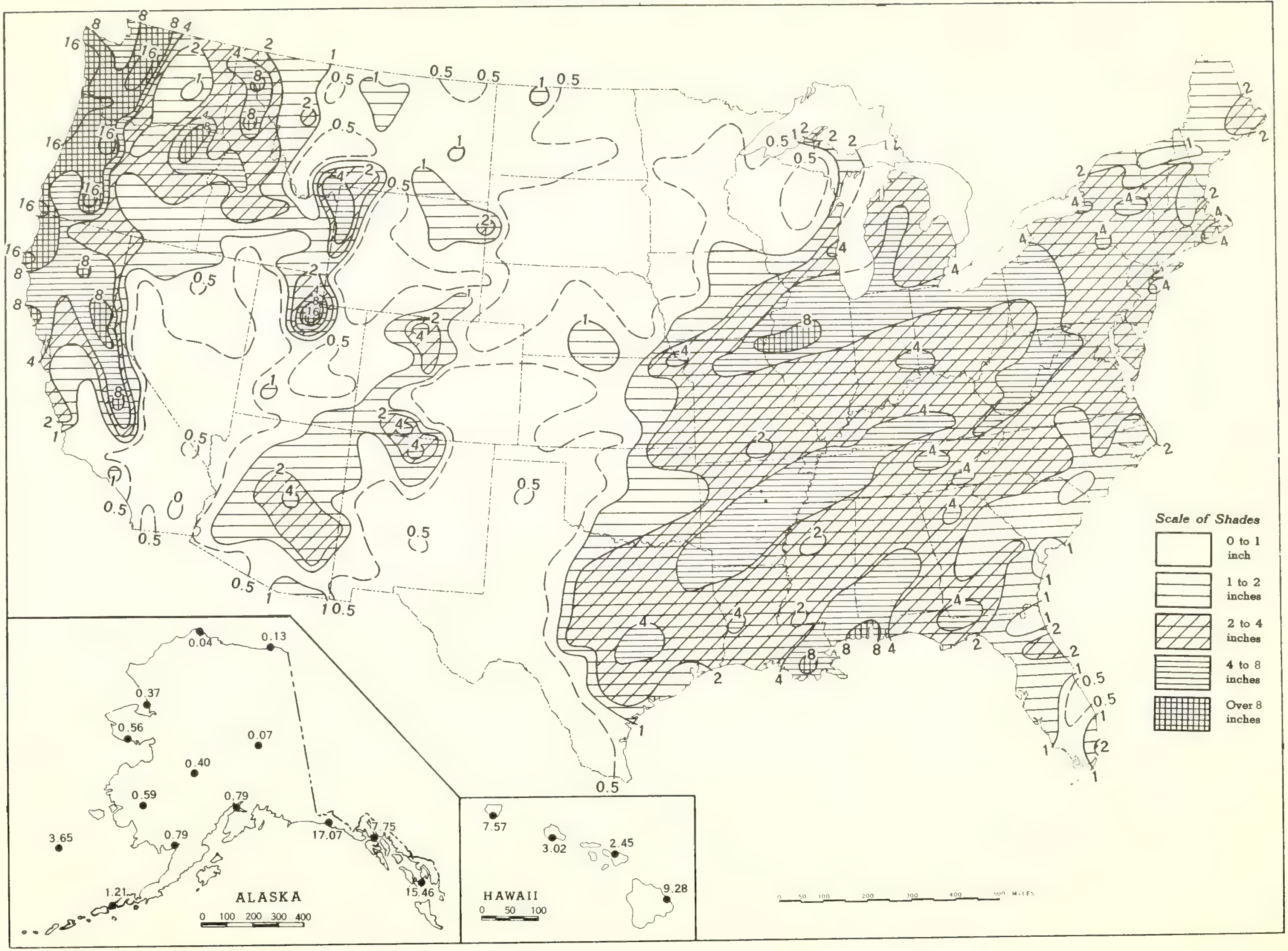
B. Departure of Average Temperature from Normal (°F.), January 1965.



A. Based on reports from over 870 Weather Bureau and cooperative stations. The monthly average is half the sum of the monthly average maximum and monthly average minimum, which are the average of the daily maxima and daily minima, respectively.

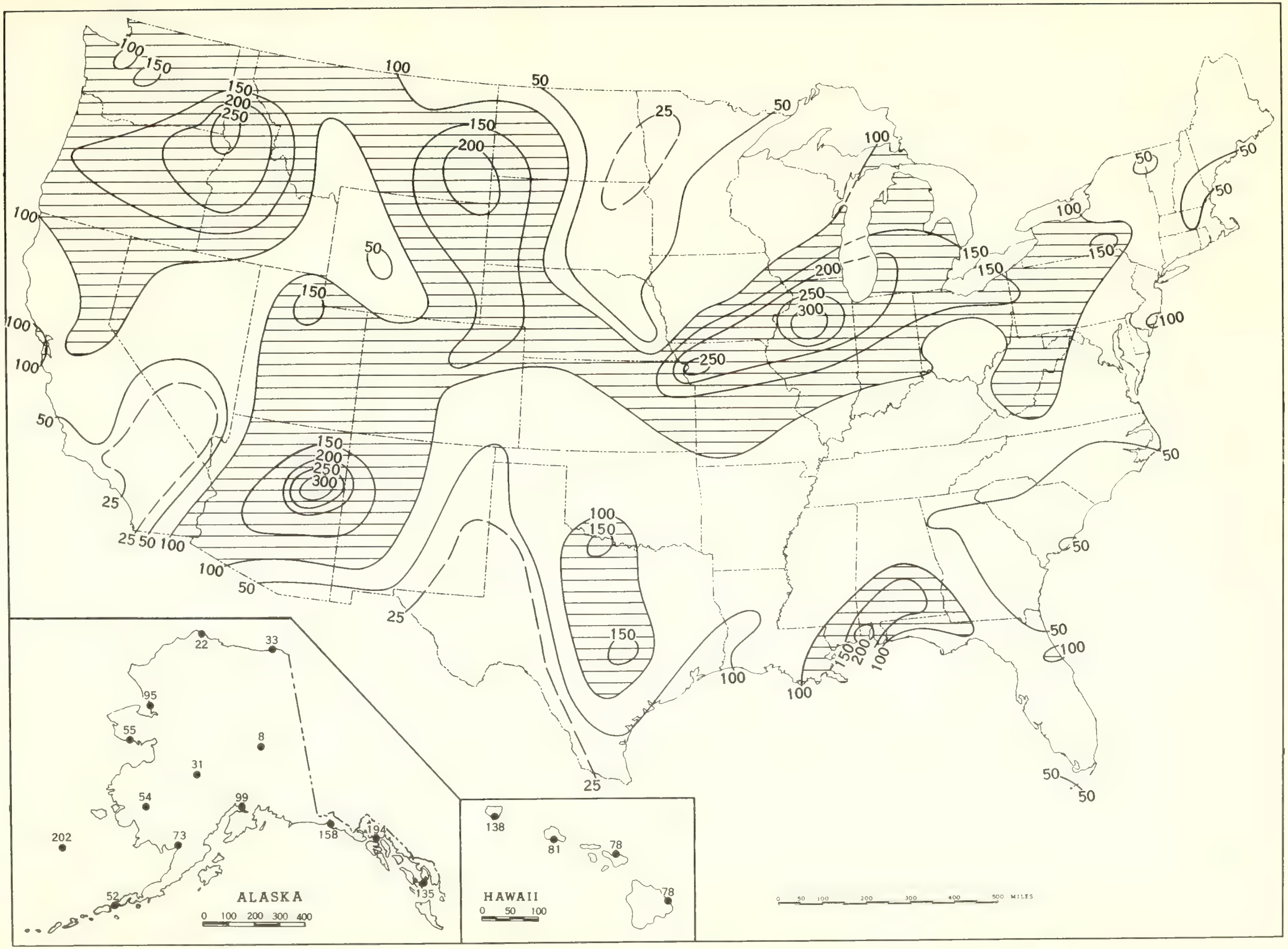
B. Departures from normal are based on the 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart II. Total Precipitation (Inches), January 1965.



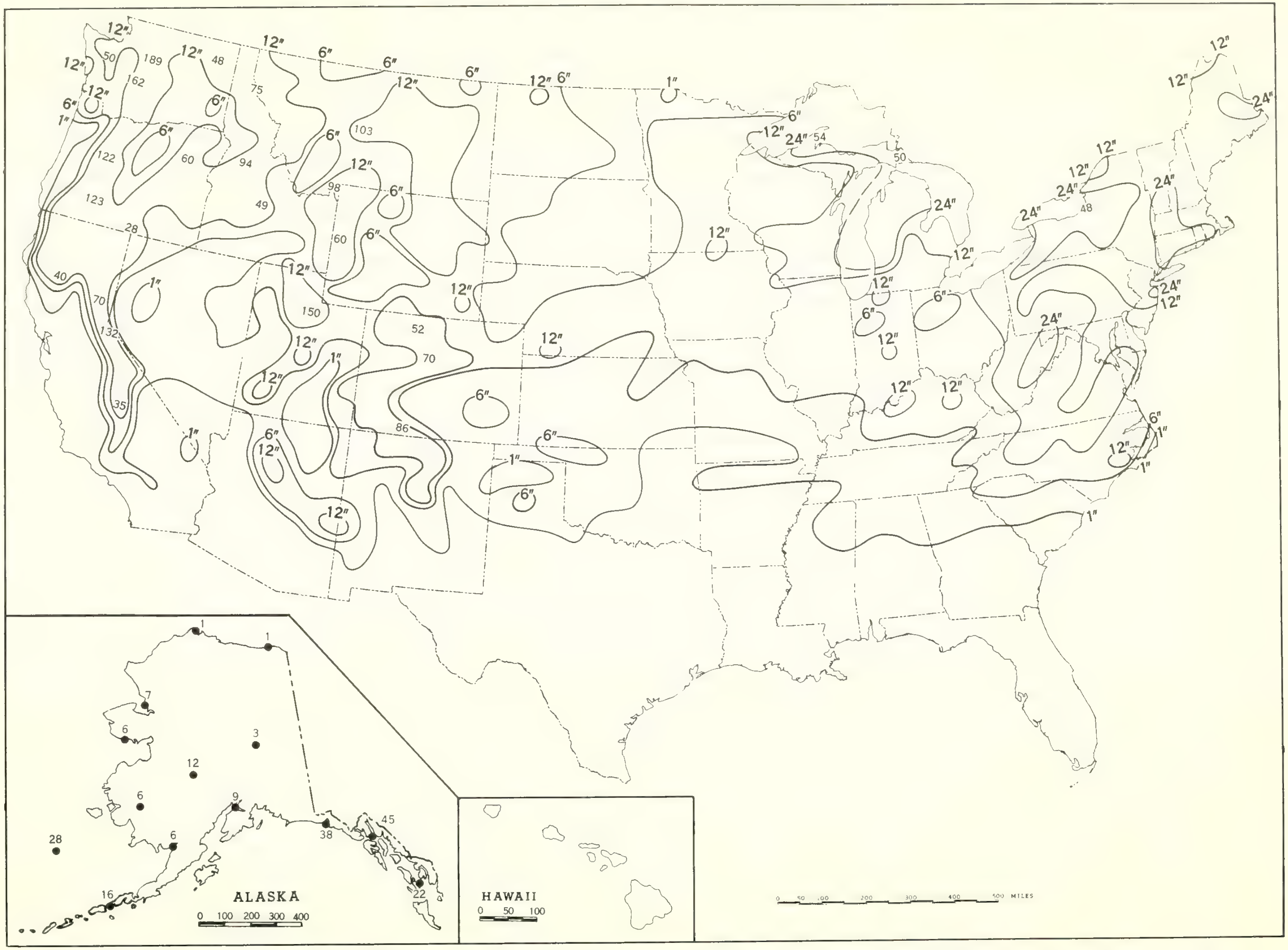
Based on daily precipitation records at about 870 Weather Bureau and cooperative stations.

Chart III. Percentage of Normal Precipitation, January 1965.



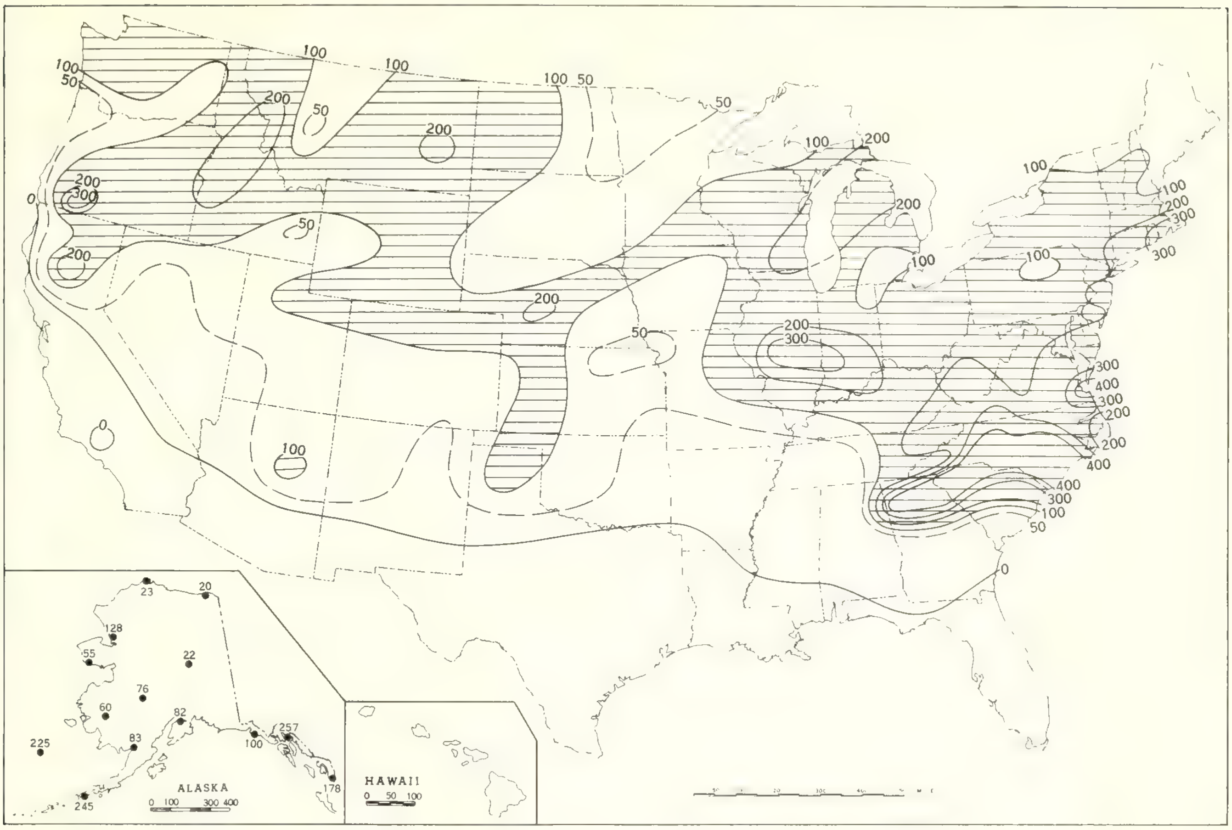
Normal monthly precipitation amounts are computed from 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart IV. Total Snowfall (Inches), January 1965.

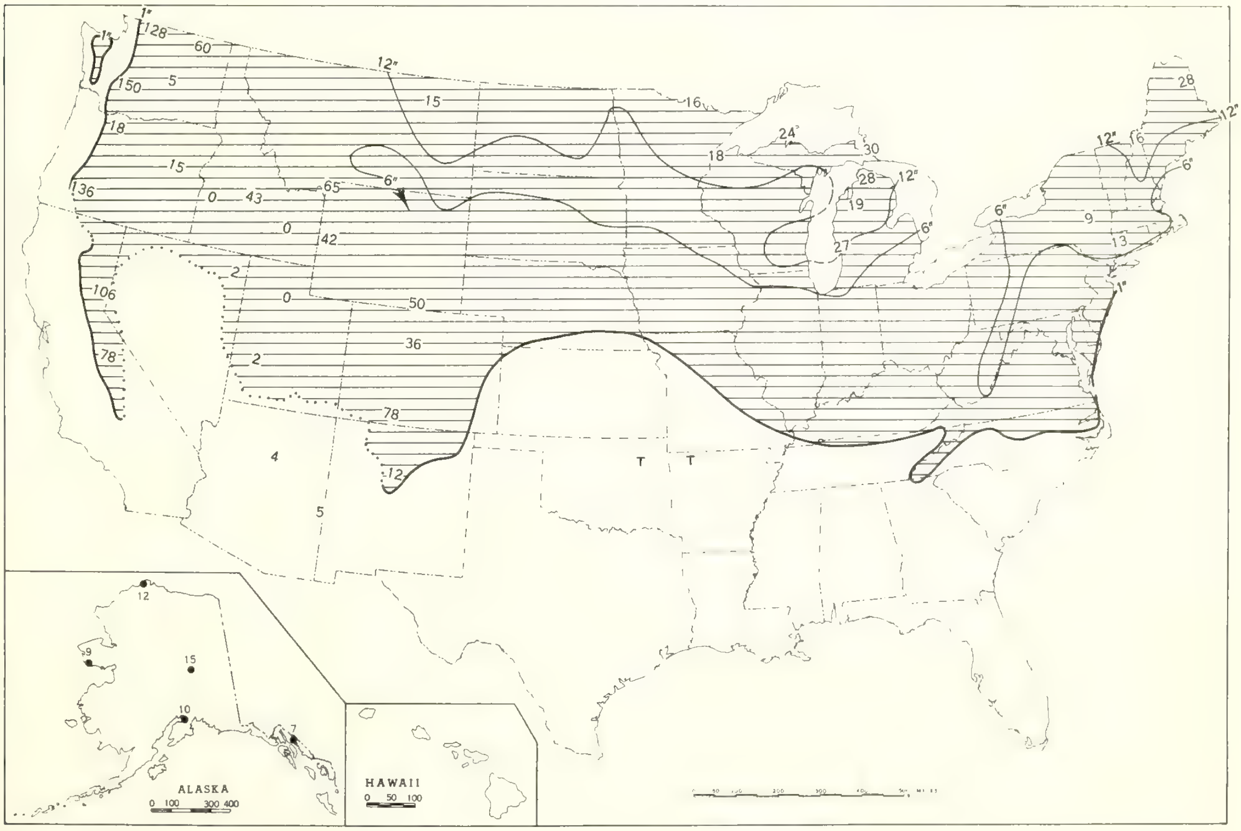


This is the total of unmelted snowfall recorded during the month at Weather Bureau and cooperative stations. This chart and Chart V are published only for the months of November through April although of course there is some snow at higher elevations, particularly in the far West, earlier and later in the year.

Chart V. A. Percentage of Mean Monthly Snowfall, January 1965.

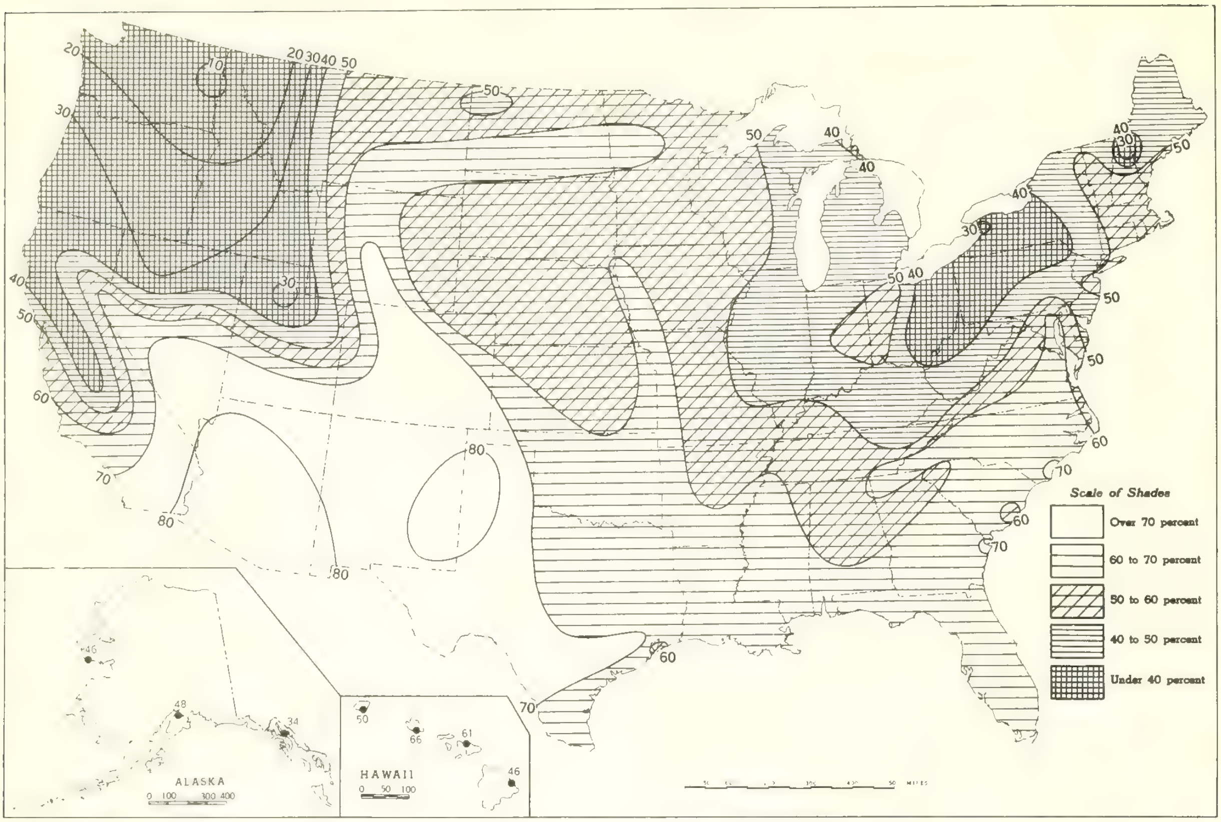


B. Depth of Snow on Ground (Inches), 7:00 a. m. E. S. T., February 1, 1965.

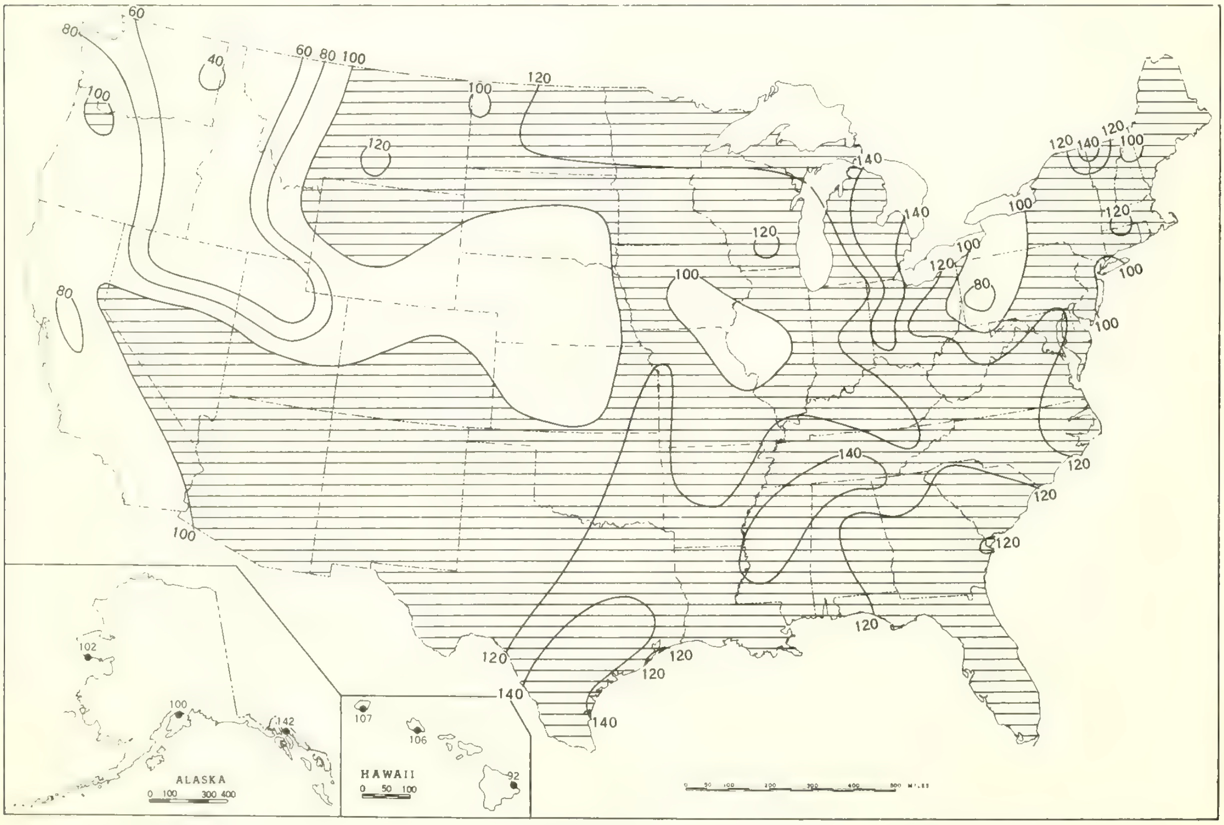


A. Amount of mean monthly snowfall is computed for Weather Bureau stations having at least 10 years of record.
B. Shows depth currently on ground at 7:00 a. m. E.S.T., of the Monday nearest the end of the month.
It is based on reports from Weather Bureau and cooperative stations.

Chart VI. A. Percentage of Possible Sunshine, January 1965.

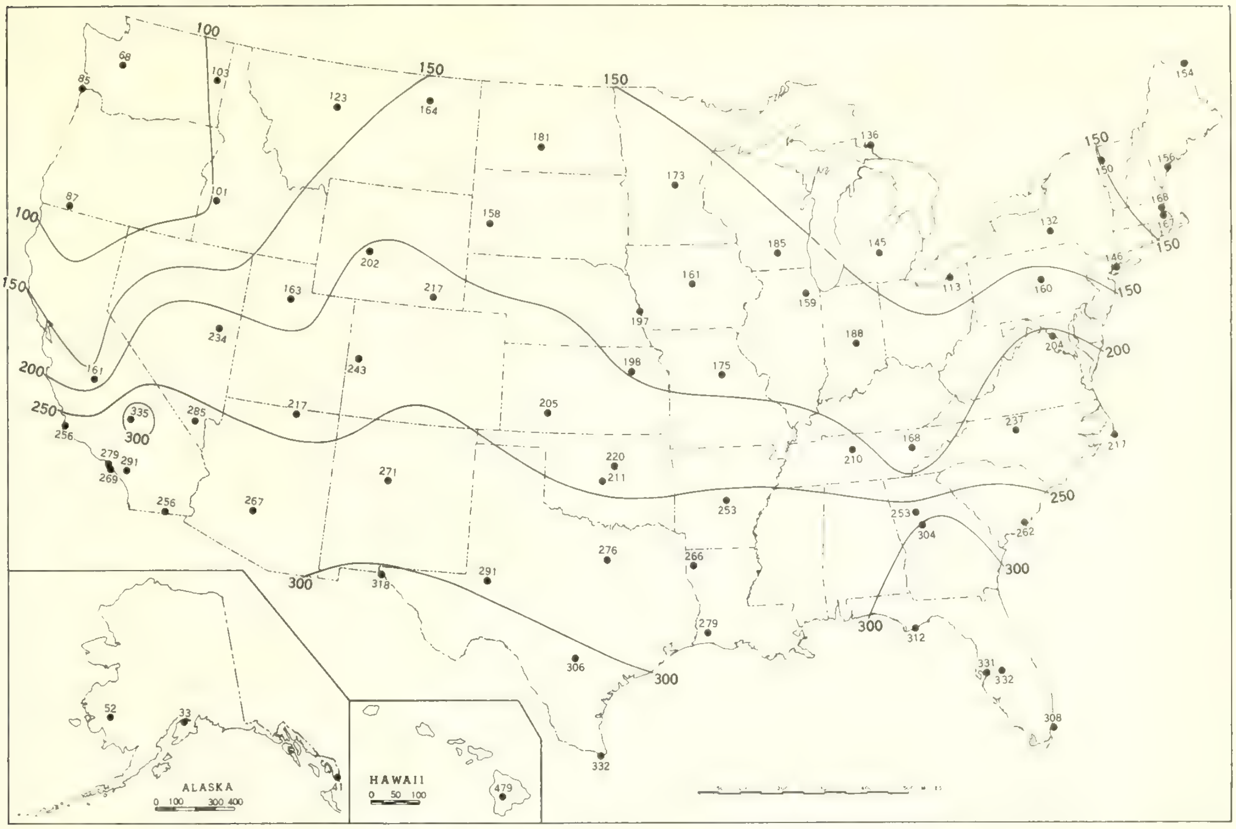


B. Percentage of Mean Monthly Sunshine, January 1965.

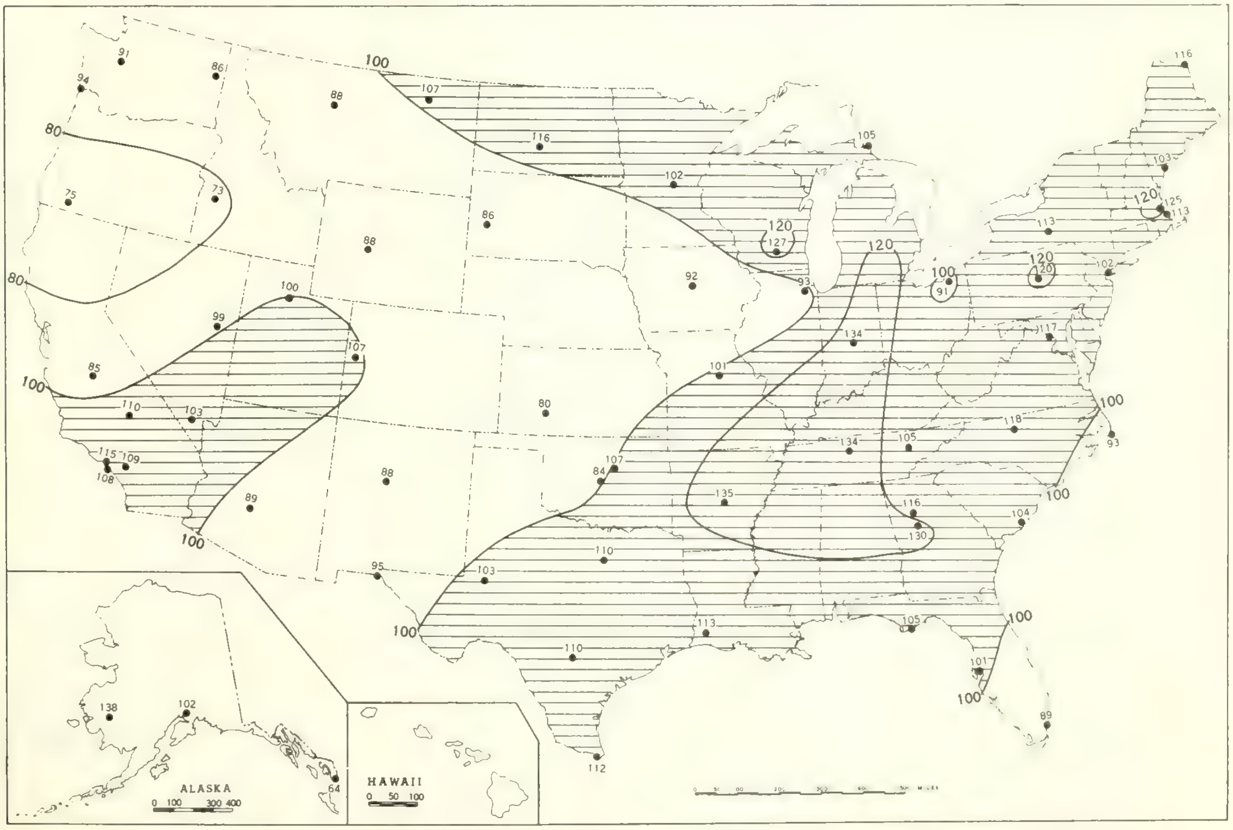


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, January 1965.

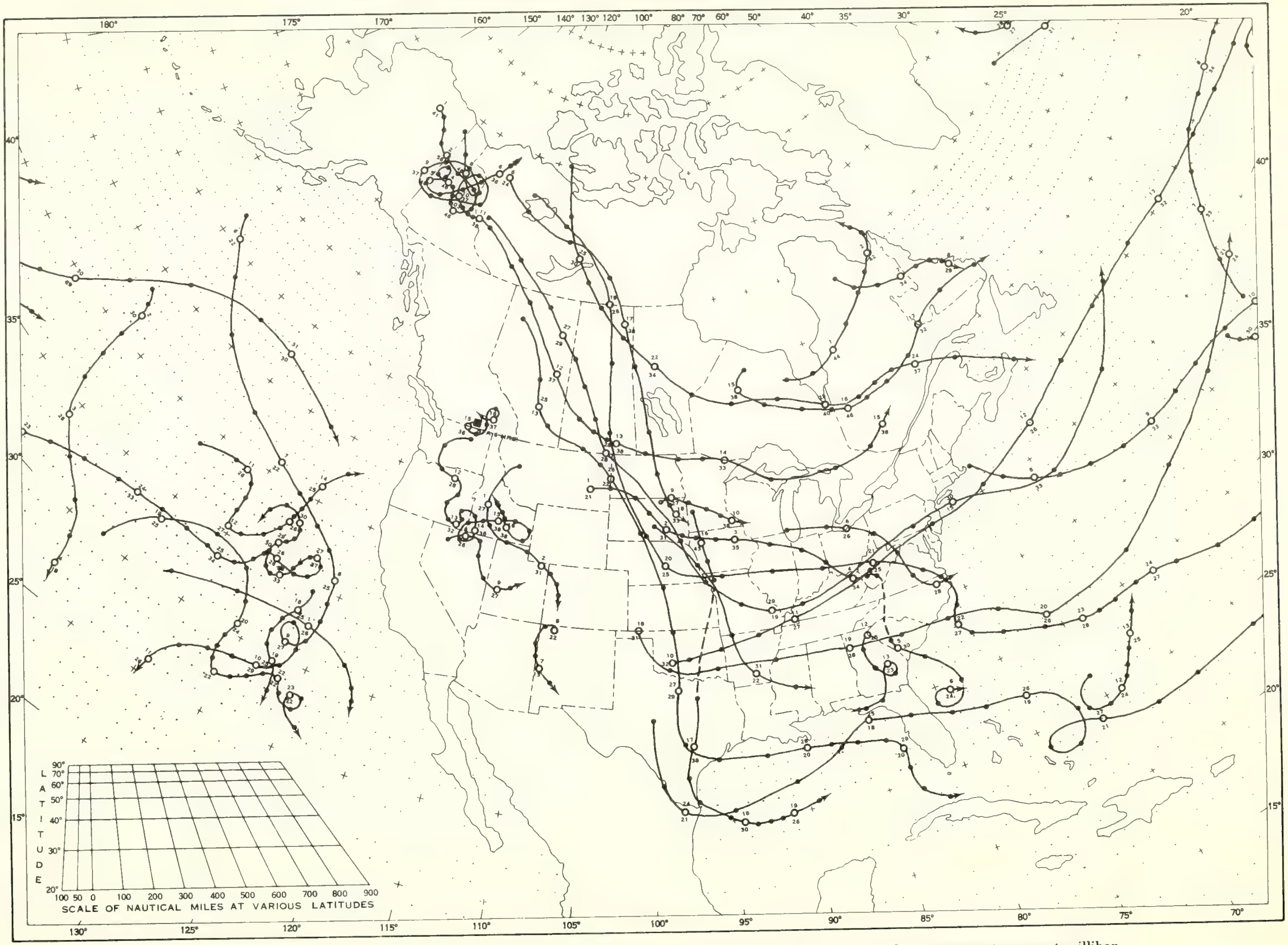


B. Percentage of Mean Daily Solar Radiation, January 1965.



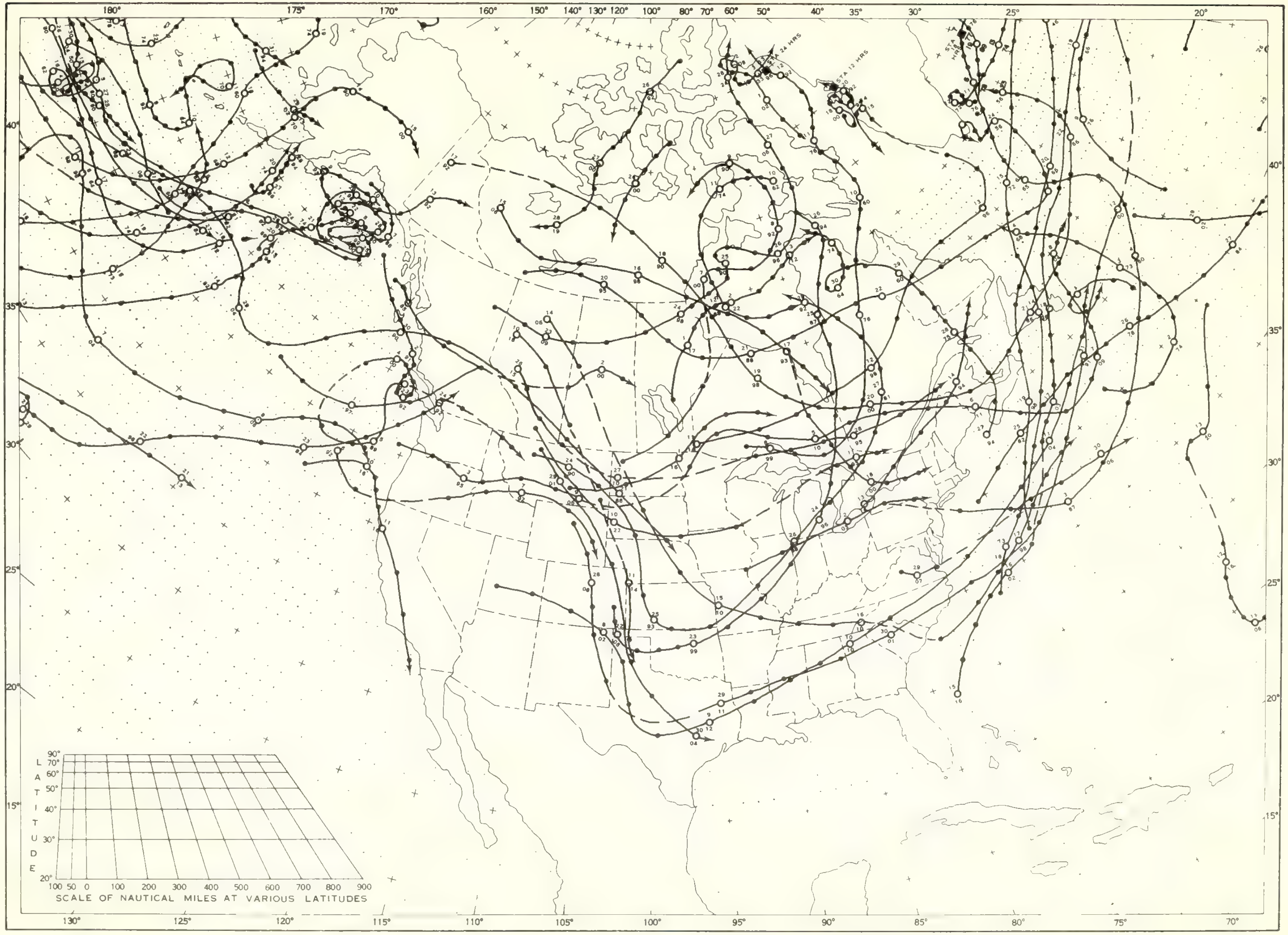
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm. $^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, January 1965.



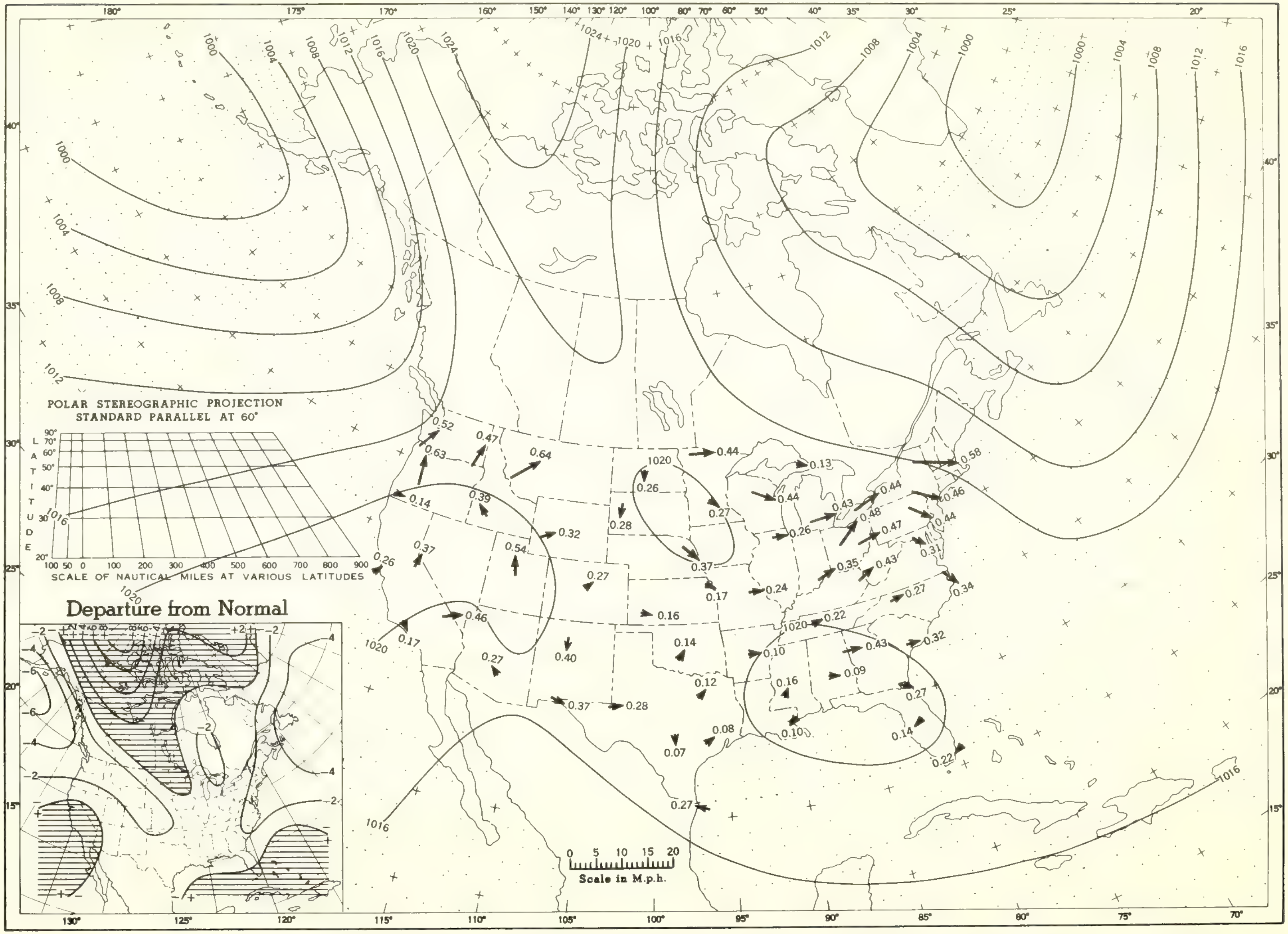
Circle indicates position of center at 7:00 a. m. E. S. T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, January 1965.



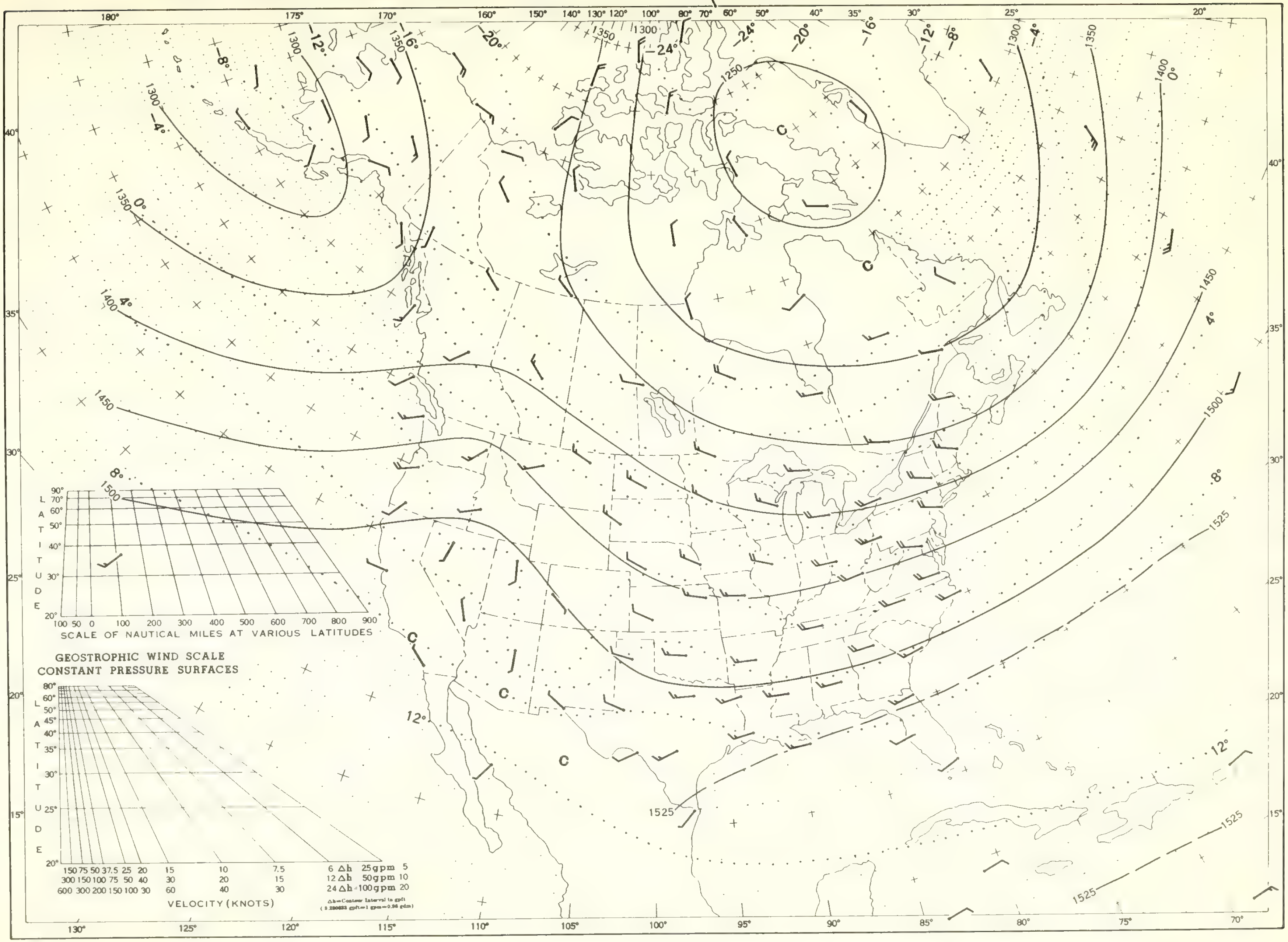
Circle indicates position of center at 7:00 a. m. E. S. T. See Chart VIII for explanation of symbols.

Chart X. Average Sea Level Pressure (mb.) and Resultant Surface Wind, January 1965. Inset: Departure of Average Pressure (mb.) from Normal, January 1965.



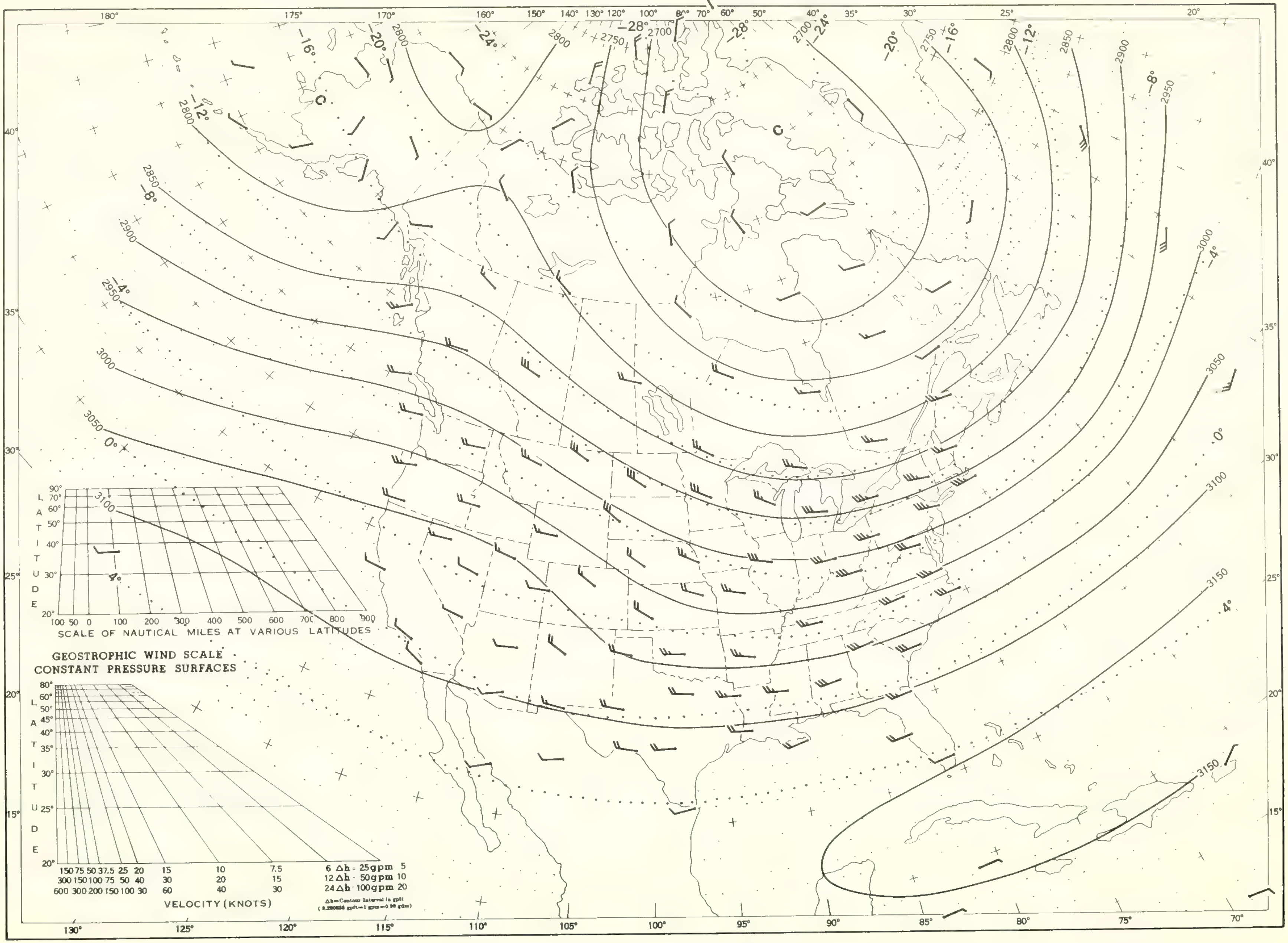
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb. Surface, 1200 GMT, January 1965. Average Height and Temperature, and Resultant Winds.



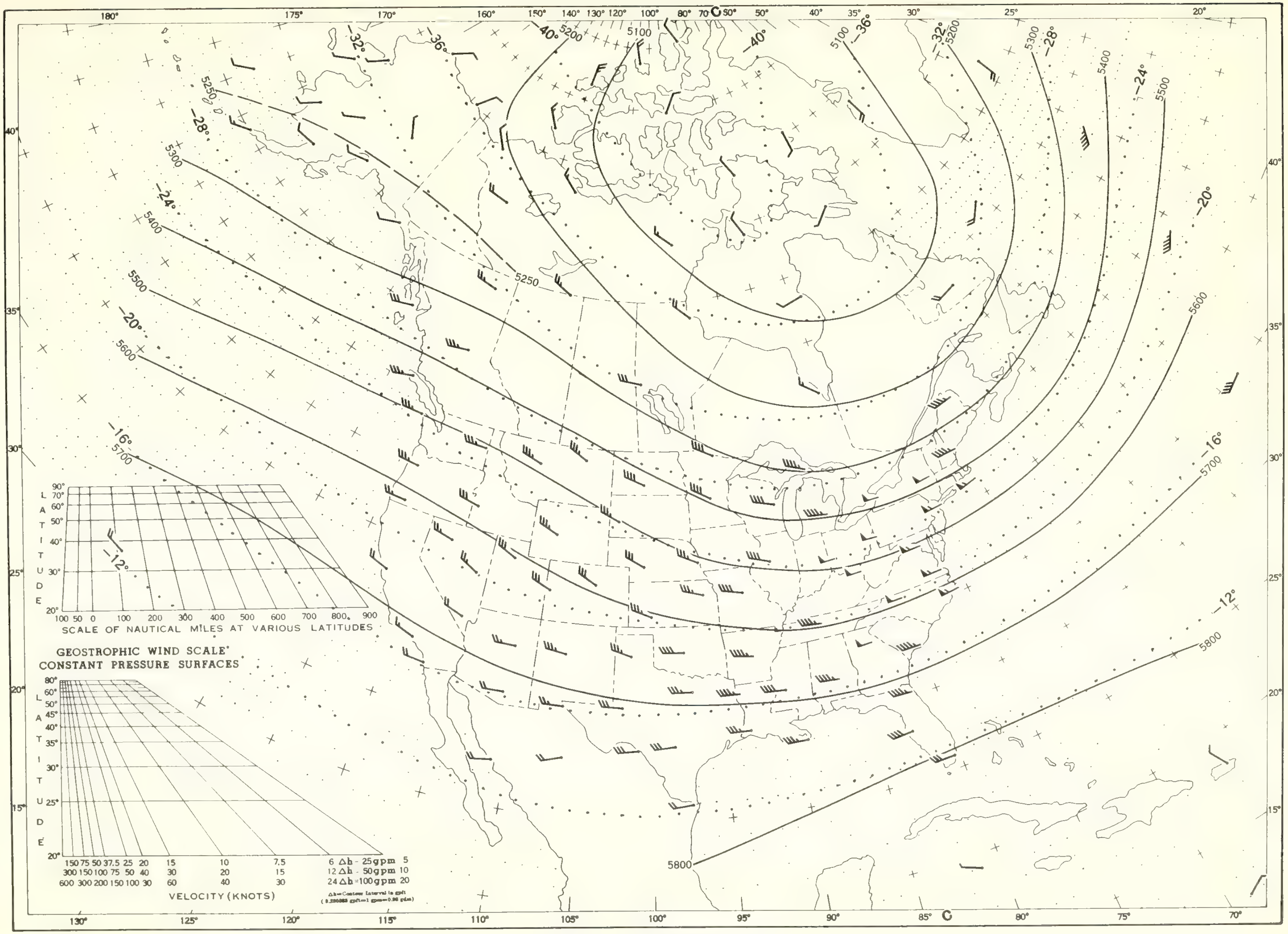
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in knots; flag represents 50 knots, full feather 10 knots, and half feather 5 knots. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, January 1965. Average Height and Temperature, and Resultant Winds.



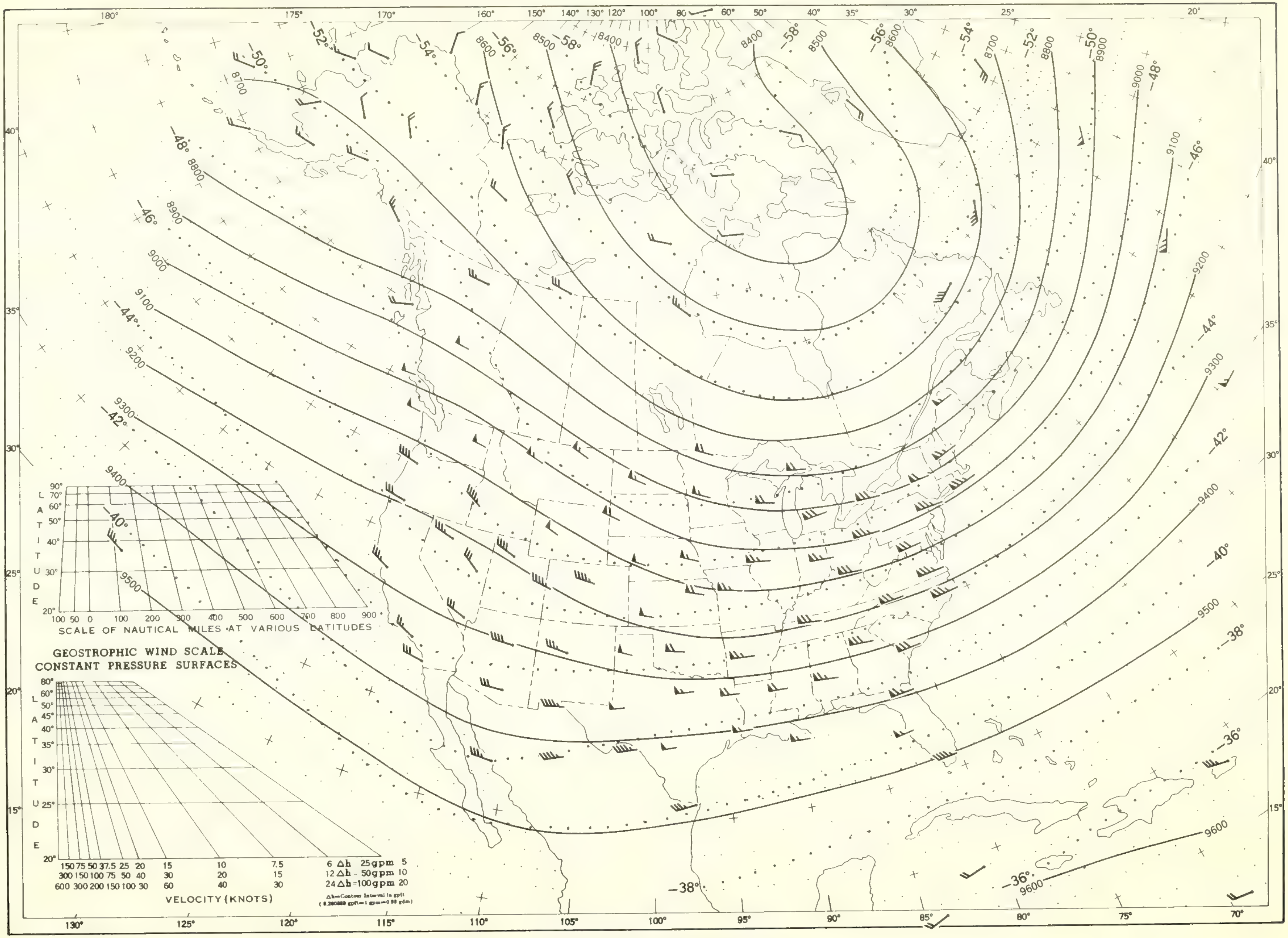
See Chart XI for explanation of map.

Chart XIII. 500-mb. Surface, 1200 GMT, January 1965. Average Height and Temperature, and Resultant Winds.



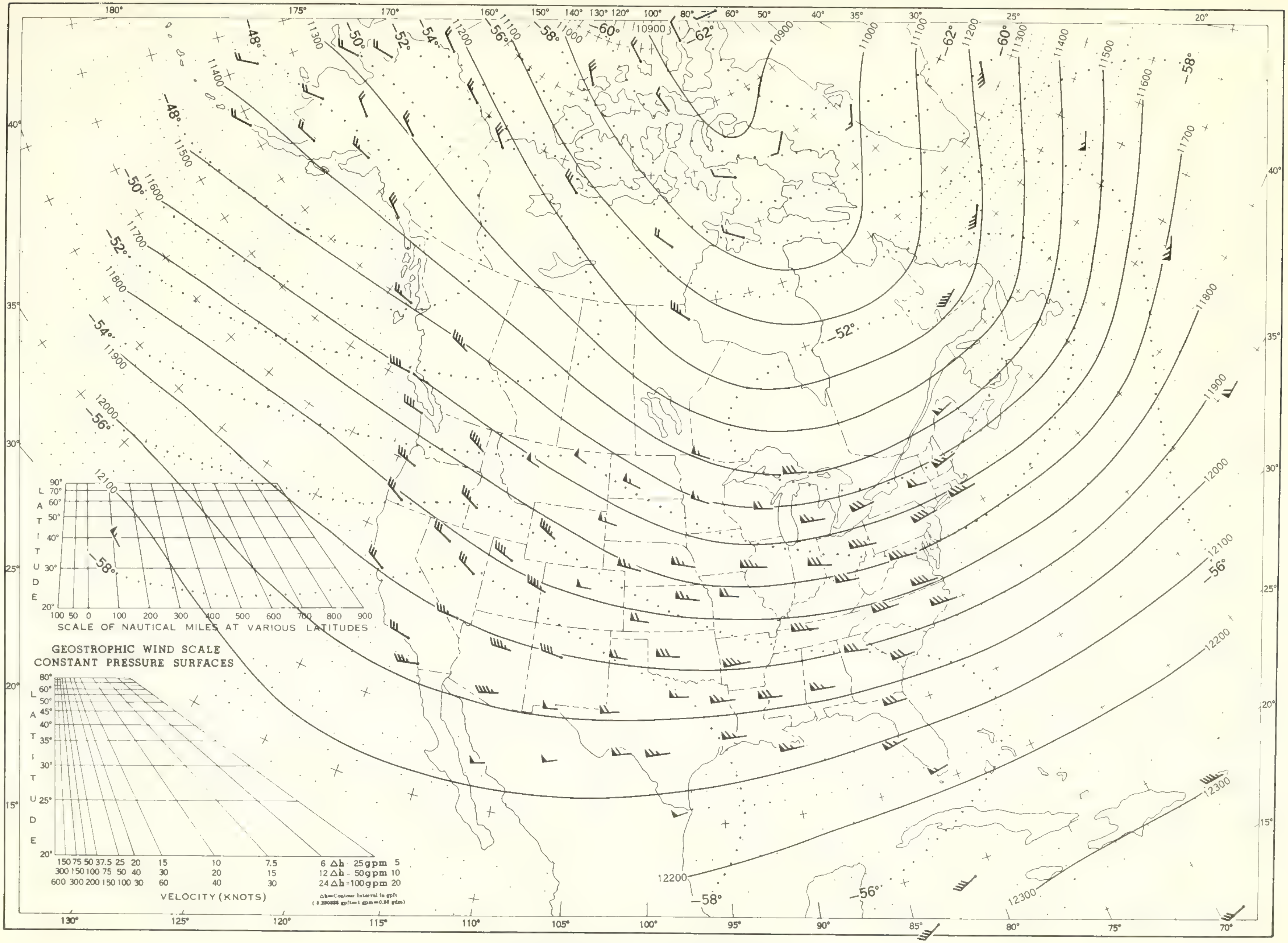
See Chart XI for explanation of map.

Chart XIV. 300-mb. Surface, 1200 GMT, January 1965. Average Height and Temperature, and Resultant Winds.



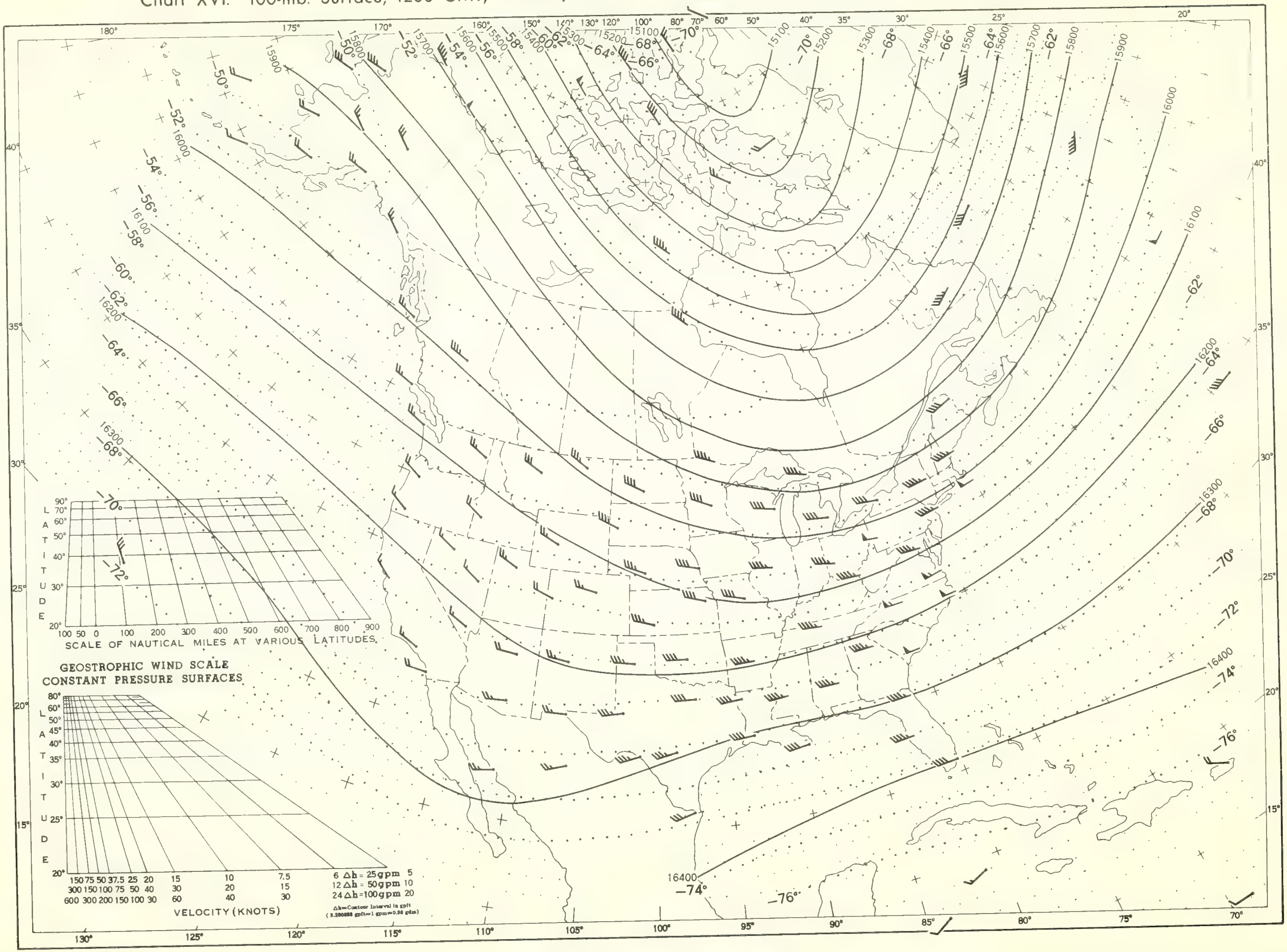
See Chart XI for explanation of map.

Chart XV. 200-mb. Surface, 1200 GMT, January 1965. Average Height and Temperature, and Resultant Winds.



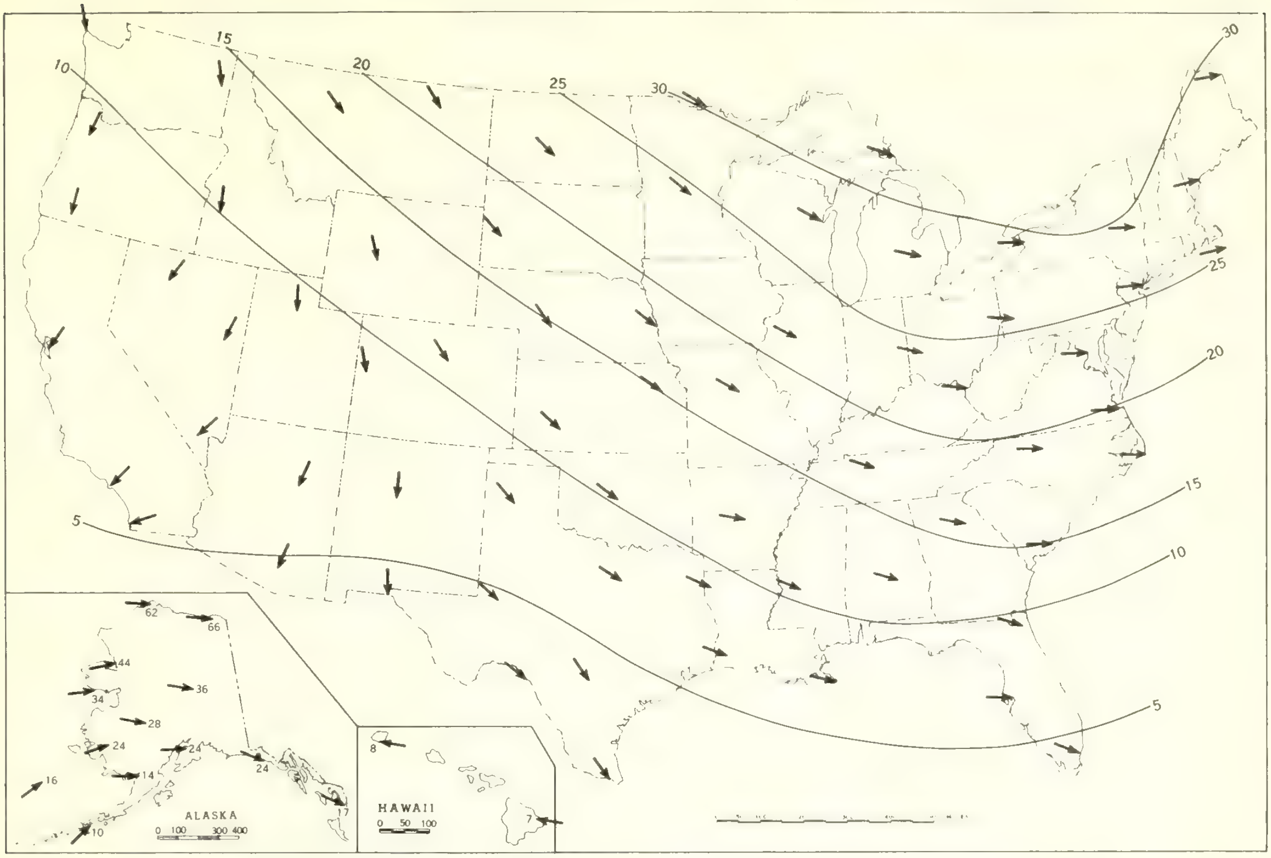
See Chart XI for explanation of map.

Chart XVI. 100-mb. Surface, 1200 GMT, January 1965. Average Height and Temperature, and Resultant Winds.

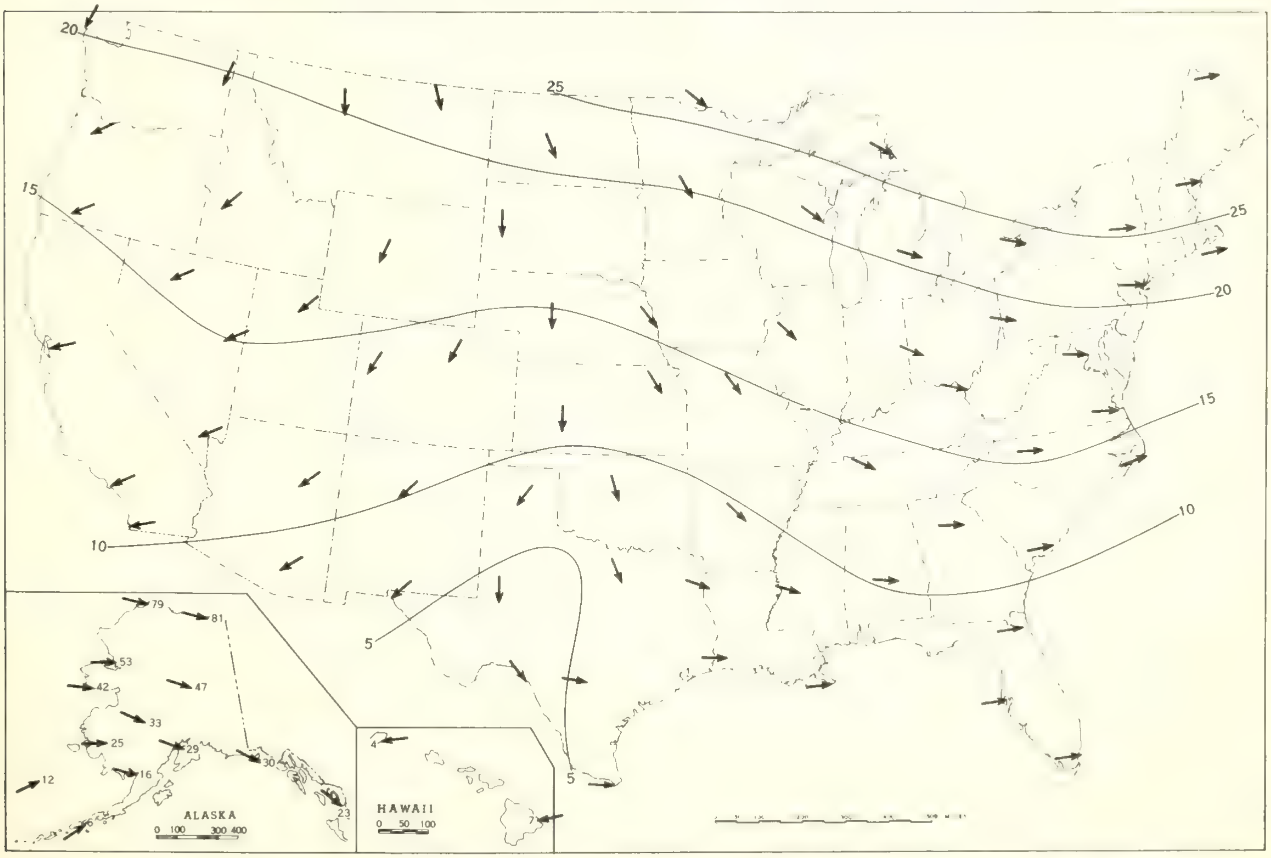


See Chart XI for explanation of map.

Chart XVII. A. 50-mb. Surface, 1200 GMT, January 1965. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, January 1965. Resultant Winds.



Wind speed (isotachs) in knots. Arrows show resultant wind direction. All wind data are based on rawin observations.

USCOMM-WB-Asheville, N. C. 5/21/65 1900

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

FEBRUARY 1965
Volume 16 No. 2

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NOTE: Delayed data and corrections will be carried in the June and December issues of this publication.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 16 No. 2 FEBRUARY 1965

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. Few clouds, much sunshine, and little rain over the western coastal States with considerably less fog than usual along the coast.

2. Severe cold over northern and central Great Plains. Heavy snow over central Great Plains on February 11.

3. Blizzards, Great Lakes region, 23d to 25th. Roads blocked, schools and industries shut down. Blustery weather reached Florida by end of month.

TEMPERATURE.--Mild temperatures prevailed over the western United States during the first week of February. A huge mound of high pressure lay over the East. Temperatures averaged below normal from the Great Plains to the Atlantic Ocean. The southern Appalachians averaged 12° to 15° colder than normal. The situation was reversed to some degree in the second week. Cold blasts down through the Great Plains dropped the temperatures over western Kansas and southeastern Colorado to 12° to 15° below normal and temperatures east of the Mississippi River were mostly above seasonal. During the third week, temperatures averaged warmer than normal from the Pacific Ocean to the western Great Plains in the north, over California and Nevada, and from Oklahoma northeastward to Lower Michigan. Elsewhere, temperatures averaged cooler than normal during the third week of February. In the last week, it was generally warmer than normal west of the Continental Divide and colder than normal east of the Divide. Monthly averages were above normal from the Pacific Ocean to western Montana, extreme western Wyoming, Utah, northwestern Arizona, and over most of the Florida Peninsula. Much of central and eastern Oregon averaged more than 4° warmer than normal. A few locations averaged more than 6° colder than seasonal.

Several cold outbreaks caused temperatures to change frequently over portions of the Great Plains. Rapid City, S. Dak., registered 68° on the 19th, -14° on the 23d, 66° on the 26th, and 15° at the end of the month. At Topeka, Kans., temperatures rose from 7° on the 1st to 59° on the 5th, dropped to 9° by the 12th, climbed to 68° by the 20th, fell to -1° on the 24th and 25th, and reached 61° by the end of the month. Similar variations were recorded at Waterloo, Iowa: -20° on the 2d, 42° on the 5th, -9° on the 13th, 47° on the 20th, -2° on the 25th, and 51° on the last afternoon of February. Marked temperature fluctuations were also recorded in the Ohio River Valley, the Northeast, and the Southeast. These changes are characteristic of the Great Plains and eastward in the winter months when cold waves advance with considerable regularity. In some areas, Minnesota, for instance, the frequent cold waves caused the monthly average temperatures to be lower than in any February since the 1930's.

PRECIPITATION.--During the month only light precipitation, generally less than 1 inch, fell over a wide band extending from California, Arizona, New Mexico, and extreme western Texas, northeastward to Montana, the Dakotas, and north-central Minnesota. Large areas in that belt received less than 0.5 inch. Some of the drier areas included North Dakota, adjoining portions of Montana and Minnesota, eastern Wyoming, southwestern South Dakota, the western half of Nebraska, eastern Oregon, southwestern Idaho, northern Nevada, central and southern California, and southern Arizona. Heavy snow, almost 80% more than average, fell at Flagstaff, Ariz. The water equivalent of this snow, 2.34 inches, exceeded the precipitation at other nearby locations.

Monthly totals over the northwestern corner of Washington ranged from 4 to more than 12 inches, where Tatoosh Island received 13.05 inches of rain in February. In the Northeast quarter, February totals generally ranged from 0.5 to more than 2 inches in the upper Mississippi River Valley to more than 6 inches in southern Maine. Portland, Maine, received 6.36 inches during the month. Generous rains fell over the Gulf Coastal States and the Southeast as far north as the Ohio River. Most monthly totals were between 4 and 6 inches. A number of localities received rains in excess of 6 inches. One of the largest totals, 11.50 inches, was measured at Tallahassee, Fla.

One of the early February storms moved inland along the northern Pacific coast on the 5th. The winds at Newport, Oreg., reached 90 to 95 m.p.h. in gusts and Portland Airport registered gusts to 60 to 70 m.p.h. The winds caused numerous power failures and considerable damage to trees and structures.

The severe weather spread southward and eastward. Almost the entire Nation from Arizona to North Dakota and eastward to the Atlantic Ocean received some form of precipitation on February 7. Heavy snow, 23.8 inches, fell at Flagstaff, Ariz., from the 6th to 10th. Snow, sleet, and freezing rain plagued the Texas Panhandle and other portions of west Texas on the 7th and 8th.

Heavy snow fell over the northern and central Great Plains. Lincoln, Nebr., received 19.0 inches and Omaha, Nebr., 18.3 inches of snow on the 11th, both new 24-hour records. Fifteen inches fell at Duluth on the 9th and 10th. Glaze in the La Crosse, Wis., area caused numerous traffic accidents and many personal injuries which were caused by pedestrians falling. Many schools in the vicinity were closed on the 10th. Deep drifts slowed traffic on main highways and closed some secondary roads on the 11th and 12th. The snow depths reached 25 to 30 inches over Upper Michigan.

More severe weather arrived near the end of the third week of February. Blizzards occurred from Montana to New England and heavy snow fell as far south as Arkansas. The storm slowed outdoor activities. Many schools and business establishments in Wisconsin, Illinois, and Indiana closed as the roads became impassable. Schools closed in the Little Rock, Ark., area on the 25th when driving became especially hazardous. Snow, sleet, and freezing rain on the 24th made the streets hazardous at Austin, Texas. Sleet and freezing rain occurred as far south as Louisiana on the 24th and 3 inches of snow fell at Memphis, Tenn., on that date. As the storm moved eastward, the winds reached gale speeds, gusting to 40 to 60 m.p.h. and caused some wind damage even in the south where precipitation occurred as rain. The blustery weather brought duststorms to Texas and Florida in the last week of February. The high winds on the 25th caused some grapefruit droppage and orange scarring in Florida. A number of tornadoes, funnels, and waterspouts occurred in Florida on the 23d.

CONDENSED CLIMATOLOGICAL SUMMARY

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	Centreville	84	12	Double Springs	2	2	Fayette	9.14	Albertville 2SE	3.33
Alaska	Lincoln Rock Light Sta	55	13	2 Stations	-59	17	Little Port Walter	20.99	2 Stations	.00
Arizona	Yuma Valley	88	23	Maverick	-32	12	Pinal Ranch	4.24	Fairbank	.00
Arkansas	Eudora	76	9	Gravette	-3	25	Hope 3NE	9.45	Gravette	2.06
California	Palm Springs	92	20	White Mountain 2	-20	11	Fort Dick 1NNE	4.24	16 Stations	.00
Colorado	Eversoll Ranch	78	27	Antero Reservoir	-41	13	Rye	3.13	2 Stations	.05
Connecticut	2 Stations	59	9+	Coventry	-27	4	Trap Fall Reservoir	6.02	Salisbury	1.93
Delaware	Selbyville	70	8	Bridgeville 1NW	-1	1	Wilmington Porter Resvr	3.05	Georgetown 5SW	.96
Florida	Saint Augustine	90	12	Niceville	19	3	Tallahassee WBAP	10.03	De Soto City 8SW	.46
Georgia	Louisville	86	11	Blairsville Exp Sta	2	3	Thomasville	9.62	Atkinson 1W	3.44
Hawaii	Upolu Point USCG, Hawaii	87	8	Mauna Loa Slope Obs	22	28+	Paakea 350 Maui	30.66	Lualualei 804, Oahu	.41
Idaho	2 Stations	66	27+	Stanley	-34	11	Burke 2ENE	5.35	2 Stations	.00
Illinois	Cairo WB City	73	9	Rochelle 1W	-22	2	Elizabethtown	5.97	Aledo	.51
Indiana	5 Stations	72	10+	Greensburg 3SW	-23	4	Bedford	6.55	West Lafayette 6NW	1.47
Iowa	Ottumwa FAA AP	67	20	2 Stations	-34	2	Estherville	D 3.25	Burlington Radio KBUR	.38
Kansas	2 Stations	77	28+	Atwood	-14	24	Belleville	3.14	Richfield 4N	T
Kentucky	6 Stations	75	11+	2 Stations	-16	3+	Russellville	6.67	Jeremiah	1.47
Louisiana	Donaldsonville	83	9	Antioch Fire Tower	15	25	Diamond 4NW	9.11	Hackberry 8SSW	2.54
Maine	Hiram 2S	52	11	Haynesville	-35	4	Portland	6.56	Middle Dam	1.58
Maryland	3 Stations	72	28+	Oakland 1SE	-14	1	Loch Raven Dam	3.95	Denton 1WNW	1.13
Massachusetts	Brockton	58	26+	2 Stations	-19	5+	Newburyport	4.97	South Egremont	1.33
Michigan	Monroe Sewage Plant	58	10	Stambaugh 1S	-32	13	Whitefish Point	D 4.57	Cornell	.63
Minnesota	2 Stations	50	27+	3 Stations	-40	24	Young America	2.88	2 Stations	.03
Mississippi	Richton 3SSE	81	11	University	7	1	Vaiden 1SSW	11.63	Gholson 8W	4.22
Missouri	Festus 2NW	76	27	Edgerton	-16	25	Sikeston Exp Farm	6.21	Goldsberry	.25
Montana	Yellowtail Dam	70	27	2 Stations	-37	11+	Summit	6.15	2 Stations	.00
Nebraska	3 Stations	71	27	Ewing	-25	24	Harbine	3.38	Moorefield	.06
Nevada	Sunrise Manor Las Vegas	81	22	2 Stations	-20	11	Emigrant Pass Hwy Sta	1.39	Beatty	.00
New Hampshire	Windham	53	8	Grafton	-29	5	Portsmouth	5.76	Lebanon FAA AP	1.56
New Jersey	Atlantic City WBAP	69	8	Layton 2	-9	5	Phillipsburg Bridge	4.54	Fortescue	1.38
New Mexico	Carlsbad	80	28	Gavilan	-30	13	Cloudcroft Ranger Station	2.90	Winston	.00
New York	Dansville	66	13	Paul Smiths	-23	5	Boonville 2SSW	6.10	Linden	D .55
North Carolina	Goldsboro 1SSW	87	12	Oconalufty	-6	3	Lake Toxaway 2SW	10.76	Marshall 2NE	2.24
North Dakota	Waterford City 14S	60	19	Wildrose	-31	1	Bowbells	1.00	2 Stations	.00
Ohio	Ironton	70	28	Tom Jenkins Dam	-18	5+	Hamilton Wtr Wks South	5.45	Toledo Sewage	1.52
Oklahoma	Hollis	83	27	Kenton	-5	12	Bear Mountain Tower	8.40	Regnier	.12
Oregon	Pelton Dam	78	18	Austin 3S	-17	11	Astor Experiment Sta	9.22	3 Stations	.00
Pennsylvania	Farrell Sharon	71	10	Milanville	-23	4	Arendtsville	5.28	Covington 2WSW	.60
Puerto Rico	2 Stations	93	22+	Cayey 1E	50	13	Rio Blanco Upper	5.60	7 Stations	.00
Rhode Island	do	55	25+	Kingston	-15	5	Providence WBAP	3.77	Block Island WBAP	2.00
South Carolina	Bamberg	83	11	Caesars Head	7	3	McClellanville	10.77	Lockhart	2.61
South Dakota	Winner	71	27	Huron WBAP	-33	24	Lead 1SE	1.96	5 Stations	T
Tennessee	Newbern	79	10	Greenville Exp Sta	-16	3	Covington 1W	8.21	Greenville Exp Sta	1.93
Texas	3 Stations	90	28+	Bravo	0	24	Maud	10.34	Hitchland	.00
Utah	2 Stations	73	27+	Strawberry Hwy Station	-26	15	Alta	4.78	Manila	T
Vermont	Dorset 1S	52	8	2 Stations	-23	5	Newfane	4.06	Burlington WBAP	.93
Virginia	4 Stations	78	13+	Chilhowie 1S	-11	3	Woolwine 4S	6.56	Boykins	.84
Washington	Richland	69	18	Chewelah 2S	-3	2	Quinault River RS	20.74	2 Stations	T
West Virginia	Grantsville 2NW	75	11	3 Stations	-15	4+	Canaan Valley	4.04	Corton	D1.18
Wisconsin	2 Stations	55	28	Brule Island	-40	13	Merrill	2.47	Fontana	.46
Wyoming	Billy Creek	66	19	Lake Yellowstone	-44	11	Alpine 2S	1.30	5 Stations	T

+ And also on an earlier date or dates

NOTE Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station		Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
	Elevation (ground)	Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	997.0	1019.8	56	33	44.6	- 4.1	76	9	15	2	0	18	34	69	6.22	0.94	2.35	12	5	T	T	0.3	2	38	SW	24	8	7	13	6.4	52
HUNTSVILLE	600	996.6	1020.1	54	32	42.8	- 2.3	76	9	8	2	0	18	32	68	5.67	0.45	2.10	10	2	1.6	1	0.9	10	48	24	24	9	7	12	6.0	
MOBILE	211	1010.5	1018.7	63	44	53.4	- 1.8	79	10	27	3	0	5	42	71	4.94	0.35	1.70	10	0	0.0	0	3.6	6	32	20	24	5	5	18	7.2	
MONTGOMERY	194	1012.5	1020.0	60	38	48.9	- 1.4	79	9	23	3	0	12	36	65	6.37	2.01	2.13	10	1	T	T	1.3	4	31	W	24	4	11	13	6.5	52
ALASKA												B																				
ANCHORAGE PRK STRIP	85			20	5	12.6	- 5.4	41	10	-15	18	0	28			0.69	- 0.02	0.43	8		10.5	21										
ANCHORAGE	143	1001.0	1006.2	19	2	10.3		38	10	-21	19	0	28	4	72	0.67		0.48	7	0	11.5	21	3.1	2	25	13	10	7	2	19	7.2	
ANNETTE	110	1007.1	1011.1	39	30	34.5	- 0.6	43	18+	23	14	0	21	28	79	18.06	9.52	5.58	21	0	24.9	5	5.1	16	31	16	18	2	4	22	8.7	
BARROW	22	1028.1	1028.8	-22	-30	-26.3	- 8.0	-18	27+	-36	8+	0	28	-37	54	T	- 0.17	T	0	0	T	12	3.7	5	22	9	22+	19	5	4	2.7	
BARTER ISLAND	39	1024.4	1026.3	-27	-37	-32.0	-12.4	-13	18	-51	9+	0	28	-38	70	T	- 0.35	T	0	0	T	15	8.4	27	46	28	17	13	6	9	4.5	
BETHEL	125	1003.4	1009.3	2	-12	- 4.6	-12.8	26	1	-33	15	0	28	- 9	77	0.97	- 0.15	0.30	12	0	10.1	31	9.5	1	35	5	5	10	1	17	6.3	
COLD BAY	94	1001.0	1004.9	30	20	24.7	- 3.3	43	9	2	18	0	27	21	84	2.78	- 0.39	0.95	19	0	23.4	10	2.5	31	61	23	8	4	2	22	8.2	
FAIRBANKS	436	996.3	1014.9	- 5	-31	-18.1	-15.2	20	12	-49	18+	0	28	-25	71	0.32	0.00	0.17	6	0	7.6	17	1.6	36	17	34	12	13	3	12	5.1	
JUNEAU	12	1007.8	1008.6	31	16	23.6	- 3.2	39	23+	- 8	20	0	28	23	89	5.10	2.04	0.92	22	0	86.3	36	5.3	10	32	12	14	3	2	23	8.6	35
KING SALMON	43	1003.7	1005.6	18	- 4	7.2	-10.2	37	8	-28	19	0	28	3	79	0.45	- 0.50	0.10	13	0	5.2	6	2.6	8	53	9	22	9	4	15	6.1	
KOTZEBUE	10	1016.9	1017.6	- 5	-23	-14.1	-10.1	10	10	-38	4	0	28	-21	68	0.26	- 0.04	0.10	6	0	10.3	24	4.3	6	30	36	15	15	2	11	4.6	
MC GRATH	334	998.3	1012.0	1	-24	-11.9	-12.0	16	11	-45	18	0	28	-22	60	0.43	- 0.71	0.21	10	0	24.0	38	1.3	28	15	29	12+	15	2	11	4.6	
NOME	13	1012.9	1013.5	3	-15	- 6.0	-11.5	19	27	-32	15	0	28	-15	65	0.13	- 0.81	0.06	4	0	1.7	9	7.1	3	41	4	5	15	3	10	3.9	73
ST. PAUL ISLAND	22	1006.1	1007.1	23	11	16.7	- 6.6	35	5+	- 8	16	0	28	15	87	1.59	0.36	0.78	18	0	11.0	26	10.0	4	49	35	21	5	4	19	7.9	
SHEMYA	122	990.5	994.1	35	30	32.7	1.9	40	24	25	7+	0	23	28	83	2.06	- 0.22	0.38	17	0	11.8	3	11.3	15	68	22	4	0	5	23	9.1	
YAKUTAT	28	1004.7	1005.7	29	13	21.3	- 7.3	37	10	- 8	18	0	28	19	87	8.54	0.34	1.88	18	0	87.3	49	4.5	10	35	14	12	2	5	21	8.3	
ARIZONA																																
FLAGSTAFF	6993	784.6	1017.0	44	15	29.7	0.1	62	26	-16	12	0	28	16	63	2.34	0.56	1.72	5	1	23.9	18	0.6	3	25	20	27+	16	5	7	4.1	
PHOENIX	1117	976.0	1015.3	65	39	52.4	- 1.1	79	26	28	12	0	3	32	52	0.91	0.06	0.83	3	2	0.0	0	1.5	15	35Y	NNW	23+	14	8	6	3.9	85
TUCSON	2584	925.5	1014.4	65	37	51.1	- 1.8	79	26	22	12	0	9	25	43	0.64	- 0.20	0.32	5	0	3.9	4	2.0	20	39	SW	6	17	3	8	3.8	85
WINSLOW	4895	850.7	1018.1	52	23	37.6	0.1	70	27	7	12	0	25	21	60	0.45	- 0.03	0.32	5	0	1.8	1	2.7	25	44	24	22	13	6	9	4.7	
YUMA	194	1008.5	1015.7	72	45	58.4	- 0.7	86	22	31	12	0	1	27	35	0.38	0.02	0.38	1	1	0.0	0	3.6	35	38	NW	23	14	7	7	3.9	89
ARKANSAS																																
FORT SMITH	449	1002.0	1019.2	55	28	41.4	- 2.3	72	7	12	2	0	17	28	65	3.08	- 0.35	1.64	5	1	T	T	1.0	1	29	W	11+	11	7	10	5.1	65
LITTLE ROCK	257	1009.5	1019.3	55	31	43.2	- 1.2	71	28	15	2	0	15	32	68	5.73	1.40	3.05	9	1	2.9	2	0.5	27	35	NW	24	11	7	10	5.3	60
TEXARKANA	372	1005.8	1019.1	59	36	47.2	- 1.3	72	28	20	25+	0	11	33	62	9.38	5.36	3.49	8	5	3.0	3	1.4	12				8	7	13	5.7	
CALIFORNIA																																
BAKERSFIELD	494	1001.4	1019.3	62	39	50.4	- 1.6	76	21	28	12	0	2	35	60	0.17	- 0.97	0.12	3	0	0.0	0	0.8	5	23	34	27+	13	5	10	4.9	
BISHOP	4108			61	27	43.8	2.6	75	20	15	24	0	24			0.02	- 0.96	0.02	1		0.0	0						16	7	5	3.5	
BLUE CANYON	5280			49	32	40.5	3.4	67	20	21	9	0	17			2.49	- 7.70	1.22	5		0.6	32			37	6	7	15	6	7	4.3	
BURBANK	724	990.9	1016.9	68	42	54.7	- 0.5	85	19	32	12	0	1	33	53	0.29	- 2.93	0.29	2	0	0.0	0	0.1	18	26	36	9	16	4	8	4.2	
EUREKA U	43			51	40	45.7	- 2.5	67	26	35	23	0	0			1.36	- 4.17	0.58	8		0.0	0			36	N	9	6	9	13	6.4	61
FRESNO	328	1007.5	1019.4	62	37	49.6	- 0.9	75	26	29	10	0	5	39	74	0.43	- 1.76	0.29	4	0	0.0	0	0.9	4	30	NW	22	10	9	9	5.0	73
LONG BEACH	34	1016.3	1017.6	65	43	53.8	- 0.6	84	19	33	12	0	0	38	61	0.42	- 1.89	0.38	2	0	0.0	0	1.6	28	23	9	15	15	5	8	4.4	
LOS ANGELES	97	1013.5	1017.2	65	46	55.3	0.1	83	19	37	12	0	0	40	63	0.34	- 2.54	0.34	2	0	0.0	0	1.7	27	45Y	N	22	13	6	9	4.5	
LOS ANGELES U	270			69	47	58.0	0.9	85	19	41	13+	0	0			0.23	- 3.10	0.23	2		0.0	0			25	N	23	18	5	5	3.7	77
MT SHASTA R	3544			51	28	39.5	2.5	67	18	20	11	0	25			1.45	- 4.46	0.85	6		1.7	1										
OAKLAND	6	1019.6	1019.8	59	45	51.5	0.8	65	25	38	12	0	0	42	69	0.82	- 2.39	0.41	6	0	0.0	0	3.1	34	23	16	27+	12	7	9	4.6	
RED BLUFF	342	1007.1	1020.1	62	39	50.9	1.2	78	20	35	24	0	0	34	59	1.14	- 2.17	0.52	5	0	0.0	0	4.8	35	34	N	6	13	7	8	4.6	80
SACRAMENTO	17	1019.0	1019.8	60	39	49.2	0.0	70	19	32	12	0	1	37	67	0.41	- 2.58	0.26	5	0	0.0	0	3.4	34	31	NW	9	13	6	9	4.6	81
SANDBERG R	4517			51	36	43.6	2.2	69	21	22	10	0	10			0.02	- 2.56	0.02	1		T	0			52	34	22	13	4	11	5.1	
SAN DIEGO	13	1016.3	1017.3	65	47	55.9	- 0.3	80	19	38	12+	0	0	41	64	0.52	- 1.63	0.52	2	0	0.0	0	2.1	30	18	NW	12+	14	5	9	4.3	83
SAN FRANCISCO	8	1019.6	1020.3	58	43	50.4	- 0.5	68	20+	37	12	0	0	40	72	0.91	- 2.57	0.59	7	0	0.0	0	4.9	30	31	N	9+	14	8	6	4.1	
SAN FRANCISCO U	52			60	48	54.0	1.0	73	20	42	3	0	0			0.94	- 2.72	0.56	4		0.0	0			26	SW	21					80
SANTA CATALINA	1568			60	48	54.0	0.0	76	19	42	4	0	0			0.24	- 2.92	0.20	2	0	0.0	0						12	6	10	5.0	
SANTA MARIA	236			63	38	50.5	- 1.3	78	20+	27	10	0	5			0.35	- 2.15	0.22	5		0.0	0						14	4	10	4.7	
STOCKTON	22	1019.3	1020.2	61	38	49.5	0.5	71	26	30	12	0	1	39	73	0.61	- 1.85	0.48	4	0	0.0	0	3.0	32	35	36	9	9	10	9	5.5	
COLORADO																																
ALAMOSA	7536			35	2	18.4	- 5.1	46	27	-23	13	0	28			0.37	0.20	0.22	6		8.4	4						14	6	8	4.4	
COLORADO SPRINGS	6145	806.6	1016.4	41	15	27.8	- 3.7	61	27	- 5	13+	0	25	11	55	0.72	0.39	0.33	7	0	9.0	5	4.0	3	32	27	22	9	5	14	6.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

FEBRUARY 1965

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
COLORADO																																
DENVER	5283	832.7	1015.6	41	14	27.4	-4.1	65	26	-5	16+	0	26	17	66	1.27	0.58	0.45	10	0	17.1	7	1.3	17	31	NE	22	5	11	12	6.3	78
GRAND JUNCTION	4855	851.7	1018.6	43	23	32.9	0.3	57	22	4	13	0	26	22	69	0.94	0.25	0.43	6	0	7.5	3	1.4	10	24	N	23	10	6	12	5.6	70
PUEBLO	4684	853.7	1017.3	45	14	29.5	-4.4	70	27	-12	12	0	25	17	61	0.71	0.23	0.26	7	0	14.4	6	2.3	1	52	N	14+	10	6	12	5.6	72
CONNECTICUT																																
BRIDGEPORT	7	1017.3	1017.7	37	22	29.4	-1.1	57	8	4	5	0	24	19	68	2.75	-0.21	1.15	10	1	6.1	8	6.7	30	50	31	22	11	6	11	5.6	
HARTFORD	169	1009.8	1016.6	35	18	26.6	-0.5	53	8	-8	4	0	27	15	62	4.43	1.49	2.16	11	1	6.0	9	4.3	29	35	NW	22	8	7	13	6.1	63
NEW HAVEN	6			37	22	29.3	-0.3	52	25	3	5	0	25			3.51	0.32	1.50	11		8.6	8			36	NW	19	10	7	11	5.9	63
DELAWARE																																
WILMINGTON	78	1014.9	1018.0	43	24	33.6	-0.2	66	8	7	4	0	22	22	65	2.17	-0.78	1.18	9	0	1.7	1	4.0	27	44	20	25	7	7	14	6.0	
DIST.OF COLUMBIA																																
WASH NATL AP	14	1016.3	1018.5	47	26	36.8	-1.0	68	28	12	1	0	19	21	59	1.89	-0.58	1 1.20	7	0	1.9	2	2.6	29	49	SSW	25	9	4	15	6.1	60
FLORIDA																																
APALACHICOLA U	13			62	48	54.7	-2.1	72	7	30	26	0	1			3.66	-0.25	0.88	12	1	0.0	0						6	8	14	6.7	44
DAYTONA BEACH	31	1018.0	1019.5	71	52	61.3	0.7	81	17+	31	1	0	1	53	79	3.00	0.25	1.22	8	3	0.0	0	2.3	36	38	27	25	6	8	14	6.3	
FORT MYERS	15	1018.0	1018.4	79	57	67.7	2.5	85	16+	38	27+	0	0	58	74	2.99	0.78	2.10	9	3	0.0	0	2.1	12	35	30	25	9	11	8	5.4	
JACKSONVILLE	24	1018.3	1019.2	67	48	57.6	0.1	83	12	30	3	0	3	46	72	5.50	2.59	1.47	8	2	0.0	0	2.5	1	48	W	25	5	8	15	6.8	51
KEY WEST	4	1017.3	1017.9	80	71	75.2	4.8	83	24+	57	27	0	0	66	74	4.46	2.48	1.74	8	4	0.0	0	6.5	9	40	SE	6	10	10	8	5.4	68
LAKELAND U	214			75	54	64.8	1.7	86	8	38	26	0	0			3.35	0.84	1.62	5		0.0	0						7	10	11	6.0	67
MIAMI	7	1018.0	1018.4	79	63	70.9	3.0	85	18	41	27	0	0	61	73	2.98	1.11	1.22	8	2	0.0	0	3.6	12	32	30	25	8	9	11	5.9	
ORLANDO	108	1014.6	1019.0	75	53	64.1	2.2	84	14+	35	26	0	0	53	74	3.67	1.25	2.32	8	2	0.0	0	0.5	5	32	28	25	6	10	12	6.4	
PENSACOLA	112	1015.2	1019.2	61	44	52.8	-3.3	75	7	27	26	0	3	42	69	6.48	2.23	3.33	11		0.0	0	3.1	2	34	NW	25					48
TALLAHASSEE	58	1017.3	1019.8	65	42	53.3	-2.3	78	7	25	1	0	4	44	75	10.03	5.85	3.17	11	1	0.0	0	2.2	4	40	21	24	3	11	14	7.0	
TAMPA	19	1018.3	1018.4	75	53	63.8	1.1	84	11	33	1	0	0	53	74	2.57	-0.27	1.22	7	2	0.0	0	1.2	9	41	27	25	9	8	11	5.8	59
WEST PALM BEACH	15	1017.6	1018.4	78	60	69.1	1.5	86	24+	40	27	0	0	60	76	4.14	1.79	1.38	11	2	0.0	0	3.0	13	43	29	25	8	10	10	5.9	
GEORGIA																																
ATHENS	802	989.8	1019.3	57	35	45.6	-0.5	76	11+	18	3	0	14	34	70	4.92	0.22	1.30	10	1	T	0	2.6	28	25	27	25	8	6	14	6.4	
ATLANTA	1010	982.1	1019.7	54	34	43.9	-2.2	74	11	16	3	0	15	32	69	4.31	-0.20	1.30	11	1	0.1	T	2.0	29	31	W	25	7	5	16	6.6	50
AUGUSTA	143	1013.9	1019.2	62	37	49.5	0.2	80	11	19	3	0	11	37	69	5.42	1.90	1.44	11	0	T	0	2.1	27	32	27	25	9	5	14	6.4	
COLUMBUS	385			61	37	49.2	-0.5	80	11+	22	3	0	12	36	65	5.46	0.83	1.63	11		T	T	1.7	34	27	29	25	3	11	14	7.1	
MACON	354	1006.8	1020.2	61	37	49.0	-2.1	80	11+	20	3	0	12	37	70	6.29	2.03	2.06	13	0	T	T	1.6	33	35	W	25	5	11	12	6.4	52
ROME	637			55	31	42.7	-1.7	74	11	13	3	0	18			4.63	-0.67	1.20	11		T	T										
SAVANNAH	46	1017.6	1019.3	64	41	52.4	-0.7	83	12	23	1	0	7	41	71	4.34	0.66	1.07	11	1	0.0	0	1.9	32	40	SW	25	7	9	12	6.4	53
HAWAII																																
HILO	31	1012.9	1014.0	76	61	68.4	-2.2	82	14	55	1	0	0	59	73	3.71	-9.23	0.91	16	1	0.0	0	4.9	34	31	36	16+	6	10	12	6.2	50
HONOLULU	7	1014.2	1014.8	77	62	69.8	-2.6	80	15+	57	28+	0	0	57	66	0.80	-2.50	0.45	6	3	0.0	0	6.5	2	31	NE	4	9	14	5	5.1	82
KAHULUI	48	1012.2	1014.4	75	61	67.9	-3.8	77	23+	54	28	0	0			7.56	5.02	4.89	17	3	0.0	0	6.1	4	31	N	16	5	14	9	6.3	58
LIHUE	115	1010.8	1016.0	74	61	67.5	-3.2	76	23	55	27+	0	0	57	72	2.52	-2.80	1.95	16	2	0.0	0	7.3	2	24	NE	20	7	9	12	5.8	57
IDAHO																																
BOISE	2838	918.4	1020.6	46	28	36.9	2.4	62	26	14	11	0	26	26	67	0.31	-1.02	0.13	7	0	0.4	T	0.5	27	31	W	27+	5	10	13	6.7	62
IDAHO FALLS 42NW R	4790			32	10	20.8	1.9	46	27	-10	2	0	28			0.07	-0.42	0.07	1				3.3	34	29	NNW	9					
IDAHO FALLS 46W R	4933			35	14	24.3	3.9	48	26	1	11+	0	28			0.15	-0.62	0.15	1		T	1			38	SW	22					
LEWISTON	1413			48	31	39.6	3.7	64	19+	21	11	0	18			0.40	-0.57	0.13	8		1.0	1						2	6	20	8.0	
POCATELLO	4454	863.2	1019.6	42	20	30.8	3.6	56	26+	-3	11	0	26	21	67	0.38	-0.54	0.10	9	0	3.7	2	6.9	23	35	SW	22	4	9	15	6.8	71
ILLINOIS																																
CAIRO U	314			49	30	39.3	-1.4	73	9	6	2	0	17			5.18	1.51	2.78	7		7.7	5			31	N	21	13	6	9	4.7	67
CHICAGO O HARE	658	991.5	1017.0	34	15	24.3	-1.9	57	28	-14	2	0	26	16	72	1.18	-0.33	0.43	12	0	11.5	10	4.6	25	38	34	25	9	6	13	5.9	
CHICAGO MIDWAY	607	993.9		36	19	27.4	-0.3	59	28	-9	2	0	24	16	65	1.76	0.16	0.60	10	0	13.1	9	4.9	26	36	S	20	8	7	13	5.9	56
MOLINE	582	994.9	1017.5	35	17	25.7	0.0	64	28	-12	2	0	26	16	68	0.97	-0.38	0.35	9	0	7.4	6	4.6	27	30	NW	21	11	4	13	5.6	60
PEORIA	652	993.2	1018.1	37	17	27.0	-1.4	60	20	-10	2	0	25	18	72	0.93	-0.78	0.39	9	0	5.8	6	2.5	27	31	NW	25	10	5	11	5.1	60
ROCKFORD	724	988.5	1016.6	31	14	22.1	-2.3	55	28	-16	2	0	27	13	69	0.83	-0.61	0.28	10	0	5.0	6	5.2	27	30	25	10	11	5	12	5.4	
SPRINGFIELD	588	995.3	1018.2	40	21	30.0	-1.6	62	28+	-6	2	0	25	22	74	1.88	0.06	1.05	8	0	14.2	12	4.2	23	36	W	12	11	8	9	4.9	61

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
INDIANA																																
EVANSVILLE	381	1004.7	1019.3	45	22	33.9	- 3.7	72	9	-10	2	0	21	25	70	5.01	1.83	2.47	10	1	9.7	6	2.2	26	28	NW	24	12	6	10	5.2	68
FORT WAYNE	791	986.1	1017.1	34	18	26.1	- 2.2	57	10	- 7	2	0	25	17	69	2.48	0.24	1.54	9	0	9.2	8	5.4	26	42	SW	12	8	8	12	6.0	53
INDIANAPOLIS	792	987.8	1018.1	39	20	29.5	- 1.6	61	10	-10	2	0	21	20	70	4.33	2.05	2.07	9	1	15.3	13	3.7	25	45	NW	25	9	8	11	5.7	69
SOUTH BEND	773	987.5	1016.6	35	19	27.0	0.2	55	10	- 9	2	0	26	18	72	2.70	0.82	0.81	14	0	20.1	14	5.4	25	32	24	12	6	7	15	6.8	
IOWA																																
BURLINGTON	694			37	16	26.3	- 1.5	63	20	- 8	2	0	26	18	70	0.38	- 1.01		6	0	4.0		4.2	26	32	25	12	10	8	10	5.4	
DES MOINES	938	982.1	1018.5	30	10	20.2	- 3.2	55	28	-13	2	0	26	14	80	1.14	0.04	0.48	7	1	7.6	4	3.4	30	31	NW	21	9	8	11	5.6	63
DUBUQUE	1065			28	10	19.1	- 2.9	55	28	-21	2	0	26			1.06	- 0.34	0.38	8		5.2	8						8	6	14	6.0	
SIOUX CITY	1095	977.0	1018.8	30	7	18.6	- 3.6	51	5	-11	24+	0	27	12	76	1.19	0.30	0.56	7	0	11.9	10	2.3	32	43	NW	21+	10	6	12	5.7	73
WATERLOO	868	984.4	1017.7	27	6	16.5	- 4.9	51	28	-20	2	0	28	11	77	1.16	0.24	0.62	5	0	6.6	5	3.7	29	44	32	21	6	9	13	6.4	
KANSAS																																
CONCORDIA	1470	963.4	1018.4	37	16	26.4	- 5.2	62	27	- 9	24	0	24	19	75	1.98	1.07	1.02	6	0	20.3	13	1.7	26	36	NW	21	14	2	12	4.7	63
DODGE CITY	2582	924.1	1017.6	45	20	32.4	- 2.6	75	27	- 1	24	0	23	21	72	0.60	- 0.10	0.29	6	0	5.5	4	2.6	33	47	N	23	12	5	11	5.3	75
GOODLAND	3645	886.9	1017.4	43	12	27.8	- 3.1	70	27	- 9	24	0	28	17	68	0.51	0.00	0.20	8	1	10.1	5	4.1	30	37	34	28	10	7	11	5.4	
TOPEKA	876	985.8	1018.8	42	20	30.8	- 2.3	68	20	- 1	25+	0	25	22	72	1.27	0.22	0.55	7	1	7.3	5	2.0	31	40	N	1	13	6	9	4.7	67
WICHITA	1321	968.5	1017.9	47	22	34.4	- 1.9	69	28+	1	24	0	23	25	73	1.39	0.47	0.58	6	1	2.7	2	1.1	31	54	N	23	14	5	9	4.6	67
KENTUCKY																																
COVINGTON	869	985.4	1017.8	45	20	32.9	- 0.2	66	28+	-10	4	0	21	23	69	5.07	2.16	1.57	9	0	5.9	5	4.6	25	29	28	25	5	12	11	6.2	
LEXINGTON	966	982.4	1018.8	45	24	34.3	- 1.5	66	9	- 4	2	0	20	23	66	2.92	- 0.50	1.14	9	1	1.8	2	5.2	20	29	25	25	9	8	11	5.7	
LOUISVILLE	474	1000.3	1018.5	47	25	35.9	0.1	70	9	1		0	21	23	61	4.67	1.38	1.72	10	0	3.9	3	4.3	27	33	W	25	8	10	10	5.6	63
LOUISIANA																																
ALEXANDRIA	92	1014.9	1019.2	61	38	49.5	- 3.3	76	11	24	26	0	10	39	73	5.11	0.14	1.35	9	6	T	0	1.9	4	32	30	24	7	3	18	7.0	
BATON ROUGE	64	1016.3	1019.1	64	42	53.1	- 2.3	80	9	25	25	0	5	42	70	5.93	1.51	2.81	11	2	T	0	3.4	7	29	17	9	7	3	18	7.2	
LAKE CHARLES	14	1017.3	1018.3	64	45	54.4	- 1.9	80	9	30	25	0	2	45	74	3.86	- 0.65	0.85	9	5	0.0	0	4.0	9	31	18	9	7	4	17	6.9	
NEW ORLEANS	3	1017.6	1018.6	64	45	54.4	- 2.7	79	10	29	26	0	3	45	72	5.25	1.26	2.25	8	1	0.0	0	3.4	6	31	22	24	7	3	18	7.1	
SHREVEPORT	252	1009.1	1018.4	60	39	49.4	- 0.9	72	28+	21	25+	0	10	38	68	6.51	2.42	3.53	9	5	2.0	2	2.0	13	40	27	11	8	4	16	6.3	47
MAINE																																
CARIBOU	624			22	1	11.5	- 1.0	38	26+	-18	5	0	28			2.33	0.31	1.15	13		14.8	16						9	7	12	5.9	
PORTLAND	61	1013.2	1015.6	32	11	21.6	- 1.2	47	25+	- 8	1	0	27	10	61	6.36	2.56	3.21	10	1	13.2	8	3.8	30	42	SE	25	9	9	10	5.8	61
MARYLAND																																
BALTIMORE	148	1012.2	1018.0	46	24	34.9	- 0.8	70	8	7	1	0	22	21	61	2.89	0.00	1.64	7	0	1.1	1	3.6	29	57	SW	25	8	9	11	5.7	67
MASSACHUSETTS																																
BLUE HILL OBS R	629			35	18	26.2	- 1.2	55	25	2	5	0	26			2.89	- 0.84	1.67	10	1	5.0	9			58	S	25					56
BOSTON	15	1015.6	1016.5	36	20	28.0	- 2.3	53	25	6	20	0	26	17	66	3.17	- 0.15	1.87	13	1	4.7	2	6.7	29	42	S	25	9	8	11	5.8	59
NANTUCKET	43	1015.9	1016.4	36	23	29.7	- 1.7	49	25	11	20	0	25	20	68	2.41	- 1.35	0.88	10	1	3.1	2	5.1	28	47	E	25	5	9	14	6.7	53
PITTSFIELD	1170			32	13	22.3	0.0	49	8	-10	4	0	26			2.34	- 0.17	1.02	11		9.3	14										
WORCESTER	986			34	15	24.3	- 0.6	51	8	- 2	5	0	27			4.30	1.38	2.04	12	1	5.9	8			38	32	19	9	7	12	5.7	
MICHIGAN																																
ALPENA	689			27	9	17.9	- 0.7	46	10	-13	23	0	27			1.86	0.25	0.52	15		20.8	15			33	SW	12	3	6	19	7.9	40
DETROIT	619	992.6	1016.1	34	19	26.6	- 0.6	56	10	2	3	0	25	18	70	2.49	0.41	1.19	11	0	15.8	11	5.1	27	42	SW	12	4	13	11	6.6	48
DETROIT M WAYNE CO	633	991.2	1016.3	35	17	25.9	- 1.2	55	10	- 1	3+	0	25	17	69	2.54	0.59	1.23	13	0	17.3	11	5.4	25				4	13	11	6.8	
DETROIT WILLOW RUN	711	987.1	1016.4	32	15	23.8	- 3.6	54	10	- 5	3	0	26	14	67	2.77	0.82	1.50	13	0	16.6	11	5.4	25	40	22	10	4	13	11	6.8	
FLINT	770	986.8	1015.6	33	17	24.8	2.6	52	10	0	23	0	25	15	67	2.16	0.40	1.08	14	1	19.7	14	5.7	25	35	24	12	3	9	16	7.4	
GRAND RAPIDS	784	985.8	1015.9	31	17	23.8		49	10	1	23	0	26	16	74	1.58	0.25	0.55	16	0	16.7	10	5.1	27	48	SW	10	2	10	16	7.9	35
HOUGHTON LAKE	1150	971.6	1015.3	27	10	18.3		43	10	-10	23+	0	27	12	77	1.40		0.33	15	0	12.9	17	4.6	26	29	24	12	4	6	18	7.8	
LANSING	841	983.1	1015.9	32	16	23.9	- 0.3	52	10	- 2	22+	0	26	18	81	2.28	0.33	0.83	12	0	15.2	11	5.8	27	47	W	12	2	12	14	7.3	56
MARQUETTE U	677			24	8	15.8	- 3.9	44	7	-10	22	0	28			1.61	- 0.04	1.07	11		20.1	30			34	SW	16	4	7	17	7.6	57
MUSKEGON	627	991.9	1015.8	32	19	25.6	- 0.1	53	10	1	23	0	25	21	83	1.90	0.10	0.42	17	0	35.4	29	4.3	28	40	34	25	2	2	24	8.9	
SAULT STE MARIE	721	986.5	1014.2	21	4	12.9	- 2.8	41	7	-13	13	0	28	8	78	2.32	0.82	0.40	17	0	32.9	33	2.5	31	37	33	25	1	6	21	8.4	39
MINNESOTA																																
DULUTH	1428	961.7	1016.2	19	- 7	6.0	- 4.8	39	20	-2[illegible]	24+	0	28	- 4	60	1.73	0.77	1.38	10	0	19.3	31	4.1	29	50	E	28	7	6	15	6.4	58

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CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station ∅	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MINNESOTA																																
INTERNATIONAL FALLS	1179	970.5	1016.4	16	-12	2.2	-4.9	35	20	-31	4	0	28	-5	70	0.43	-0.28	0.14	7	0	4.5	19	4.6	25	36	26	20	6	7	15	6.4	
MINNEAPOLIS	834	985.4	1017.5	23	1	11.8	-3.9	43	27+	-28	2	0	27	6	76	1.59	0.81	1.02	5	0	11.7	13	2.6	31	45	NW	21	8	7	13	6.2	60
ROCHESTER	1297	967.2	1017.6	21	2	11.6	-4.6	42	27	-25	2	0	27	5	74	1.34	0.54	0.59	7	0	8.8	8	5.6	27	39	32	21	7	7	14	6.3	
ST CLOUD	1034	977.3	1017.4	20	-4	8.4	-5.0	44	5	-29	2	0	27		67	0.91	0.11	0.76	6		11.1	17						8	7	13	6.3	
MISSISSIPPI																																
JACKSON	310	1007.5	1019.7	59	36	47.2		79	9	21	25	0	13	37	73	7.90		2.86	11	4	T	0	1.6	8	34	NW	25	7	5	16	6.5	52
MERIDIAN	290	1008.8	1020.1	60	35	47.3	-3.3	79	11	19	2	0	16	37	72	5.88	0.79	2.03	10	1	T	T	0.9	35	28	30	24	8	4	16	6.4	
VICKSBURG U	234			59	39	48.8	-3.0	78	11+	22	25+	0	9			8.35	3.04	2.40	12		T	T			28	NW	25+	8	4	16	6.3	56
MISSOURI																																
COLUMBIA	778	988.8	1018.0	43	22	32.4	-1.4	67	20	-1	2	0	24	22	69	1.15	-0.66	0.65	8	0	9.9	8	2.0	26	35	NW	1	10	7	11	5.4	60
KANSAS CITY	742	990.5	1018.8	43	22	32.3	-3.5	67	20	1	25	0	24	22	67	1.81	0.57	0.96	9	1	7.7	7	1.0	26	29	NW	21	9	11	8	5.4	73
SAINT JOSEPH	811			43	17	29.9	-1.2	64	20	-5	2	0	26	20	66	0.81	-0.28	0.50	4	0	2.3	3	1.7	31	23	36	23+	13	5	10	5.0	
ST LOUIS	535	998.0	1018.9	45	22	33.8	-0.9	70	27	-2	2	0	22	21	64	1.16	-0.88	0.66	7	0	5.7	4	3.2	26	31	W	11	9	11	8	5.2	58
SPRINGFIELD	1268	971.6	1018.2	49	24	36.7	-0.4	68	27+	0	25	0	21	26	69	2.13	0.01	0.96	8	1	4.0	4	3.0	20	28	W	11	11	6	11	5.2	66
MONTANA																																
BILLINGS	3567	888.6	1016.5	36	15	25.2	-0.5	61	19	-20	23	0	22	14	65	1.18	0.58	0.46	8	0	13.9	8	9.0	25	36	NW	27+	2	7	19	8.0	60
GLASGOW	2277			23	-1	11.1	-2.5	47	19	-22	23	0	28			0.20	-0.21	0.10	5		6.6	15						2	14	12	6.9	
GREAT FALLS	3662	885.2	1017.2	37	18	27.0	3.2	59	19	-11	23	0	20	16	66	1.18	0.44	0.34	10	0	12.5	6	10.8	24	51	W	27+	0	6	22	8.6	45
HAVRE	2582			28	5	16.2	-0.1	45	26	-20	23	0	25			0.51	0.08	0.26	6		7.2	10			43	NW	19	3	4	21	8.0	59
HELENA	3828	879.1	1018.1	39	14	26.6	3.4	60	19	-11	23	0	27	15	62	0.49	0.06	0.21	6	1	9.4	4	6.0	27	39	W	19+	1	3	24	8.7	54
KALISPELL	2965	909.9	1017.8	34	14	24.2	-0.3	49	19	-7	15+	0	26	19	78	0.69	-0.31	0.28	15	0	10.7	16	1.8	19	40	1	22	1	3	24	8.9	
MILES CITY	2629	920.8	1017.8	30	6	18.2	-2.1	55	26	-17	23	0	27	12	74	0.53	0.16		5	0	3.5		2.4	26								
MISSOULA	3190	904.2	1019.6	35	15	24.6	-0.4	49	19+	-8	11	0	28	20	81	0.62	-0.25	0.22	11	0	11.2	8	2.1	30	36	W	5	0	3	25	9.3	28
NEBRASKA																																
GRAND ISLAND	1841	949.9	1018.8	33	11	22.3	-3.8	63	27	-17	24	0	28	14	71	1.23	0.49	0.65	9	0	15.3	11	3.6	29	31	36	7	12	3	13	5.8	
LINCOLN U	1150			33	12	22.6	-6.1	59	5	-9	24	0	25			3.06	1.97	1.55	7	0	26.1	21			33	NW	21	12	5	11	5.5	53
NORFOLK	1544			31	7	18.7	-4.2	58	27	-17	24	0	27			0.90	0.12	0.55	5		13.0	10						9	8	11	5.7	
NORTH PLATTE	2775	915.7	1017.4	37	9	23.4	-4.5	74	27	-9	24+	0	27	15	73	0.35	-0.17	0.21	6	0	7.2	7	3.6	33	42	N	7	9	5	14	6.4	60
OMAHA	978	982.1	1019.0	33	11	22.2	-4.3	57	5	-6	24	0	26	16	77	2.97	2.02	1.48	9	0	25.4	18	2.5	33	36	NW	21	11	6	11	5.5	61
SCOTTSBLUFF	3957	877.4	1017.4	41	13	26.9	-2.1	70	27	-9	13	0	26	17	70	0.44	0.04	0.34	5	0	6.6	5	5.8	31	32	2	20	8	10	10	5.8	
VALENTINE	2587			38	9	23.7	0.7	68	27	-16	24+	0	28			0.08	-0.48	0.05	3		2.4	1			34	S	8	9	6	13	5.9	75
NEVADA																																
ELKO	5075	846.3	1021.0	46	17	31.4	3.4	63	26	0	11	0	28	21	70	0.31	-0.58	0.15	7	0	4.9	2	3.5	26	35	25	27	6	12	10	5.9	
ELY	6253	808.3	1019.3	43	13	27.8	1.2	59	21	-9	12	0	27	15	63	0.64	-0.06	0.48	6	0	9.0	5	0.8	22	28	NW	9	9	10	9	5.3	85
LAS VEGAS	2162	939.7	1017.2	62	37	49.5	1.7	75	27+	22	12	0	5	18	32	0.45	0.01	0.45	2	0	0.0	0	4.5	31	54	NW	22	18	4	6	3.4	87
RENO	4404	868.9	1020.9	57	23	40.1	4.5	74	21	13	10	0	26	21	52	0.01	-1.01	0.01	1	0	T	0	1.0	32	38	SE	27	12	9	7	4.6	96
WINNEMUCCA	4299	870.0	1020.9	51	19	35.2	2.9	65	25	4	11	0	27	20	60	0.38	-0.56	0.28	4	0	1.8	1	2.0	26	34	N	27	6	12	10	6.1	70
NEW HAMPSHIRE																																
CONCORD	339	1003.1	1016.2	33	12	22.2	-0.5	47	16+	-14	5	0	27	12	65	3.06	0.58	1.29	8	1	6.5	8	4.6	30	36	NW	22	10	7	11	5.4	62
MT WASHINGTON OBS	6262			13	-7	3.0	-2.6	35	12	-27	23	0	28			7.52	2.31	3.32	18	1	32.7	5			132Y	SE	25	4	3	21	8.1	26
NEW JERSEY																																
ATLANTIC CITY	64	1015.9	1018.2	44	22	33.0	-1.7	69	8	2	5	0	22	22	67	2.44	-0.69	1.17	10	0	3.3	2	5.2	28	40	23	25	8	7	13	5.8	60
ATLANTIC CITY U	11			42	27	34.4	-1.3	65	8	12	5+	0	18			1.99	-1.39	0.73	10						45	SSE	25					
NEWARK	11	1016.9	1017.9	40	25	32.4	-1.3	63	8	10	5	0	22	19	62	2.91	0.11	1.52	8	0	1.8	1	5.6	29	46	23	25	8	9	11	5.8	
TRENTON U	56			41	25	33.2	-0.2	61	8	10	5	0	21			2.27	-0.32	1.02	11		3.1	1			41	SW	25	8	12	8	5.2	66
NEW MEXICO																																
ALBUQUERQUE	5310	835.8	1014.9	52	27	39.4	-0.5	69	22	13	14	0	23	18	48	0.60	0.22	0.20	6	0	3.6	2	1.4	1	35	NW	22+	13	6	9	4.8	78
CLAYTON	4969			48	20	34.0	-2.0	70	27+	5	13	0	26			0.50	0.13	0.32	3		5.3	3						11	5	12	5.4	
RATON	6379			47	11	28.6	-4.1	66	26	-9	12	0	28			0.33	-0.09	0.16	5		4.2	2						13	5	10	4.8	
ROSWELL	3617			58	23	40.1	-2.0	79	27	-4	24	0	26			0.84	0.42	0.59	3	0	7.8	5			27	NW	28	13	10	5	3.9	80
SILVER CITY	5373			55	26	40.5	-2.9	68	26	10	12	0	22			0.06	-0.63	0.05	3		T	T						13	6	9	4.6	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average dew point	Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below			Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW YORK																																
ALBANY	277	1006.1	1017.1	31	13	22.3	- 1.4	49	25	-12	4	0	27	14	70	1.92	- 0.28	0.76	9	0	3.7	8	5.5	25	35	NW	22	5	7	16	6.9	54
BINGHAMTON	1590	955.0	1015.8	30	15	22.7	- 1.1	47	21+	- 2	5	0	25	16	76	1.55	- 0.63	0.47	15	0	6.8	9	5.3	25	42	E	25	2	6	20	8.0	30
BUFFALO	705	988.8	1015.4	33	18	25.8	1.7	60	12	4	23+	0	24	17	69	2.99	0.27	1.13	20	0	9.4	9	8.3	25	43	W	12	1	6	21	8.6	31
NEW YORK U	132	1014.6	1018.0	41	27	33.9	0.5	61	8	13	5	0	19	19	59	3.66	0.82	1.79	9	0	2.5	1	3.9	28	33	NW	19	12	7	9	4.9	57
J.F. KENNEDY	15	1016.6	1017.5	40	25	32.3	0.7	62	8	10	5	0	20	19	61	2.79	- 0.14	0.93	10	0	4.1	2	5.1	29	35	24	26	8	9	11	5.6	
NEW YORK LA GUARDIA	11	1015.9	1017.6	40	28	34.2	0.6	60	8	14	5	0	19	21	63	3.24	0.15	1.38	9	0	2.3	1	5.2	29	37	S	25	9	8	11	5.7	
ROCHESTER	547	995.6	1016.4	34	18	25.7	0.8	64	12	3	5	0	25	18	72	2.24	- 0.29	0.60	12	1	10.3	8	7.0	24	40	SW	26+	1	7	20	8.0	33
SYRACUSE	417	1000.3	1015.7	33	16	24.6	0.3	54	12	- 2	20	0	26	16	71	2.82	- 0.31	0.58	18	1	24.9	12	5.1	26	38	W	26	2	9	17	8.0	29
NORTH CAROLINA																																
ASHEVILLE	2140	941.1	1018.9	49	27	37.9		68	11	8	3	0	21	27	71	4.60		1.69	11	0	4.3	2	3.8	34	43	35	19	10	4	14	5.9	58
CAPE HATTERAS R	7	1018.6	1018.9	54	37	45.5	- 1.0	69	10	17	1	0	11	37	74	5.21	1.28	1.78	12	0	0.0	0	2.5	33	42	SW	25	7	8	13	6.1	64
CHARLOTTE	735	990.9	1018.9	55	34	44.6	0.4	75	11	16	3	0	16	32	68	2.69	- 0.86	0.89	11	0	1.0	T	1.7	24	38	SW	25	10	4	14	5.9	61
GREENSBORO	897	986.5	1018.8	52	30	40.6	- 0.4	75	11	8	1	0	19	29	67	2.80	- 0.50	1.29	12	0	3.3	3	2.8	27	38	SW	12	9	5	14	6.1	57
RALEIGH	434	1002.4	1018.7	55	31	42.9	- 0.1	79	11	9	1	0	19	29	64	2.40	- 0.83	1.12	9	0	3.4	3	2.5	26	32	24	25	10	5	13	5.8	60
WILMINGTON	28	1018.3	1019.5	59	37	48.3	- 0.4	78	12+	19	1	0	12	37	70	4.83	1.41	1.21	12	0	0.0	T	1.8	31	33	W	25	9	7	12	5.8	67
WINSTON SALEM	963	983.1	1018.9	50	31	40.3	- 1.4	72	11	12	1	0	18	28	66	2.85	- 0.63	1.13	10	0	6.3	4	2.9	28	29	27	25	9	5	14	5.9	
NORTH DAKOTA																																
BISMARCK	1647	954.6	1017.8	23	- 3	10.2	- 3.3	47	26	-28	4	0	28	2	67	0.21	- 0.22	0.14	4	0	3.2	11	4.2	31	40	NW	20	9	9	10	5.5	80
FARGO	896	983.4	1018.1	19	- 5	7.1	- 3.6	40	20	-27	2	0	28	1	75	0.14	- 0.37	0.10	4	0	1.7	5	2.2	30	49	NW	20	5	9	14	6.8	62
WILLISTON	1899			22	- 4	9.3	- 3.1	44	18	-22	3	0	28			0.10	- 0.38	0.06	5		0.9	12			66	NW	20	9	7	12	6.0	64
OHIO																																
AKRON	1208	970.9	1017.0	37	16	26.2	- 2.5	62	10	- 5	3	0	25	19	74	2.66	0.36	0.91	15	0	8.9	4	5.9	24	36	24	12	1	10	17	8.0	
CINCINNATI OBS	761			45	23	33.8	- 1.3	66	10	- 2	2	0	20			5.33	2.53	1.58	9		6.3	5			25	W	25					59
CLEVELAND	777	986.5	1016.6	37	19	28.0	0.4	64	10	- 2	3	0	25	20	72	3.00	0.67	0.65	17	0	15.6	5	6.5	22	37	SW	12	1	9	18	8.1	43
COLUMBUS	812	987.1	1018.1	39	19	29.1	- 2.0	62	10	- 7	4	0	22	20	70	3.76	1.45	1.08	10	1	7.6	5	4.5	24	36	W	12	6	8	14	7.1	46
DAYTON	1002	980.4	1017.7	41	20	30.7	- 0.2	63	10	- 7	2	0	21	20	67	2.80	0.48	1.17	8	0	5.3	3	5.1	23	36	NW	25	8	4	16	6.4	56
MANSFIELD	1297			35	16	25.5	- 2.3	58	10	- 3	3	0	24			2.64	0.04	0.94	12		10.8	4						1	10	17	8.0	
TOLEDO	676			35	17	25.8	- 1.5	59	10	- 2	3	0	26	16	61	1.96	0.08	0.94	9	0	12.6	7	5.0	25	38	SW	12	4	10	14	6.9	49
YOUNGSTOWN	1178	972.6	1016.9	35	16	25.5	- 2.1	62	10	- 4	23	0	25	17	69	3.21	0.71	1.64	14	0	12.2	3	6.1	24	37	25	12	1	7	20	8.3	
OKLAHOMA																																
OKLAHOMA CITY	1280	970.2	1017.9	52	27	39.5	- 1.8	77	28	7	24	0	21	26	65	0.85	- 0.52	0.41	7	1	0.9	1	1.4	18	45	NW	23+	14	7	7	4.3	73
TULSA	650	993.6	1018.3	53	26	39.4	- 1.2	73	26	8	24	0	18	26	62	1.45	- 0.32	0.65	7	1	1.5	1	2.6	21	37	S	28	16	4	8	3.9	73
OREGON																																
ASTORIA	8	1020.0	1020.6	49	39	44.2	1.4	57	18	32	1	0	1	39	80	6.77	- 3.12	1.28	21	0	0.0	0	4.0	21	31	18	26	1	2	25	8.9	
BURNS U	4151	874.4	1020.3	46	23	34.6	4.9	59	18	8	11	0	28	25	70	0.22	- 1.05	0.10	6		1.8	1	4.4	30				5	6	17	7.0	
EUGENE	359	1008.5	1022.0	52	36	44.3	1.7	64	25+	29	2	0	4	38	83	1.60	- 3.37	0.91	8	0	T	0	3.2	21	32	20	5	2	4	22	8.0	
MEACHAM	4050			38	25	31.8	2.7	55	17	6	11	0	23			3.17	- 0.83	0.65	15		25.4	17						3	4	21	8.3	
MEDFORD	1298	973.9	1022.7	55	31	42.7	2.6	67	18	24	10	0	20	32	73	0.70	- 1.70	0.65	4	0	T	T	0.5	22	32	14	5	3	11	14	7.0	
PENDLETON	1482	965.1	1019.8	49	33	41.1	3.7	64	17	24	11	0	14	33	76	0.37	- 0.81	0.16	10	0	0.5	T	6.3	26	44	26	5	5	4	19	7.5	
PORTLAND	21	1020.0	1021.3	51	36	43.4	1.4	61	25+	29	24+	0	6	38	84	2.22	- 2.00	0.60	13	0	0.0	0	3.0	19	58	SE	5	1	3	24	8.7	39
SALEM	196	1014.6	1021.9	51	35	43.1	1.2	62	25	27	2+	0	7	38	85	1.57	- 3.74	0.70	13	0	0.0	0	4.7	21	43	21	5	1	6	21	8.6	
SEXTON SUMMIT R	3836	885.9	1020.5	46	31	38.6	2.5	64	18	22	10+	0	17			1.14	- 2.98	0.80	11		3.6	1			43	17	5	8	5	15	6.7	
PACIFIC AREA																																
CANTON ISLAND	8			87	77	82.0	- 1.0	89	28	73	2	0	0			2.73	0.60	2.09	5		0.0	0						12	7	9	5.4	
ENIWETOK	13	1008.5	1009.2	85	75	80.2	- 0.7	86	28+	72	9+	0	0	71	74	0.60	- 1.24	0.13	14		0.0	0	15.4	7								
TAGUAC GUAM R	361			83	72	77.4	- 0.9	85	24+	66	19+	0	0			1.02	- 2.47	0.22	18		0.0	0			27	E	14					66
JOHNSTON	7	1013.2	1013.9	79	70	74.3	- 2.7	81	10	65	16	0	0	62	65	0.97	- 0.56	0.35	16	0	0.0	0	16.6	7	36	NE	24	7	21	0	4.2	79
KOROR R	94	1004.4	1008.1	85	75	80.0	- 0.3	89	15	72	4	0	0	74	85	13.03	5.90	5.46	20	0	0.0	0	8.3	8	27	NE	3	0	0	28	10.0	63
KWAJALEIN	8	1007.5	1008.3	86	76	81.0	1.0	88	28+	72	26+	0	0	72	76	1.01	- 1.14	0.45	12	0	0.0	0	10.4	6	29	6	11	0	4	24	9.0	
MAJURO WB AIRPORT	10	1007.1	1007.5	84	77	80.5	0.1	86	26+	74	6	0	0	72	75	5.32	- 3.23	1.75	16	1	0.0	0	6.2	8	29	NE	18+	0	4	24	9.4	52
MARCUS ISLAND	20			74	65	69.5		80	24	61	21+	0	0			0.66	- 0.27	0.37	10		0.0	0			42	W	19	3	15	10	6.3	50
PONAPE R	123	1002.0	1007.5	85	76	80.6	0.1	88	20	71	13	0	0	73	80	11.12	1.38	4.72	20	1	0.0	0	9.1	6	22	E	11	0	2	26	9.4	35
TRUK MOEN ISLAND	5	1007.1	1007.3	85	76	80.3	- 0.4	86	15+	72	14	0	0	73	78	6.70	0.41	1.67	16	0	0.0	0	13.4	5	26	NE	20	0	1	27	9.6	65
WAKE	11	1013.2	1013.5	81	72	76.3	- 0.8	83	13	70	24+	0	0	67	75	1.08	- 0.27	0.55	9	0	0.0	0	9.1	7	28	3	22	13	8	7	4.3	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PACIFIC AREA																																
YAP R	55	1006.1	1007.9	85	76	80.5	0.1	86	26+	73	3	0	0	74	82	6.00	1.36	1.35	24	0	0.0	0	12.6	5	29	NE	28	0	1	27	9.8	51
PENNSYLVANIA																																
ALLENTOWN	376	1003.4	1017.8	39	21	30.2	1.0	59	8	5	5+	0	23	17	63	3.21	0.57	1.81	10	1	1.9	2	5.3	28	45	32	19	8	11	9	5.5	
ERIE	732	988.8	1016.4	35	18	26.6	0.2	62	10	- 2	23	0	25	20	75	3.00	0.68	1.51	16	0	13.7	4	7.9	23	38	18	10	2	7	19	8.0	
HARRISBURG	338	1005.1	1018.3	42	23	32.5	- 0.1	65	8	6	5+	0	22	18	60	3.29	0.98	1.93	10	1	1.7	1	4.8	28	36	SW	25	7	8	13	6.4	61
PHILADELPHIA	5	1016.9	1018.0	42	24	33.3	0.1	62	8	6	4	0	21	21	64	2.18	- 0.62	1.20	10	0	2.2	1	4.0	29	41	SW	25	7	9	12	6.0	58
PITTSBURGH	1137	971.6	1017.2	38	18	28.4	- 0.8	63	10	- 1	20	0	25	18	65	2.98	0.79	1.25	14	0	10.4	4	5.9	26	35	23	25	1	7	20	8.0	39
PITTSBURGH U	749			41	22	31.3	- 2.1	67	10	2	3	0	21			2.41	0.10	1.12	11		5.9											45
READING U	266			42	25	33.4	0.0	63	8	9	5	0	21			3.26	0.62	1.86	10		2.2	1						9	10	9	5.8	55
SCRANTON	930	981.7	1017.3	36	20	28.1	- 0.2	53	21	1	5	0	23	16	63	1.90	- 0.09	0.81	10	1	2.3	3	3.6	26	39	S	25	6	8	14	7.0	44
WILLIAMSPORT	527	998.3	1018.2	36	19	27.3	- 1.9	49	28	- 3	4	0	26	18	71	2.27	- 0.24	0.99	9	0	0.8	1	2.4	27	38	26	25	4	9	15	7.0	
RHODE ISLAND																																
BLOCK ISLAND	110			36	24	29.7	- 1.2	52	25	8	20	0	22			2.00	- 1.29	0.95	10		2.2	3										
PROVIDENCE	51	1014.2	1016.5	37	20	28.4	- 1.3	55	8	0	5	0	26	16	61	3.77	0.67	2.11	10	1	2.7	7	5.5	28	36	29	22	10	6	12	5.4	59
SOUTH CAROLINA																																
CHARLESTON	41	1017.6	1019.1	62	41	51.2	- 0.3	80	10	24	3	0	8	40	72	5.49	2.20	1.79	13	1	0.0	0	1.4	31	54Y	S	25	6	11	11	6.3	52
CHARLESTON U	9			60	45	52.4	0.1	77	10+	29	26	0	2			5.49	2.42	1.50	11		0.0	0			39	W	25					
COLUMBIA	217	1011.2	1019.3	60	37	48.3	- 0.1	79	11	19	3	0	12	36	70	5.33	1.59	1.29	11	0	0.0	0	2.0	26	35	23	25	8	8	12	6.0	55
FLORENCE	146	1013.9	1019.3	59	37	48.0	- 0.8	79	10	20	3	0	12	34	65	5.69	2.52	1.39	10	0	0.0	0	1.1	30	31	25	25	8	8	12	6.0	
GNVLE SPARTANBURG	957	983.7	1018.9	55	34	44.2	- 1.3	75	11	17	3	0	14	31	65	5.22	1.15	1.85	12	0	1.0	1	1.9	30	36	W	25	10	6	12	5.9	53
SOUTH DAKOTA																																
ABERDEEN	1296	968.8	1018.3	24	- 2	11.2	- 3.8	47	26	-28	4	0	28	4	72	0.09	- 0.56	0.07	3	0	1.9	3	2.4	29	35	31	20	8	8	12	6.0	
HURON	1282	969.2	1018.3	28	1	14.3	- 2.3	47	19	-33	24	0	28	6	67	0.51	- 0.09	0.33	6	0	10.7	8	1.9	29	40	NW	20	7	8	13	6.3	68
RAPID CITY	3165	901.8	1016.5	39	12	25.6	1.5	68	19	-14	23	0	26	14	65	0.22	- 0.26	0.10	6	0	1.9	2	5.5	33	48	NW	14	6	11	11	6.0	71
SIOUX FALLS	1418	964.4	1018.5	26	0	13.0	- 6.1	51	5	-30	24	0	28	7	72	1.46	0.53	0.99	7	0	21.1	14	2.9	28	32	35	28	9	7	12	5.9	
TENNESSEE																																
BRISTOL	1507	963.8	1019.3	49	25	37.3	- 2.7	76	11	- 4	3	0	21	27	70	2.77	- 0.79	0.92	11	0	9.0	7	3.3	26	35	25	25	9	4	15	6.3	
CHATTANOOGA	670	994.9	1020.2	51	30	40.7	- 3.7	71	11	10	2	0	18	30	71	4.46	- 0.91	0.97	10	3	0.9	T	1.1	27	34	NW	11	10	2	16	6.2	56
KNOXVILLE	980	984.1	1020.1	50	29	39.7	- 3.4	73	11	3	3	0	19	30	72	3.25	- 1.56	0.81	11	0	6.9	5	2.3	27	42	W	11	8	4	16	6.4	45
MEMPHIS	263	1009.1	1019.8	54	32	42.9	- 1.2	76	9	13	2	0	17	32	69	6.78	2.09	3.28	12	1	3.3	3	1.9	21	43	W	11	11	6	11	5.3	63
NASHVILLE	583	997.0	1019.3	51	28	39.8	- 2.2	73	9	4	3+	0	20	29	67	4.71	0.20	1.83	10	1	2.9	2	2.4	22	39	NW	25	11	6	11	5.4	57
OAK RIDGE	905			50	28	38.9	- 2.2	68	11	1	3	0	19			2.89	- 2.91	0.90	10		5.8	4			34Y		25	10	2	16	6.2	
TEXAS																																
ABILENE	1762	954.6	1017.2	58	34	45.8	- 2.6	82	28	18	24	0	14	30	60	1.48	0.39	0.76	4	0	T	T	2.7	19	36	N	1	12	5	11	5.5	56
AMARILLO	3604	889.6	1015.2	52	23	37.6	- 3.7	75	27	3	24	0	25	21	59	0.47	- 0.15	0.29	4	2	3.8	2	3.2	28	42	N	23	13	9	6	4.3	82
AUSTIN	597	995.6	1018.1	59	40	49.4	- 4.4	73	28+	23	24	0	5	39	73	5.06	2.48	2.00	11	4	0.5	1	3.2	1	34	NW	24+	8	6	14	6.2	46
BROWNSVILLE	16	1015.2	1015.7	70	52	61.3	- 2.7	86	11	38	25	0	0	53	79	1.57	0.09	0.88	7	1	0.0	0	2.1	6	55	NW	24	7	6	15	6.7	44
CORPUS CHRISTI	41	1015.2	1016.9	66	47	56.4	- 4.0	80	11	30	25	0	2	50	81	4.41	2.71	2.30	10	1	0.0	0	4.5	7	42	N	24	9	3	16	6.4	46
DALLAS	481	1000.7	1018.4	57	36	46.5	- 3.0	72	28	18	24	0	11	35	67	5.36	2.81	3.35	10	4	T	T	1.2	17	35	W	9	10	7	11	5.2	55
DEL RIO	1026	980.7	1017.1	62	40	50.7		82	28	25	14	0	4	37	65	1.72	- 0.56	0.63	5	0	T	T	1.7	8	31	33	24	10	6	12	5.8	
EL PASO	3918	880.8	1014.3	59	35	46.7	- 2.4	72	27	21	24	0	14	23	44	0.59	0.18	0.55	3	0	0.3	T	3.1	27	41	W	28	11	7	10	4.7	78
FORT WORTH	537	997.6	1018.5	57	35	45.8	- 3.4	73	28	18	24	0	12	35	69	6.20	3.96	4.06	8	4	T	T	0.8	21	30	18	28+	12	5	11	5.1	
GALVESTON U	7			61	49	55.0	- 1.8	71	21	28	24	0	1			1.77	- 1.11	0.62	8		0.0	0										49
HOUSTON U	41			64	48	56.1	- 1.0	78	8	27	24	0	1			3.46	0.25	1.88	10		T	T										
HOUSTON	50	1015.6	1017.8	65	45	55.1	- 0.7	80	8	26	24	0	2	44	70	3.27	- 0.17	1.43	11	3	T	T	3.5	7	31	32	24	6	6	16	6.9	52
LUBBOCK	3243	902.8	1016.0	55	26	40.4	- 2.7	78	27	9	24	0	23	22	55	0.35	- 0.22	0.35	2	0	2.0	2	1.6	27	41	28	28	11	11	6	4.5	
MIDLAND	2851	915.3	1015.1	56	30	43.2	- 5.1	75	28+	14	24	0	18	27	63	1.71	1.11	1.22	6	0	3.5	1	1.3	22	32	4	21	11	4	13	5.3	
PORT ARTHUR	16	1017.3	1018.0	65	44	54.4	- 1.6	78	21+	25	25	0	4	44	72	5.41	0.96	5.05	8	3	T	0	3.8	9	42	NW	24	5	8	15	6.7	48
SAN ANGELO	1903	948.9	1016.8	58	35	46.6	- 3.9	80	28	18	24	0	10	33	66	2.54	1.64	1.37	9	2	0.3	T	2.1	23	30	30	11	9	6	13	6.0	
SAN ANTONIO	788	989.2	1017.5	60	39	49.8	- 5.6	74	27	25	24+	0	6	39	70	6.43	4.78	2.34	13	4	T	1	4.5	3	41	N	24	8	6	14	6.2	45
VICTORIA	104	1013.5	1017.5	64	45	54.5	- 3.5	78	8	27	24	0	2	46	76	2.86	0.52	1.29	9	0	T	0	3.3	5				7	4	17	6.9	
WACO	500	1000.0	1018.5	59	38	48.2	- 3.3	73	28+	20	24	0	8	37	67	4.41	1.99	2.14	11	4	2.0	2	1.2	30	35	32	23	10	5	13	5.9	
WICHITA FALLS	994	980.4	1017.6	58	32	44.7	- 2.1	80	28	15	24	0	14	29	58	0.83	- 0.55	0.72	4	0	T	0	2.0	22	35	1	21	10	7	11	5.2	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	F.	°F.	°F.	°F.		F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
UTAH																																
MILFORD	5028			46	16	30.9	1.2	64	26	- 6	12	0	27			1.01	0.31	0.42	6		12.0	5						12	9	7	4.5	
SALT LAKE CITY	4220	872.7	1019.9	44	22	33.0	0.5	60	26	6	15	0	27	20	62	1.13	- 0.05	0.57	6	1	9.5	4	1.1	16	34	SW	27	9	7	12	6.0	67
WENDOVER	4237			44	25	34.5	1.7	62	27	16	11	0	27			0.22	- 0.08	0.16	4		T	T						8	13	7	5.0	
VERMONT																																
BURLINGTON	332	1002.7	1015.6	30	10	20.0	2.6	48	8	-11	5	0	27	9	63	0.93	- 0.86	0.38	7	0	4.3	5	2.7	24	50	SE	25	4	7	17	7.2	54
VIRGINIA																																
LYNCHBURG	916			47	25	36.0	- 2.9	71	28	0	1	0	20			3.35	0.70	1.90	9		3.7	3			34	W	25	10	5	13	5.6	56
NORFOLK	26	1017.6	1018.6	51	31	41.0	- 0.6	78	12	8	1	0	19	28	64	2.53	- 0.68	1.41	7	0	3.9	4	2.9	25	66	SW	25	7	7	14	6.2	50
RICHMOND	162	1012.5	1018.7	50	28	38.8	- 1.1	71	28+	3	1	0	20	25	63	2.77	- 0.13	1.10	9	0	6.6	6	2.3	23	34	NW	22	11	6	11	5.5	62
ROANOKE	1149	974.9	1018.2	47	26	36.4	- 2.8	68	8	5	1	0	18	22	60	3.53	0.67	1.46	9	0	4.0	4	4.7	28	37	32	19	10	6	12	5.6	
WASHINGTON																																
OLYMPIA	195	1012.5	1020.0	48	35	41.5	0.6	60	25+	23	9	0	10	38	87	4.93	- 1.69	1.39	17	0	T	0	6.0	21	32	20	27+	0	6	22	8.9	
SEATTLE TACOMA	400	1003.1	1019.6	48	38	43.0	2.2	59	25	32	28	0	1	36	79	3.88	- 0.36	1.21	15	0	T	0	4.5	20	43	21	27	1	4	23	8.7	
SPOKANE	2356	932.3	1017.9	39	25	32.1	2.1	51	19	12	2	0	24	24	74	1.13	- 0.73	0.65	12	0	2.3	5	5.5	21	45	SW	27	3	7	18	7.6	40
STAMPEDE PASS R	3958			33	25	28.6	2.0	50	18	18	3+	0	26			11.07	0.92	1.46	23		73.6	133						1	3	24	9.0	
TATOOSH ISLAND R	101	1015.2	1018.4	46	39	42.5	- 0.6	50	18	35	20+	0	0	38	85	13.05	4.35	2.99	22	0	T	0	3.6	19	64	W	27	1	6	21	8.7	19
WALLA WALLA U	949			50	36	43.1	4.7	66	17	27	11+	0	9			0.55	- 0.97	0.20	9		T	T			34	W	8	5	4	19	7.6	34
YAKIMA	1052	979.7	1019.1	48	27	37.5	3.5	63	19	18	2	0	25	27	71	0.08	- 0.79	0.05	3	0	0.1	4	4.4	27	32	20	5	6	7	15	6.9	
WEST INDIES																																
SAN JUAN P.R.	15	1015.2	1017.8	82	70	75.9	1.5	87	25+	64	15	0	0	66	72	0.79	- 2.11	0.24	14	0	0.0	0	10.0	8	40	E	7	1	24	3	5.7	59
SWAN ISLAND	28			82	75	78.7	0.3	83	25+	70	26	0	0			0.26	- 0.90	0.08	9	0	0.0	0						12	11	5	4.7	
WEST VIRGINIA																																
BECKLEY	2504	927.2	1018.8	44	22	32.8		66	10	- 5	3	0	21	22	67	2.11		0.79	11	0	11.0	8	6.0	24	40	26	25	5	8	15	7.1	
CHARLESTON	939	983.1	1018.1	47	24	35.6	- 1.9	70	10	1	5+	0	20	24	65	2.02	- 1.51	0.93	9	0	6.7	4	4.4	23	30	24	25	5	7	16	6.9	
ELKINS	1970	944.8	1017.8	44	19	31.6	- 1.4	65	10	-12	1	0	22	22	68	1.94	- 1.33	0.55	15	0	11.2	6	5.5	25	35	26	25	2	11	15	7.7	
HUNTINGTON	827	987.5	1018.4	47	24	35.9	- 1.8	69	10	3	5+	0	21	23	63	2.17	- 0.87	0.87	10	0	2.7	3	3.5	23	35	24	25	7	6	15	6.4	
PARKERSBURG U	615			44	22	33.3	- 2.2	66	10	1	5+	0	21			3.36	0.53	1.85	11		5.2	3			30	SW	25					39
WISCONSIN																																
GREEN BAY	682	989.2	1016.0	25	6	15.3	- 2.8	42	20	-16	2	0	28	6	66	0.85	- 0.23	0.45	9	0	6.3	7	5.2	28	32	NE	11	7	8	13	6.2	57
LA CROSSE	652	992.2	1018.2	26	2	14.0	- 5.4	46	27	-31	2	0	28	7	72	0.72	- 0.33	0.35	6	0	6.6	7	3.0	27	30	28	10	8	7	13	6.3	
MADISON	858	983.7	1016.5	28	9	18.7	- 0.8	49	20	-23	4	0	28	13	76	0.74	- 0.39	0.31	9	0	4.7	14	4.5	28	31	NW	21+	7	8	13	6.2	61
MILWAUKEE	672	990.5	1016.8	29	14	21.2	- 1.2	47	20	-13	3+	0	27	15	77	1.04	- 0.36	0.44	10	0	10.1	12	5.1	26	40	SW	10	9	7	12	5.9	59
WYOMING																																
CASPER	5338	834.1	1017.0	34	11	22.6	- 3.7	53	27	-15	23	0	25	12	62	0.37	- 0.22	0.10	9	0	8.6	5	10.3	23	36	24	27	9	8	11	5.9	
CHEYENNE	6126	807.7	1016.2	38	14	26.0	- 1.3	56	26	- 6	23	0	26	11	55	0.26	- 0.30	0.09	7	0	5.5	3	11.0	30	43	NW	26	8	10	10	5.8	65
LANDER	5563	825.6	1017.2	38	11	24.0	- 0.1	56	26	- 6	11	0	28	11	60	0.83	0.14	0.27	8	0	15.7	6	1.3	28	34	NW	27+	5	11	12	6.2	67
SHERIDAN	3964	876.1	1017.6	36	10	23.4	- 0.4	64	19	- 9	23+	0	26			0.72	- 0.02	0.19	10	0	12.5	4	4.5	30	38	NW	22	5	4	19	7.6	45

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

A Maximum hourly average.
B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	°C.	C.	°C.		°C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
ALABAMA																																
BIRMINGHAM	189	997.0	1019.8	13.3	0.6	7.0	-2.3	24.4	9	- 9.4	2	0	18	1.1	69	158	24	60	12	5	T	T	0.1	2	17.0	SW	24	8	7	13	6.4	52
HUNTSVILLE	183	996.6	1020.1	12.2	0.0	6.0	-1.3	24.4	9	-13.3	2	0	18	0.0	68	144	11	53	10	2	41	T	0.4	10	21.5	24	24	9	7	12	6.0	
MOBILE	64	1010.5	1018.7	17.2	6.7	11.9	-1.0	26.1	10	- 2.8	3	0	5	5.6	71	125	9	43	10	0	0	0	1.6	6	14.3	20	24	5	5	18	7.2	
MONTGOMERY	59	1012.5	1020.0	15.6	3.3	9.4	-0.8	26.1	9	- 5.0	3	0	12	2.2	65	162	51	54	10	1	T	T	0.6	4	13.9	W	24	4	11	13	6.5	52
ALASKA																																
ANCHORAGE PRK STRIP	26			- 6.7	-15.0	-10.8	-3.0	5.0	10	-26.1	18	0	28			18	- 1	11	8		267	533										
ANCHORAGE	44	1001.0	1006.2	- 7.2	-16.7	-12.1		3.3	10	-29.4	19	0	28	-15.6	72	17		12	7	0	292	533	1.4	2	11.2	13	10	7	2	19	7.2	
ANNETTE	34	1007.1	1011.1	3.9	- 1.1	1.4	-0.3	6.1	18+	- 5.0	14	0	21	- 2.2	79	459	242	142	21	0	632	127	2.3	16	13.9	16	18	2	4	22	8.7	
BARROW	7	1028.1	1028.8	-30.0	-34.4	-32.4	-4.4	-27.8	27+	-37.8	8+	0	28	-38.3	54	T	- 4	T	0	0	T	305	1.7	5	9.8	9	22+	19	5	4	2.7	
BARTER ISLAND	12	1024.4	1026.3	-32.8	-38.3	-35.6	-6.9	-25.0	18	-46.1	9+	0	28	-38.9	70	T	- 9	T	0	0	T	381	3.8	27	20.6	28	17	13	6	9	4.5	
BETHEL	38	1003.4	1009.3	-16.7	-24.4	-20.3	-7.1	- 3.3	1	-36.1	15	0	28	-22.8	77	25	- 4	8	12	0	257	787	4.2	1	15.6	5	5	10	1	17	6.3	
COLD BAY	29	1001.0	1004.9	- 1.1	- 6.7	- 4.1	-1.8	6.1	9	-16.7	18	0	27	- 6.1	84	71	- 10	24	19	0	594	254	1.1	31	27.3	23	8	4	2	22	8.2	
FAIRBANKS	133	996.3	1014.9	-20.6	-35.0	-27.8	-8.4	- 6.7	12	-45.0	18+	0	28	-31.7	71	8	0	4	6	0	193	432	0.7	36	7.6	34	12	13	3	12	5.1	
JUNEAU	4	1007.8	1008.6	- 0.6	- 8.9	- 4.7	-1.8	3.9	23+	-22.2	20	0	28	- 5.0	89	130	52	23	22	0	2192	914	2.4	10	14.3	12	14	3	2	23	8.6	35
KING SALMON	13	1003.7	1005.6	- 7.8	-20.0	-13.8	-5.7	2.8	8	-33.3	19	0	28	-16.1	79	11	- 13	3	13	0	132	152	1.2	8	23.7	9	22	9	4	15	6.1	
KOTZEBUE	3	1016.9	1017.6	-20.6	-30.6	-25.6	-5.6	-12.2	10	-38.9	4	0	28	-29.4	68	7	- 1	3	6	0	262	610	1.9	6	13.4	36	15	15	2	11	4.6	
MC GRATH	102	998.3	1012.0	-17.2	-31.1	-24.4	-6.7	- 8.9	11	-42.8	18	0	28	-30.0	60	11	- 18	5	10	0	610	965	0.6	28	6.7	29	12+	15	2	11	4.6	
NOME	4	1012.9	1013.5	-16.1	-26.1	-21.1	-6.4	- 7.2	27	-35.6	15	0	28	-26.1	65	3	- 21	2	4	0	43	229	3.2	3	18.3	4	5	15	3	10	3.9	73
ST. PAUL ISLAND	7	1006.1	1007.1	- 5.0	-11.7	- 8.5	-3.7	1.7	5+	-22.2	16	0	28	- 9.4	87	40	9	20	18	0	279	660	4.5	4	21.9	35	21	5	4	19	7.9	
SHEMYA	37	990.5	994.1	1.7	- 1.1	0.4	1.1	4.4	24	- 3.9	7+	0	23	- 2.2	83	52	- 6	10	17	0	300	76	5.1	15	30.4	22	4	0	5	23	9.1	
YAKUTAT	9	1004.7	1005.7	- 1.7	-10.6	- 5.9	-4.1	2.8	10	-22.2	18	0	28	- 7.2	87	217	9	48	18	0	2217	1245	2.0	10	15.6	14	12	2	5	21	8.3	
ARIZONA																																
FLAGSTAFF	2131	784.6	1017.0	6.7	- 9.4	- 1.3	0.1	16.7	26	-26.7	12	0	28	- 8.9	63	59	14	44	5	1	607	457	0.3	3	11.2	20	27+	16	5	7	4.1	
PHOENIX	340	976.0	1015.3	18.3	3.9	11.3	-0.6	26.1	26	- 2.2	12	0	3	0.0	52	23	2	21	3	2	0	0	0.7	15	15.6Y	NNW	23+	14	8	6	3.9	85
TUCSON	788	925.5	1014.4	18.3	2.8	10.6	-1.0	26.1	26	- 5.6	12	0	9	- 3.9	43	16	- 5	8	5	0	99	102	0.9	20	17.4	SW	6	17	3	8	3.8	85
WINSLOW	1492	850.7	1018.1	11.1	- 5.0	3.1	0.1	21.1	27	-13.9	12	0	25	- 6.1	60	11	- 1	8	5	0	46	T	1.2	25	19.7	24	22	13	6	9	4.7	
YUMA	59	1008.5	1015.7	22.2	7.2	14.7	-0.4	30.0	22	- 0.6	12	0	1	- 2.8	35	10	1	10	1	1	0	0	1.6	35	17.0	NW	23	14	7	7	3.9	89
ARKANSAS																																
FORT SMITH	137	1002.0	1019.2	12.8	- 2.2	5.2	-1.3	22.2	7	-11.1	2	0	17	- 2.2	65	78	- 9	42	5	1	T	T	0.4	1	13.0	W	11+	11	7	10	5.1	65
LITTLE ROCK	78	1009.5	1019.3	12.8	- 0.6	6.2	-0.7	21.7	28	- 9.4	2	0	15	0.0	68	146	36	77	9	1	74	51	0.2	27	15.6	NW	24	11	7	10	5.3	60
TEXARKANA	113	1005.8	1019.1	15.0	2.2	8.4	-0.7	22.2	28	- 6.7	25+	0	11	0.6	62	238	136	89	8	5	76	76	0.6	12				8	7	13	5.7	
CALIFORNIA																																
BAKERSFIELD	151	1001.4	1019.3	16.7	3.9	10.2	-0.9	24.4	21	- 2.2	12	0	2	1.7	60	4	- 25	3	3	0	0	0	0.4	5	10.3	34	27+	13	5	10	4.9	
BISHOP	1252			16.1	- 2.8	6.6	1.4	23.9	20	- 9.4	24	0	24			1	- 24	1	1		0	0						16	7	5	3.5	
BLUE CANYON	1609			9.4	0.0	4.7	1.9	19.4	20	- 6.1	9	0	17			63	-196	31	5		15	813			1.6	6	7	15	6	7	4.3	
BURBANK	221	990.9	1016.9	20.0	5.6	12.6	-0.3	29.4	19	0.0	12	0	1	0.6	53	7	- 74	7	2	0	0	0	0.0	18	11.6	36	9	16	4	8	4.2	
EUREKA U	13			10.6	4.4	7.6	-1.4	19.4	26	1.7	23	0	0			35	-106	15	8		0	0			16.1	N	9	6	9	13	6.4	61
FRESNO	100	1007.5	1019.4	16.7	2.8	9.8	-0.5	23.9	26	- 1.7	10	0	5	3.9	74	11	- 45	7	4	0	0	0	0.4	4	13.4	NW	22	10	9	9	5.0	73
LONG BEACH	10	1016.3	1017.6	18.3	6.1	12.1	-0.3	28.9	19	0.6	12	0	0	3.3	61	11	- 48	10	2	0	0	0	0.7	28	10.3	9	15	15	5	8	4.4	
LOS ANGELES	30	1013.5	1017.2	18.3	7.8	12.9	0.1	28.3	19	2.8	12	0	0	4.4	63	9	- 65	9	2	0	0	0	0.8	27	20.1Y	N	22	13	6	9	4.5	
LOS ANGELES U	82			20.6	8.3	14.4	0.5	29.4	19	5.0	13+	0	0			6	- 79	6	2		0	0			11.2	N	23	18	5	5	3.7	77
MT SHASTA R	1080			10.6	- 2.2	4.2	1.4	19.4	18	- 6.7	11	0	25			37	-113	22	6		43	T										
OAKLAND	2	1019.6	1019.8	15.0	7.2	10.8	0.4	18.3	25	3.3	12	0	0	5.6	69	21	- 61	10	6	0	0	0	1.4	34	10.3	16	27+	12	7	9	4.6	
RED BLUFF	104	1007.1	1020.1	16.7	3.9	10.5	0.7	25.6	20	1.7	24	0	0	1.1	59	29	- 55	13	5	0	0	0	2.1	35	15.2	N	6	13	7	8	4.6	80
SACRAMENTO	5	1019.0	1019.8	15.6	3.9	9.6	0.0	21.1	19	0.0	12	0	1	2.8	67	10	- 66	7	5	0	0	0	1.5	34	13.9	NW	9	13	6	9	4.6	81
SANDBERG R	1377			10.6	2.2	6.4	1.2	20.6	21	- 5.6	10	0	10			1	- 65	1	1		T	0			23.2	34	22	13	4	11	5.1	
SAN DIEGO	4	1016.3	1017.3	18.3	8.3	13.3	-0.2	26.7	19	3.3	12+	0	0	5.0	64	13	- 41	13	2	0	0	0	0.9	30	8.0	NW	12+	14	5	9	4.3	83
SAN FRANCISCO	2	1019.6	1020.3	14.4	6.1	10.2	-0.3	20.0	20+	2.8	12	0	0	4.4	72	23	- 65	15	7	0	0	0	2.2	30	13.9	N	9+	14	8	6	4.1	
SAN FRANCISCO U	16			15.6	8.9	12.2	0.6	22.8	20	5.6	3	0	0			24	- 69	14	4		0	0			11.6	SW	21					80
SANTA CATALINA	478			15.6	8.9	12.2	0.0	24.4	19	5.6	4	0	0			6	- 74	5	2	0	0	0						12	6	10	5.0	
SANTA MARIA	72			17.2	3.3	10.3	-0.7	25.6	20+	- 2.8	10	0	5			9	- 55	6	5		0	0						14	4	10	4.7	
STOCKTON	7	1019.3	1020.2	16.1	3.3	9.7	0.3	21.7	26	- 1.1	12	0	1	3.9	73	15	- 47	12	4	0	0	0	1.3	32	15.6	36	9	9	10	9	5.5	
COLORADO																																
ALAMOSA	2297			1.7	-16.7	- 7.6	-2.8	7.8	27	-30.6	13	0	28			9	5	6	6		213	102						14	6	8	4.4	
COLORADO SPRINGS	1873	806.6	1016.4	5.0	- 9.4	- 2.3	-2.1	16.1	27	-20.6	13+	0	25	-11.7	55	18	10	8	7	0	229	127	1.8	3	14.3	27	22	9	5	14	6.4	
DENVER	1610	832.7	1015.6	5.0	-10.0	- 2.6	-2.3	18.3	26	-20.6	16+	0	26	- 8.3	66	32	15	11	10	0	434	178	0.6	17	13.9	NE	22	5	11	12	6.3	78
GRAND JUNCTION	1480	851.7	1018.6	6.1	- 5.0	0.5	0.2	13.9	22	-15.6	13	0	26	- 5.6	69	24	6	11	6	0	191	76	0.6	10	10.7	N	23	10	6	12	5.6	70
PUEBLO	1428	853.7	1017.3	7.2	-10.0	- 1.4	-2.4	21.1	27	-24.4	12	0	25	- 8.3	61	18	6	7	7	0	366	152	1.0	1	23.2	N	14+	10	6	12	5.6	72

See footnotes at end of table

CLIMATOLOGICAL DATA
METRIC UNITS

FEBRUARY 1965

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	°C.	°C.	°C.	°C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
CONNECTICUT																																
BRIDGEPORT	2	1017.3	1017.7	2.8	- 5.6	- 1.4	-0.6	13.9	8	-15.6	5	0	24	- 7.2	68	70	- 5	29	10	1	155	203	3.0	30	22.4	31	22	11	6	11	5.6	
HARTFORD	52	1009.8	1016.6	1.7	- 7.8	- 3.0	-0.3	11.7	8	-22.2	4	0	27	- 9.4	62	113	38	55	11	1	152	229	1.9	29	15.6	NW	22	8	7	13	6.1	63
NEW HAVEN	2			2.8	- 5.6	- 1.5	-0.2	11.1	25	-16.1	5	0	25			89	8	38	11		218	203			16.1	NW	19	10	7	11	5.9	63
DELAWARE																																
WILMINGTON	24	1014.9	1018.0	6.1	- 4.4	0.9	-0.1	18.9	8	-13.9	4	0	22	- 5.6	65	55	- 20	30	9	0	43	T	1.8	27	19.7	20	25	7	7	14	6.0	
DIST.OF COLUMBIA																																
WASH NATL AP	4	1016.3	1018.5	8.3	- 3.3	2.7	-0.6	20.0	28	-11.1	1	0	19	- 6.1	59	48	- 15	30	7	0	48	51	1.2	29	21.9	SSW	25	9	4	15	6.1	60
FLORIDA																																
APALACHICOLA U	4			16.7	8.9	12.6	-1.2	22.2	7	- 1.1	26	0	1			93	- 6	22	12	1	0	0						6	8	14	6.7	44
DAYTONA BEACH	9	1018.0	1019.5	21.7	11.1	16.3	0.4	27.2	17+	- 0.6	1	0	1	11.7	79	76	6	31	8	3	0	0	1.0	36	17.0	27	25	6	8	14	6.3	
FORT MYERS	5	1018.0	1018.4	26.1	13.9	19.8	1.4	29.4	16+	3.3	27+	0	0	14.4	74	76	20	53	9	3	0	0	0.9	12	15.6	30	25	9	11	8	5.4	
JACKSONVILLE	7	1018.3	1019.2	19.4	8.9	14.2	0.1	28.3	12	- 1.1	3	0	3	7.8	72	140	66	37	8	2	0	0	1.1	1	21.5	W	25	5	8	15	6.8	51
KEY WEST	1	1017.3	1017.9	26.7	21.7	24.0	2.7	28.3	24+	13.9	27	0	0	18.9	74	113	63	44	8	4	0	0	2.9	9	17.9	SE	6	10	10	8	5.4	68
LAKELAND U	65			23.9	12.2	18.2	0.9	30.0	8	3.3	26	0	0			85	21	41	5		0	0						7	10	11	6.0	67
MIAMI	2	1018.0	1018.4	26.1	17.2	21.6	1.7	29.4	18	5.0	27	0	0	16.1	73	76	28	31	8	2	0	0	1.6	12	14.3	30	25	8	9	11	5.9	
ORLANDO	33	1014.6	1019.0	23.9	11.7	17.8	1.2	28.9	14+	1.7	26	0	0	11.7	74	93	32	59	8	2	0	0	0.2	5	14.3	28	25	6	10	12	6.4	
PENSACOLA	34	1015.2	1019.2	16.1	6.7	11.6	-1.8	23.9	7	- 2.8	26	0	3	5.6	69	165	57	85	11		0	0	1.4	2	15.2	NW	25					48
TALLAHASSEE	18	1017.3	1019.8	18.3	5.6	11.8	-1.3	25.6	7	- 3.9	1	0	4	6.7	75	255	149	81	11	1	0	0	1.0	4	17.9	21	24	3	11	14	7.0	
TAMPA	6	1018.3	1018.4	23.9	11.7	17.7	0.6	28.9	11	0.6	1	0	0	11.7	74	65	- 7	31	7	2	0	0	0.5	9	18.3	27	25	9	8	11	5.8	59
WEST PALM BEACH	5	1017.6	1018.4	25.6	15.6	20.6	0.8	30.0	24+	4.4	27	0	0	15.6	76	105	45	35	11	2	0	0	1.3	13	19.2	29	25	8	10	10	5.9	
GEORGIA																																
ATHENS	244	989.8	1019.3	13.9	1.7	7.6	-0.3	24.4	11+	- 7.8	3	0	14	1.1	70	125	6	33	10	1	T	0	1.2	28	11.2	27	25	8	6	14	6.4	
ATLANTA	308	982.1	1019.7	12.2	1.1	6.6	-1.2	23.3	11	- 8.9	3	0	15	0.0	69	109	- 5	33	11	1	T	T	0.9	29	13.9	W	25	7	5	16	6.6	50
AUGUSTA	44	1013.9	1019.2	16.7	2.8	9.7	0.1	26.7	11	- 7.2	3	0	11	2.8	69	138	48	37	11	0	T	0	0.9	27	14.3	27	25	9	5	14	6.4	
COLUMBUS	117			16.1	2.8	9.6	-0.3	26.7	11+	- 5.6	3	0	12	2.2	65	139	21	41	11		T	T	0.8	34	12.1	29	25	3	11	14	7.1	
MACON	108	1006.8	1020.2	16.1	2.8	9.4	-1.2	26.7	11+	- 6.7	3	0	12	2.8	70	160	52	52	13	0	T	T	0.7	33	15.6	W	25	5	11	12	6.4	52
ROME	194			12.8	- 0.6	5.9	-0.9	23.3	11	-10.6	3	0	18			118	- 17	30	11		T	T										
SAVANNAH	14	1017.6	1019.3	17.8	5.0	11.3	-0.4	28.3	12	- 5.0	1	0	7	5.0	71	110	17	27	11	1	0	0	0.8	32	17.9	SW	25	7	9	12	6.4	53
HAWAII																																
HILO	9	1012.9	1014.0	24.4	16.1	20.2	-1.2	27.8	14	12.8	1	0	0	15.0	73	94	-234	23	16	1	0	0	2.2	34	13.9	36	16+	6	10	12	6.2	50
HONOLULU	2	1014.2	1014.8	25.0	16.7	21.0	-1.4	26.7	15+	13.9	28+	0	0	13.9	66	20	- 64	11	6	3	0	0	2.9	2	13.9	NE	4	9	14	5	5.1	82
KAHULUI	15	1012.2	1014.4	23.9	16.1	19.9	-2.1	25.0	23+	12.2	28	0	0			192	128	124	17	3	0	0	2.7	4	13.9	N	16	5	14	9	6.3	58
LIHUE	35	1010.8	1016.0	23.3	16.1	19.7	-1.8	24.4	23	12.8	27+	0	0	13.9	72	64	- 71	50	16	2	0	0	3.3	2	10.7	NE	20	7	9	12	5.8	57
IDAHO																																
BOISE	865	918.4	1020.6	7.8	- 2.2	2.7	1.3	16.7	26	-10.0	11	0	26	- 3.3	67	8	- 26	3	7	0	10	T	0.2	27	13.9	W	27+	5	10	13	6.7	62
IDAHO FALLS 42NW R	1460			0.0	-12.2	- 6.2	1.1	7.8	27	-23.3	2	0	28			2	- 11	2	1				1.5	34	13.0	NNW	9					
IDAHO FALLS 46W R	1504			1.7	-10.0	- 4.3	2.2	8.9	26	-17.2	11+	0	28			4	- 16	4	1		T	25			17.0	SW	22					
LEWISTON	431			8.9	- 0.6	4.2	2.1	17.8	19+	- 6.1	11	0	18			10	- 14	3	8		25	T						2	6	20	8.0	
POCATELLO	1358	863.2	1019.6	5.6	- 6.7	- 0.7	2.0	13.3	26+	-19.4	11	0	26	- 6.1	67	10	- 14	3	9	0	94	51	3.1	23	15.6	SW	22	4	9	15	6.8	71
ILLINOIS																																
CAIRO U	96			9.4	- 1.1	4.1	-0.8	22.8	9	-14.4	2	0	17			132	38	71	7		196	127			13.9	N	21	13	6	9	4.7	67
CHICAGO O HARE	201	991.5	1017.0	1.1	- 9.4	- 4.3	-1.1	13.9	28	-25.6	2	0	26	- 8.9	72	30	- 8	11	12	0	292	254	2.1	25	17.0	34	25	9	6	13	5.9	
CHICAGO MIDWAY	185	993.9		2.2	- 7.2	- 2.6	-0.2	15.0	28	-22.8	2	0	24	- 8.9	65	45	4	15	10	0	333	229	2.2	26	16.1	S	20	8	7	13	5.9	56
MOLINE	177	994.9	1017.5	1.7	- 8.3	- 3.5	0.0	17.8	28	-24.4	2	0	26	- 8.9	68	25	- 10	9	9	0	188	152	2.1	27	13.4	NW	21	11	4	13	5.6	60
PEORIA	199	993.2	1018.1	2.8	- 8.3	- 2.8	-0.8	15.6	20	-23.3	2	0	25	- 7.8	72	24	- 20	10	9	0	147	152	1.1	27	13.9	NW	25	10	5	11	5.1	60
ROCKFORD	221	988.5	1016.6	- 0.6	-10.0	- 5.5	-1.3	12.8	28	-26.7	2	0	27	-10.6	69	21	- 15	7	10	0	127	152	2.3	27	13.4	25	10	11	5	12	5.4	
SPRINGFIELD	179	995.3	1018.2	4.4	- 6.1	- 1.1	-0.9	16.7	28+	-21.1	2	0	25	- 5.6	74	48	2	27	8	0	361	305	1.9	23	16.1	W	12	11	8	9	4.9	61
INDIANA																																
EVANSVILLE	116	1004.7	1019.3	7.2	- 5.6	1.1	-2.1	22.2	9	-23.3	2	0	21	- 3.9	70	127	46	63	10	1	246	152	1.0	26	12.5	NW	24	12	6	10	5.2	68
FORT WAYNE	241	986.1	1017.1	1.1	- 7.8	- 3.3	-1.2	13.9	10	-21.7	2	0	25	- 8.3	69	63	6	39	9	0	234	203	2.4	26	18.8	SW	12	8	8	12	6.0	53
INDIANAPOLIS	241	987.8	1018.1	3.9	- 6.7	- 1.4	-0.9	16.1	10	-23.3	2	0	21	- 6.7	70	110	52	53	9	1	389	330	1.7	25	20.1	NW	25	9	8	11	5.7	69
SOUTH BEND	236	987.5	1016.6	1.7	- 7.2	- 2.8	0.1	12.8	10	-22.8	2	0	26	- 7.8	72	69	21	21	14	0	511	356	2.4	25	14.3	24	12	6	7	15	6.8	
IOWA																																
BURLINGTON	212			2.8	- 8.9	- 3.2	-0.8	17.2	20	-22.2	2	0	26	- 7.8	70	10	- 26		6	0	102		1.9	26	14.3	25	12	10	8	10	5.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station		Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)				
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
	Elevation (ground)	Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	°C.	°C.	°C.	C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
IOWA																																
DES MOINES	286	982.1	1018.5	- 1.1	-12.2	- 6.6	-1.8	12.8	28	-25.0	2	0	26	-10.0	80	29	1	12	7	1	193	102	1.5	30	13.9	NW	21	9	8	11	5.6	63
DUBUQUE	325			- 2.2	-12.2	- 7.2	-1.6	12.8	28	-29.4	2	0	26			27	- 9	10	8		132	203						8	6	14	6.0	
SIOUX CITY	334	977.0	1018.8	- 1.1	-13.9	- 7.4	-2.0	10.6	5	-23.9	24+	0	27	-11.1	76	30	8	14	7	0	302	254	1.0	32	19.2	NW	21+	10	6	12	5.7	73
WATERLOO	265	984.4	1017.7	- 2.8	-14.4	- 8.6	-2.7	10.6	28	-28.9	2	0	28	-11.7	77	29	6	16	5	0	168	127	1.7	29	19.7	32	21	6	9	13	6.4	
KANSAS																																
CONCORDIA	448	963.4	1018.4	2.8	- 8.9	- 3.1	-2.9	16.7	27	-22.8	24	0	24	- 7.2	75	50	27	26	6	0	516	330	0.8	26	16.1	NW	21	14	2	12	4.7	63
DODGE CITY	787	924.1	1017.6	7.2	- 6.7	0.2	-1.4	23.9	27	-18.3	24	0	23	- 6.1	72	15	- 3	7	6	0	140	102	1.2	33	21.0	N	23	12	5	11	5.3	75
GOODLAND	1111	886.9	1017.4	6.1	-11.1	- 2.3	-1.7	21.1	27	-22.8	24	0	28	- 8.3	68	13	0	5	8	1	257	127	1.8	30	16.5	34	28	10	7	11	5.4	
TOPEKA	267	985.8	1018.8	5.6	- 6.7	- 0.7	-1.3	20.0	20	-18.3	25+	0	25	- 5.6	72	32	6	14	7	1	185	127	0.9	31	17.9	N	1	13	6	9	4.7	67
WICHITA	403	968.5	1017.9	8.3	- 5.6	1.3	-1.1	20.6	28+	-17.2	24	0	23	- 3.9	73	35	12	15	6	1	69	51	0.5	31	24.1	N	23	14	5	9	4.6	67
KENTUCKY																																
COVINGTON	265	985.4	1017.8	7.2	- 6.7	0.5	-0.1	18.9	28+	-23.3	4	0	21	- 5.0	69	129	55	40	9	0	150	127	2.1	25	13.0	28	25	5	12	11	6.2	
LEXINGTON	294	982.4	1018.8	7.2	- 4.4	1.3	-0.8	18.9	9	-20.0	2	0	20	- 5.0	66	74	- 13	29	9	1	46	51	2.3	20	13.0	25	25	9	8	11	5.7	
LOUISVILLE	144	1000.3	1018.5	8.3	- 3.9	2.2	0.1	21.1	9	-17.2	1+	0	21	- 5.0	61	119	35	44	10	0	99	76	1.9	27	14.8	W	25	8	10	10	5.6	63
LOUISIANA																																
ALEXANDRIA	28	1014.9	1019.2	16.1	3.3	9.7	-1.8	24.4	11	- 4.4	26	0	10	3.9	73	130	4	34	9	6	T	0	0.8	4	14.3	30	24	7	3	18	7.0	
BATON ROUGE	20	1016.3	1019.1	17.8	5.6	11.7	-1.3	26.7	9	- 3.9	25	0	5	5.6	70	151	38	71	11	2	T	0	1.5	7	13.0	17	9	7	3	18	7.2	
LAKE CHARLES	4	1017.3	1018.3	17.8	7.2	12.4	-1.1	26.7	9	- 1.1	25	0	2	7.2	74	98	- 17	22	9	5	0	0	1.8	9	13.9	18	9	7	4	17	6.9	
NEW ORLEANS	1	1017.6	1018.6	17.8	7.2	12.4	-1.5	26.1	10	- 1.7	26	0	3	7.2	72	133	32	57	8	1	0	0	1.5	6	13.9	22	24	7	3	18	7.1	
SHREVEPORT	77	1009.1	1018.4	15.6	3.9	9.7	-0.5	22.2	28+	- 6.1	25+	0	10	3.3	68	165	61	90	9	5	51	51	0.9	13	17.9	27	11	8	4	16	6.3	47
MAINE																																
CARIBOU	190			- 5.6	-17.2	-11.4	-0.6	3.3	26+	-27.8	5	0	28			59	8	29	13		376	406						9	7	12	5.9	
PORTLAND	19	1013.2	1015.6	0.0	-11.7	- 5.8	-0.7	8.3	25+	-22.2	1	0	27	-12.2	61	162	65	82	10	1	335	203	1.7	30	18.8	SE	25	9	9	10	5.8	61
MARYLAND																																
BALTIMORE	45	1012.2	1018.0	7.8	- 4.4	1.6	-0.4	21.1	8	-13.9	1	0	22	- 6.1	61	73	0	42	7	0	28	T	1.6	29	25.5	SW	25	8	9	11	5.7	67
MASSACHUSETTS																																
BLUE HILL OBS R	192			1.7	- 7.8	- 3.2	-0.7	12.8	25	-16.7	5	0	26			73	- 21	42	10	1	127	229			25.9	S	25					56
BOSTON	5	1015.6	1016.5	2.2	- 6.7	- 2.2	-1.3	11.7	25	-14.4	20	0	26	- 8.3	66	81	- 4	47	13	1	119	51	3.0	29	18.8	S	25	9	8	11	5.8	59
NANTUCKET	13	1015.9	1016.4	2.2	- 5.0	- 1.3	-0.9	9.4	25	-11.7	20	0	25	- 6.7	68	61	- 34	22	10	1	79	51	2.3	28	21.0	E	25	5	9	14	6.7	53
PITTSFIELD	357			0.0	-10.6	- 5.4	0.0	9.4	8	-23.3	4	0	26			59	- 4	26	11		236	356										
WORCESTER	301			1.1	- 9.4	- 4.3	-0.3	10.6	8	-18.9	5	0	27			109	35	52	12	1	150	203			17.0	32	19	9	7	12	5.7	
MICHIGAN																																
ALPENA	210			- 2.8	-12.8	- 7.8	-0.4	7.8	10	-25.0	23	0	27			47	6	13	15		528	381			14.8	SW	12	3	6	19	7.9	40
DETROIT	189	992.6	1016.1	1.1	- 7.2	- 3.0	-0.3	13.3	10	-16.7	3	0	25	- 7.8	70	63	10	30	11	0	401	279	2.3	27	18.8	SW	12	4	13	11	6.6	48
DETROIT M WAYNE CO	193	991.2	1016.3	1.7	- 8.3	- 3.4	-0.7	12.8	10	-18.3	3+	0	25	- 8.3	69	65	15	31	13	0	439	279	2.4	25				4	13	11	6.8	
DETROIT WILLOW RUN	217	987.1	1016.4	0.0	- 9.4	- 4.6	-2.0	12.2	10	-20.6	3	0	26	-10.0	67	70	21	38	13	0	422	279	2.4	25	17.9	22	10	4	13	11	6.8	
FLINT	235	986.8	1015.6	0.6	- 8.3	- 4.0	1.4	11.1	10	-17.8	23	0	25	- 9.4	67	55	10	27	14	1	500	356	2.5	25	15.6	24	12	3	9	16	7.4	
GRAND RAPIDS	239	985.8	1015.9	- 0.6	- 8.3	- 4.6		9.4	10	-17.2	23	0	26	- 8.9	74	40	6	14	16	0	424	254	2.3	27	21.5	SW	10	2	10	16	7.9	35
HOUGHTON LAKE	351	971.6	1015.3	- 2.8	-12.2	- 7.6		6.1	10	-23.3	23+	0	27	-11.1	77	36		8	15	0	328	432	2.1	26	13.0	24	12	4	6	18	7.8	
LANSING	256	983.1	1015.9	0.0	- 8.9	- 4.5	-0.2	11.1	10	-18.9	22+	0	26	- 7.8	81	58	8	21	12	0	386	279	2.6	27	21.0	W	12	2	12	14	7.3	56
MARQUETTE U	206			- 4.4	-13.3	- 9.0	-2.2	6.7	7	-23.3	22	0	28			41	- 1	27	11		511	762			15.2	SW	16	4	7	17	7.6	57
MUSKEGON	191	991.9	1015.8	0.0	- 7.2	- 3.6	-0.1	11.7	10	-17.2	23	0	25	- 6.1	83	48	3	11	17	0	899	737	1.9	28	17.9	34	25	2	2	24	8.9	
SAULT STE MARIE	220	986.5	1014.2	- 6.1	-15.6	-10.6	-1.6	5.0	7	-25.0	13	0	28	-13.3	78	59	21	10	17	0	836	838	1.1	31	16.5	33	25	1	6	21	8.4	39
MINNESOTA																																
DULUTH	435	961.7	1016.2	- 7.2	-21.7	-14.4	-2.7	3.9	20	-33.3	24+	0	28	-20.0	60	44	20	35	10	0	490	787	1.8	29	22.4	E	28	7	6	15	6.4	58
INTERNATIONAL FALLS	359	970.5	1016.4	- 8.9	-24.4	-16.6	-2.7	1.7	20	-35.0	4	0	28	-20.6	70	11	- 7	4	7	0	114	483	2.1	25	16.1	26	20	6	7	15	6.4	
MINNEAPOLIS	254	985.4	1017.5	- 5.0	-17.2	-11.2	-2.2	6.1	27+	-33.3	2	0	27	-14.4	76	40	21	26	5	0	297	330	1.2	31	20.1	NW	21	8	7	13	6.2	60
ROCHESTER	395	967.2	1017.6	- 6.1	-16.7	-11.3	-2.6	5.6	27	-31.7	2	0	27	-15.0	74	34	14	15	7	0	224	203	2.5	27	17.4	32	21	7	7	14	6.3	
ST CLOUD	315	977.3	1017.4	- 6.7	-20.0	-13.1	-2.8	6.7	5	-33.9	2	0	27		67	23	3	19	6		282	432						8	7	13	6.3	
MISSISSIPPI																																
JACKSON	94	1007.5	1019.7	15.0	2.2	8.4		26.1	9	- 6.1	25	0	13	2.8	73	201		73	11	4	T	0	0.7	8	15.2	NW	25	7	5	16	6.5	52
MERIDIAN	88	1008.8	1020.1	15.6	1.7	8.5	-1.8	26.1	11	- 7.2	2	0	16	2.8	72	149	20	52	10	1	T	T	0.4	35	12.5	30	24	8	4	16	6.4	
VICKSBURG U	71			15.0	3.9	9.3	-1.7	25.6	11+	- 5.6	25+	0	9			212	77	61	12		T	T			12.5	NW	25+	8	4	16	6.3	56

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days			Average relative humidity	Precipitation			No. of days		Snow, Sleet		Wind		Fastest mile (1.6 kilometers)			No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	°C.	°C.	°C.	°C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
MISSOURI																																
COLUMBIA	237	988.8	1018.0	6.1	-5.6	0.2	-0.8	19.4	20	-18.3	2	0	24	-5.6	69	29	-17	17	8	0	251	203	0.9	26	15.6	NW	1	10	7	11	5.4	60
KANSAS CITY	226	990.5	1018.8	6.1	-5.6	0.2	-1.9	19.4	20	-17.2	25	0	24	-5.6	67	46	14	24	9	1	196	178	0.4	26	13.0	NW	21	9	11	8	5.4	73
ST JOSEPH	247			6.1	-8.3	-1.2	-0.7	17.8	20	-20.6	2	0	26	-6.7	66	21	-7	13	4	0	58	76	0.8	31	10.3	36	23+	13	5	10	5.0	
ST LOUIS	163	998.0	1018.9	7.2	-5.6	1.0	-0.5	21.1	27	-18.9	2	0	22	-6.1	64	29	-22	17	7	0	145	102	1.4	26	13.9	W	11	9	11	8	5.2	58
SPRINGFIELD	386	971.6	1018.2	9.4	-4.4	2.6	-0.2	20.0	27+	-17.8	25	0	21	-3.3	69	54		24	8	1	102	102	1.3	20	12.5	W	11	11	6	11	5.2	66
MONTANA																																
BILLINGS	1087	888.6	1016.5	2.2	-9.4	-3.8	-0.3	16.1	19	-28.9	23	0	22	-10.0	65	30	15	12	8	0	353	203	4.0	25	16.1	NW	27+	2	7	19	8.0	60
GLASGOW	694			-5.0	-18.3	-11.6	-1.4	8.3	19	-30.0	23	0	28			5	-5	3	5		168	381						2	14	12	6.9	
GREAT FALLS	1116	885.2	1017.2	2.8	-7.8	-2.8	1.8	15.0	19	-23.9	23	0	20	-8.9	66	30	11	9	10	0	318	152	4.8	24	22.8	W	27+	0	6	22	8.6	45
HAVRE	787			-2.2	-15.0	-8.8	-0.1	7.2	26	-28.9	23	0	25			13	2	7	6		183	254			19.2	NW	19	3	4	21	8.0	59
HELENA	1167	879.1	1018.1	3.9	-10.0	-3.0	1.9	15.6	19	-23.9	23	0	27	-9.4	62	12	2	5	6	1	239	102	2.7	27	17.4	W	19+	1	3	24	8.7	54
KALISPELL	904	909.9	1017.8	1.1	-10.0	-4.3	-0.2	9.4	19	-21.7	15+	0	26	-7.2	78	18	-8	7	15	0	272	406	0.8	19	17.9	1	22	1	3	24	8.9	
MILES CITY	801	920.8	1017.8	-1.1	-14.4	-7.7	-1.2	12.8	26	-27.2	23	0	27	-11.1	74	13	4		5	0	89		1.1	26								
MISSOULA	972	904.2	1019.6	1.7	-9.4	-4.1	-0.2	9.4	19+	-22.2	11	0	28	-6.7	81	16	-6	6	11	0	284	203	0.9	30	16.1	W	5	0	3	25	9.3	28
NEBRASKA																																
GRAND ISLAND	561	949.9	1018.8	0.6	-11.7	-5.4	-2.1	17.2	27	-27.2	24	0	28	-10.0	71	31	12	17	9	0	389	279	1.6	29	13.9	36	7	12	3	13	5.8	
LINCOLN U	351			0.6	-11.1	-5.2	-3.4	15.0	5	-22.8	24	0	25			78	50	39	7	0	663	533			14.8	NW	21	12	5	11	5.5	53
NORFOLK	471			-0.6	-13.9	-7.4	-2.3	14.4	27	-27.2	24	0	27			23	3	14	5		330	254						9	8	11	5.7	
NORTH PLATTE	846	915.7	1017.4	2.8	-12.8	-4.8	-2.5	23.3	27	-22.8	24+	0	27	-9.4	73	9	-4	5	6	0	183	178	1.6	33	18.8	N	7	9	5	14	6.4	60
OMAHA	298	982.1	1019.0	0.6	-11.7	-5.4	-2.4	13.9	5	-21.1	24	0	26	-8.9	77	75	51	38	9	0	645	457	1.1	33	16.1	NW	21	11	6	11	5.5	61
SCOTTSBLUFF	1206	877.4	1017.4	5.0	-10.6	-2.8	-1.2	21.1	27	-22.8	13	0	26	-8.3	70	11	1	9	5	0	168	127	2.6	31	14.3	2	20	8	10	10	5.8	
VALENTINE	789			3.3	-12.8	-4.6	0.4	20.0	27	-26.7	24+	0	28			2	-12	1	3		61	T			15.2	S	8	9	6	13	5.9	75
NEVADA																																
ELKO	1547	846.3	1021.0	7.8	-8.3	-0.3	1.9	17.2	26	-17.8	11	0	28	-6.1	70	8	-15	4	7	0	124	51	1.6	26	15.6	25	27	6	12	10	5.9	
ELY	1906	808.3	1019.3	6.1	-10.6	-2.3	0.7	15.0	21	-22.8	12	0	27	-9.4	63	16	-2	12	6	0	229	127	0.4	22	12.5	NW	9	9	10	9	5.3	85
LAS VEGAS	659	939.7	1017.2	16.7	2.8	9.7	0.9	23.9	27+	-5.6	12	0	5	-7.8	32	11		11	2	0	0	0	2.0	31	24.1	NW	22	18	4	6	3.4	87
RENO	1342	868.9	1020.9	13.9	-5.0	4.5	2.5	23.3	21	-10.6	10	0	26	-6.1	52	T	-26	T	1	0	T	0	0.4	32	17.0	SE	27	12	9	7	4.6	96
WINNEMUCCA	1310	870.0	1020.9	10.6	-7.2	1.8	1.6	18.3	25	-15.6	11	0	27	-6.7	60	10	-14	7	4	0	46	T	0.9	26	15.2	N	27	6	12	10	6.1	70
NEW HAMPSHIRE																																
CONCORD	103	1003.1	1016.2	0.6	-11.1	-5.4	-0.3	8.3	16+	-25.6	5	0	27	-11.1	65	78	15	33	8	1	165	203	2.1	30	16.1	NW	22	10	7	11	5.4	62
MT WASHINGTON OBS	1909			-10.6	-21.7	-16.1	-1.4	1.7	12	-32.8	23	0	28			191	59	84	18	1	831	127			59.0Y	SE	25	4	3	21	8.1	26
NEW JERSEY																																
ATLANTIC CITY	20	1015.9	1018.2	6.7	-5.6	0.6	-0.9	20.6	8	-16.7	5	0	22	-5.6	67	62	-18	30	10	0	84	51	2.3	28	17.9	23	25	8	7	13	5.8	60
ATLANTIC CITY U	3			5.6	-2.8	1.3	-0.7	18.3	8	-11.1	5+	0	18			51	-35	19	10						20.1	SSE	25					
NEWARK	3	1016.9	1017.9	4.4	-3.9	0.2	-0.7	17.2	8	-12.2	5	0	22	-7.2	62	74	3	39	8	0	46	T	2.5	29	20.6	23	25	8	9	11	5.8	
TRENTON U	17			5.0	-3.9	0.7	-0.1	16.1	8	-12.2	5	0	21			58	-8	26	11		79	T			18.3	SW	25	8	12	8	5.2	66
NEW MEXICO																																
ALBUQUERQUE	1618	835.8	1014.9	11.1	-2.8	4.1	-0.3	20.6	22	-10.6	14	0	23	-7.8	48	15	6	5	6	0	91	51	0.6	1	15.6	NW	22+	13	6	9	4.8	78
CLAYTON	1515			8.9	-6.7	1.1	-1.1	21.1	27+	-15.0	13	0	26			13	3	8	3		135	76						11	5	12	5.4	
RATON	1944			8.3	-11.7	-1.9	-2.3	18.9	26	-22.8	12	0	28			8	-2	4	5		107	51						13	5	10	4.8	
ROSWELL	1102			14.4	-5.0	4.5	-1.1	26.1	27	-20.0	24	0	26			21	11	15	3	0	198	127			12.1	NW	28	13	10	5	3.9	80
SILVER CITY	1638			12.8	-3.3	4.7	-1.6	20.0	26	-12.2	12	0	22			2	-16	1	3		T	T						13	6	9	4.6	
NEW YORK																																
ALBANY	84	1006.1	1017.1	-0.6	-10.6	-5.4	-0.8	9.4	25	-24.4	4	0	27	-10.0	70	49	-7	19	9	0	94	203	2.5	25	15.6	NW	22	5	7	16	6.9	54
BINGHAMTON	485	955.0	1015.8	-1.1	-9.4	-5.2	-0.6	8.3	21+	-18.9	5	0	25	-8.9	76	39	-16	12	15	0	173	229	2.4	25	18.8	E	25	2	6	20	8.0	30
BUFFALO	215	988.8	1015.4	0.6	-7.8	-3.4	0.9	15.6	12	-15.6	23+	0	24	-8.3	69	76	7	29	20	0	239	229	3.7	25	19.2	W	12	1	6	21	8.6	31
NEW YORK U	40	1014.6	1018.0	5.0	-2.8	1.1	0.3	16.1	8	-10.6	5	0	19	-7.2	59	93	21	45	9	0	64	T	1.7	28	14.8	NW	19	12	7	9	4.9	57
J.F. KENNEDY	5	1016.6	1017.5	4.4	-3.9	0.2	0.4	16.7	8	-12.2	5	0	20	-7.2	61	71	-4	24	10	0	104	51	2.3	29	15.6	24	26	8	9	11	5.6	
NEW YORK LA GUARDIA	3	1015.9	1017.6	4.4	-2.2	1.2	0.3	15.6	8	-10.0	5	0	19	-6.1	63	82	4	35	9	0	58	T	2.3	29	16.5	S	25	9	8	11	5.7	
ROCHESTER	167	995.6	1016.4	1.1	-7.8	-3.5	0.4	17.8	12	-16.1	5	0	25	-7.8	72	57	-7	15	12	1	262	203	3.1	24	17.9	SW	26+	1	7	20	8.0	33
SYRACUSE	127	1000.3	1015.7	0.6	-8.9	-4.1	0.2	12.2	12	-18.9	20	0	26	-8.9	71	72	-8	15	18	1	632	305	2.3	26	17.0	W	26	2	9	17	8.0	29
NORTH CAROLINA																																
ASHEVILLE	652	941.1	1018.9	9.4	-2.8	3.3		20.0	11	-13.3	3	0	21	-2.8	71	117		43	11	0	109	51	1.7	34	19.2	35	19	10	4	14	5.9	58
CAPE HATTERAS R	2	1018.6	1018.9	12.2	2.8	7.5	-0.6	20.6	10	-8.3	1	0	11	2.8	74	132	33	45	12	0	0	0	1.1	33	18.8	SW	25	7	8	13	6.1	64
CHARLOTTE	224	990.9	1018.9	12.8	1.1	7.0	0.2	23.9	11	-8.9	3	0	16	0.0	68	68	-22	23	11	0	25	T	0.8	24	17.0	SW	25	10	4	14	5.9	61

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	°C.	°C.	°C.	°C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
NORTH CAROLINA																																
GREENSBORO	273	986.5	1018.8	11.1	- 1.1	4.8	-0.2	23.9	11	-13.3	1	0	19	- 1.7	67	71	- 13	33	12	0	84	76	1.3	27	17.0	SW	12	9	5	14	6.1	57
RALEIGH	132	1002.4	1018.7	12.8	- 0.6	6.1	-0.1	26.1	11	-12.8	1	0	19	- 1.7	64	61	- 21	28	9	0	86	76	1.1	26	14.3	24	25	10	5	13	5.8	60
WILMINGTON	9	1018.3	1019.5	15.0	2.8	9.1	-0.2	25.6	12+	- 7.2	1	0	12	2.8	70	123	36	31	12	0	0	T	0.8	31	14.8	W	25	9	7	12	5.8	67
WINSTON SALEM	294	983.1	1018.9	10.0	- 0.6	4.6	-0.8	22.2	11	-11.1	1	0	18	- 2.2	66	72	- 16	29	10	0	160	102	1.3	28	13.0	27	25	9	5	14	5.9	
NORTH DAKOTA																																
BISMARCK	502	954.6	1017.8	- 5.0	-19.4	-12.1	-1.8	8.3	26	-33.3	4	0	28	-16.7	67	5	- 6	4	4	0	81	279	1.9	31	17.9	NW	20	9	9	10	5.5	80
FARGO	273	983.4	1018.1	- 7.2	-20.6	-13.8	-2.0	4.4	20	-32.8	2	0	28	-17.2	75	4	- 9	3	4	0	43	127	1.0	30	21.9	NW	20	5	9	14	6.8	62
WILLISTON	579			- 5.6	-20.0	-12.6	-1.7	6.7	18	-30.0	3	0	28			3	- 10	2	5		23	305			29.5	NW	20	9	7	12	6.0	64
OHIO																																
AKRON	368	970.9	1017.0	2.8	- 8.9	- 3.2	-1.4	16.7	10	-20.6	3	0	25	- 7.2	74	68	9	23	15	0	226	102	2.6	24	16.1	24	12	1	10	17	8.0	
CINCINNATI OBS	232			7.2	- 5.0	1.0	-0.7	18.9	10	-18.9	2	0	20			135	64	40	9		160	127			11.2	W	25					59
CLEVELAND	237	986.5	1016.6	2.8	- 7.2	- 2.2	0.2	17.8	10	-18.9	3	0	25	- 6.7	72	76	17	17	17	0	396	127	2.9	22	16.5	SW	12	1	9	18	8.1	43
COLUMBUS	247	987.1	1018.1	3.9	- 7.2	- 1.6	-1.1	16.7	10	-21.7	4	0	22	- 6.7	70	96	37	27	10	1	193	127	2.0	24	16.1	W	12	6	8	14	7.1	46
DAYTON	305	980.4	1017.7	5.0	- 6.7	- 0.7	-0.1	17.2	10	-21.7	2	0	21	- 6.7	67	71	12	30	8	0	135	76	2.3	23	16.1	NW	25	8	4	16	6.4	56
MANSFIELD	395			1.7	- 8.9	- 3.6	-1.3	14.4	10	-19.4	3	0	24			67	1	24	12		274	102						1	10	17	8.0	
TOLEDO	206			1.7	- 8.3	- 3.4	-0.8	15.0	10	-18.9	3	0	26	- 8.9	61	50	2	24	9	0	320	178	2.2	25	17.0	SW	12	4	10	14	6.9	49
YOUNGSTOWN	359	972.6	1016.9	1.7	- 8.9	- 3.6	-1.2	16.7	10	-20.0	23	0	25	- 8.3	69	82	18	42	14	0	310	76	2.7	24	16.5	25	12	1	7	20	8.3	
OKLAHOMA																																
OKLAHOMA CITY	390	970.2	1017.9	11.1	- 2.8	4.2	-1.0	25.0	28	-13.9	24	0	21	- 3.3	65	22	- 13	10	7	1	23	T	0.6	18	20.1	NW	23+	14	7	7	4.3	73
TULSA	198	993.6	1018.3	11.7	- 3.3	4.1	-0.7	22.8	26	-13.3	24	0	18	- 3.3	62	37	- 8	17	7	1	38	T	1.2	21	16.5	S	28	16	4	8	3.9	73
OREGON																																
ASTORIA	2	1020.0	1020.6	9.4	3.9	6.8	0.8	13.9	18	0.0	1	0	1	3.9	80	172	- 79	33	21	0	0	0	1.8	21	13.9	18	26	1	2	25	8.9	
BURNS U	1265	874.4	1020.3	7.8	- 5.0	1.4	2.7	15.0	18	-13.3	11	0	28	- 3.9	70	6	- 27	3	6		46	T	2.0	30				5	6	17	7.0	
EUGENE	109	1008.5	1022.0	11.1	2.2	6.8	0.9	17.8	25+	- 1.7	2	0	4	3.3	83	41	- 86	23	8	0	T	0	1.4	21	14.3	20	5	2	4	22	8.0	
MEACHAM	1234			3.3	- 3.9	- 0.1	1.5	12.8	17	-14.4	11	0	23			81	- 21	17	15		645	432						3	4	21	8.3	
MEDFORD	396	973.9	1022.7	12.8	- 0.6	5.9	1.4	19.4	18	- 4.4	10	0	20	0.0	73	18	- 43	17	4	0	T	T	0.2	22	14.3	14	5	3	11	14	7.0	
PENDLETON	452	965.1	1019.8	9.4	0.6	5.1	2.1	17.8	17	- 4.4	11	0	14	0.6	76	9	- 21	4	10	0	13	T	2.8	26	19.7	26	5	5	4	19	7.5	
PORTLAND	6	1020.0	1021.3	10.6	2.2	6.3	0.8	16.1	25+	- 1.7	24+	0	6	3.3	84	56	- 51	15	13	0	0	0	1.3	19	25.9	SE	5	1	3	24	8.7	39
SALEM	60	1014.6	1021.9	10.6	1.7	6.2	0.7	16.7	25	- 2.8	2+	0	7	3.3	85	40	- 95	18	13	0	0	0	2.1	21	19.2	21	5	1	6	21	8.6	
SEXTON SUMMIT R	1169	885.9	1020.5	7.8	- 0.6	3.7	1.4	17.8	18	- 5.6	10+	0	17			29	- 76	20	11		91	T			19.2	17	5	8	5	15	6.7	
PACIFIC AREA																																
CANTON ISLAND	2			30.6	25.0	27.8	-0.6	31.7	28	22.8	2	0	0			69	15	53	5		0	0						12	7	9	5.4	
ENIWETOK	4	1008.5	1009.2	29.4	23.9	26.8	-0.4	30.0	28+	22.2	9+	0	0	21.7	74	15	- 31	3	14		0	0	6.9	7								
TAGUAC GUAM R	110			28.3	22.2	25.2	-0.5	29.4	24+	18.9	19+	0	0			26	- 63	6	18		0	0			12.1	E	14					66
JOHNSTON	2	1013.2	1013.9	26.1	21.1	23.5	-1.5	27.2	10	18.3	16	0	0	16.7	65	25	- 14	9	16	0	0	0	7.4	7	16.1	NE	24	7	21	0	4.2	79
KOROR R	29	1004.4	1008.1	29.4	23.9	26.7	-0.2	31.7	15	22.2	4	0	0	23.3	85	331	150	139	20	0	0	0	3.7	8	12.1	NE	3	0	0	28	10.0	63
KWAJALEIN	2	1007.5	1008.3	30.0	24.4	27.2	0.6	31.1	28+	22.2	26+	0	0	22.2	76	26	- 29	11	12	0	0	0	4.6	6	13.0	6	11	0	4	24	9.0	
MAJURO	3	1007.1	1007.5	28.9	25.0	26.9	0.1	30.0	26+	23.3	6	0	0	22.2	75	135	- 82	44	16	1	0	0	2.8	8	13.0	NE	18+	0	4	24	9.4	52
MARCUS ISLAND	6			23.3	18.3	20.8		26.7	24	16.1	21+	0	0			17	- 7	9	10		0	0			18.8	W	19	3	15	10	6.3	50
PONAPE R	37	1002.0	1007.5	29.4	24.4	27.0	0.1	31.1	20	21.7	13	0	0	22.8	80	282	35	120	20	1	0	0	4.1	6	9.8	E	11	0	2	26	9.4	35
TRUK MOEN ISLAND	2	1007.1	1007.3	29.4	24.4	26.8	-0.2	30.0	15+	22.2	14	0	0	22.8	78	170	10	42	16	0	0	0	6.0	5	11.6	NE	20	0	1	27	9.6	65
WAKE	3	1013.2	1013.5	27.2	22.2	24.6	-0.4	28.3	13	21.1	24+	0	0	19.4	75	27	- 7	14	9	0	0	0	4.1	7	12.5	3	22	13	8	7	4.3	
YAP R	17	1006.1	1007.9	29.4	24.4	26.9	0.1	30.0	26+	22.8	3	0	0	23.3	82	152	35	34	24	0	0	0	5.6	5	13.0	NE	28	0	1	27	9.8	51
PENNSYLVANIA																																
ALLENTOWN	115	1003.4	1017.8	3.9	- 6.1	- 1.0	0.6	15.0	8	-15.0	5+	0	23	- 8.3	63	82	14	46	10	1	48	51	2.4	28	20.1	32	19	8	11	9	5.5	
ERIE	223	988.8	1016.4	1.7	- 7.8	- 3.0	0.1	16.7	10	-18.9	23	0	25	- 6.7	75	76	17	38	16	0	348	102	3.5	23	17.0	18	10	2	7	19	8.0	
HARRISBURG	103	1005.1	1018.3	5.6	- 5.0	0.3	-0.1	18.3	8	-14.4	5+	0	22	- 7.8	60	84	25	49	10	1	43	T	2.1	28	16.1	SW	25	7	8	13	6.4	61
PHILADELPHIA	2	1016.9	1018.0	5.6	- 4.4	0.7	0.1	16.7	8	-14.4	4	0	21	- 6.1	64	55	- 16	30	10	0	56	T	1.8	29	18.3	SW	25	7	9	12	6.0	58
PITTSBURGH	347	971.6	1017.2	3.3	- 7.8	- 2.0	-0.4	17.2	10	-18.3	20	0	25	- 7.8	65	76	20	32	14	0	264	102	2.6	26	15.6	23	25	1	7	20	8.0	39
PITTSBURGH U	228			5.0	- 5.6	- 0.4	-1.2	19.4	10	-16.7	3	0	21			61	3	28	11		150											45
READING U	81			5.6	- 3.9	0.8	0.0	17.2	8	-12.8	5	0	21			83	16	47	10		56	T						9	10	9	5.8	55
SCRANTON	283	981.7	1017.3	2.2	- 6.7	- 2.2	-0.1	11.7	21	-17.2	5	0	23	- 8.9	63	48	- 2	21	10	1	58	76	1.6	26	17.4	S	25	6	8	14	7.0	44
WILLIAMSPORT	161	998.3	1018.2	2.2	- 7.2	- 2.6	-1.1	9.4	28	-19.4	4	0	26	- 7.8	71	58	- 6	25	9	0	20	T	1.1	27	17.0	26	25	4	9	15	7.0	
RHODE ISLAND																																
BLOCK ISLAND	34			2.2	- 4.4	- 1.3	-0.7	11.1	25	-13.3	20	0	22			51	- 33	24	10		56	76										
PROVIDENCE	16	1014.2	1016.5	2.8	- 6.7	- 2.0	-0.7	12.8	8	-17.8	5	0	26	- 8.9	61	96	17	54	10	1	69	178	2.5	28	16.1	29	22	10	6	12	5.4	59

See footnotes at end of table

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	°C.	°C.	°C.	°C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
SOUTH CAROLINA																																
CHARLESTON	12	1017.6	1019.1	16.7	5.0	10.7	-0.2	26.7	10	- 4.4	3	0	8	4.4	72	139	56	45	13	1	0	0	0.6	31	24.1Y	S	25	6	11	11	6.3	52
CHARLESTON U	3			15.6	7.2	11.3	0.1	25.0	10+	- 1.7	26	0	2			139	61	38	11		0	0			17.4	W	25					
COLUMBIA	66	1011.2	1019.3	15.6	2.8	9.1	-0.1	26.1	11	- 7.2	3	0	12	2.2	70	135	40	33	11	0	0	0	0.9	26	15.6	23	25	8	8	12	6.0	55
FLORENCE	45	1013.9	1019.3	15.0	2.8	8.9	-0.4	26.1	10	- 6.7	3	0	12	1.1	65	145	64	35	10	0	0	0	0.5	30	13.9	25	25	8	8	12	6.0	
GNVLE SPARTANBURG	292	983.7	1018.9	12.8	1.1	6.8	-0.7	23.9	11	- 8.3	3	0	14	- 0.6	65	133	29	47	12	0	25	T	0.8	30	16.1	W	25	10	6	12	5.9	53
SOUTH DAKOTA																																
ABERDEEN	395	968.8	1018.3	- 4.4	-18.9	-11.6	-2.1	8.3	26	-33.3	4	0	28	-15.6	72	2	- 14	2	3	0	48	76	1.1	29	15.6	31	20	8	8	12	6.0	
HURON	391	969.2	1018.3	- 2.2	-17.2	- 9.8	-1.3	8.3	19	-36.1	24	0	28	-14.4	67	13	- 2	8	6	0	272	203	0.8	29	17.9	NW	20	7	8	13	6.3	68
RAPID CITY	965	901.8	1016.5	3.9	-11.1	- 3.6	0.8	20.0	19	-25.6	23	0	26	-10.0	65	6	- 7	3	6	0	48	51	2.5	33	21.5	NW	14	6	11	11	6.0	71
SIOUX FALLS	432	964.4	1018.5	- 3.3	-17.8	-10.6	-3.4	10.6	5	-34.4	24	0	28	-13.9	72	37	13	25	7	0	536	356	1.3	28	14.3	35	28	9	7	12	5.9	
TENNESSEE																																
BRISTOL	459	963.8	1019.3	9.4	- 3.9	2.9	-1.5	24.4	11	-20.0	3	0	21	- 2.8	70	70	- 20	23	11	0	229	178	1.5	26	15.6	25	25	9	4	15	6.3	
CHATTANOOGA	204	994.9	1020.2	10.6	- 1.1	4.8	-2.1	21.7	11	-12.2	2	0	18	- 1.1	71	113	- 23	25	10	3	23	T	0.5	27	15.2	NW	11	10	2	16	6.2	56
KNOXVILLE	299	984.1	1020.1	10.0	- 1.7	4.3	-1.9	22.8	11	-16.1	3	0	19	- 1.1	72	83	- 40	21	11	0	175	127	1.0	27	18.8	W	11	8	4	16	6.4	45
MEMPHIS	80	1009.1	1019.8	12.2	0.0	6.1	-0.7	24.4	9	-10.6	2	0	17	0.0	69	172	53	83	12	1	84	76	0.8	21	19.2	W	11	11	6	11	5.3	63
NASHVILLE	178	997.0	1019.3	10.6	- 2.2	4.3	-1.2	22.8	9	-15.6	3+	0	20	- 1.7	67	120	5	46	10	1	74	51	1.1	22	17.4	NW	25	11	6	11	5.4	57
OAK RIDGE	276			10.0	- 2.2	3.8	-1.2	20.0	11	-17.2	3	0	19			73	- 74	23	10		147	102			15.2Y		25	10	2	16	6.2	
TEXAS																																
ABILENE	537	954.6	1017.2	14.4	1.1	7.7	-1.4	27.8	28	- 7.8	24	0	14	- 1.1	60	38	10	19	4	0	T	T	1.2	19	16.1	N	1	12	5	11	5.5	56
AMARILLO	1098	889.6	1015.2	11.1	- 5.0	3.1	-2.1	23.9	27	-16.1	24	0	25	- 6.1	59	12	- 4	7	4	2	97	51	1.4	28	18.8	N	23	13	9	6	4.3	82
AUSTIN	182	995.6	1018.1	15.0	4.4	9.7	-2.4	22.8	28+	- 5.0	24	0	5	3.9	73	129	63	51	11	4	13	T	1.4	1	15.2	NW	24+	8	6	14	6.2	46
BROWNSVILLE	5	1015.2	1015.7	21.1	11.1	16.3	-1.5	30.0	11	3.3	25	0	0	11.7	79	40	2	22	7	1	0	0	0.9	6	24.6	NW	24	7	6	15	6.7	44
CORPUS CHRISTI	12	1015.2	1016.9	18.9	8.3	13.6	-2.2	26.7	11	- 1.1	25	0	2	10.0	81	112	69	58	10	1	0	0	2.0	7	18.8	N	24	9	3	16	6.4	46
DALLAS	147	1000.7	1018.4	13.9	2.2	8.1	-1.7	22.2	28	- 7.8	24	0	11	1.7	67	136	71	85	10	4	T	T	0.5	17	15.6	W	9	10	7	11	5.2	55
DEL RIO	313	980.7	1017.1	16.7	4.4	10.4		27.8	28	- 3.9	14	0	4	2.8	65	44	- 14	16	5	0	T	T	0.8	8	13.9	33	24	10	6	12	5.8	
EL PASO	1194	880.8	1014.3	15.0	1.7	8.2	-1.3	22.2	27	- 6.1	24	0	14	- 5.0	44	15	5	14	3	0	8	T	1.4	27	18.3	W	28	11	7	10	4.7	78
FORT WORTH	164	997.6	1018.5	13.9	1.7	7.7	-1.9	22.8	28	- 7.8	24	0	12	1.7	69	157	101	103	8	4	T	T	0.4	21	13.4	18	28+	12	5	11	5.1	
GALVESTON U	2			16.1	9.4	12.8	-1.0	21.7	21	- 2.2	24	0	1			45	- 28	16	8		0	0										49
HOUSTON U	12			17.8	8.9	13.4	-0.6	25.6	8	- 2.8	24	0	1			88	6	48	10		T	T										
HOUSTON	15	1015.6	1017.8	18.3	7.2	12.8	-0.4	26.7	8	- 3.3	24	0	2	6.7	70	83	- 4	36	11	3	T	T	1.6	7	13.9	32	24	6	6	16	6.9	52
LUBBOCK	988	902.8	1016.0	12.8	- 3.3	4.7	-1.5	25.6	27	-12.8	24	0	23	- 5.6	55	9	- 6	9	2	0	51	51	0.7	27	18.3	28	28	11	11	6	4.5	
MIDLAND	869	915.3	1015.1	13.3	- 1.1	6.2	-2.8	23.9	28+	-10.0	24	0	18	- 2.8	63	43	28	31	6	0	89	T	0.6	22	14.3	4	21	11	4	13	5.3	
PORT ARTHUR	5	1017.3	1018.0	18.3	6.7	12.4	-0.9	25.6	21+	- 3.9	25	0	4	6.7	72	137	24	128	8	3	T	0	1.7	9	18.8	NW	24	5	8	15	6.7	48
SAN ANGELO	580	948.9	1016.8	14.4	1.7	8.1	-2.2	26.7	28	- 7.8	24	0	10	0.6	66	65	42	35	9	2	8	T	0.9	23	13.4	30	11	9	6	13	6.0	
SAN ANTONIO	240	989.2	1017.5	15.6	3.9	9.9	-3.1	23.3	27	- 3.9	24+	0	6	3.9	70	163	121	59	13	4	T	T	2.0	3	18.3	N	24	8	6	14	6.2	45
VICTORIA	32	1013.5	1017.5	17.8	7.2	12.5	-1.9	25.6	8	- 2.8	24	0	2	7.8	76	73	13	33	9	0	T	0	1.5	5				7	4	17	6.9	
WACO	152	1000.0	1018.5	15.0	3.3	9.0	-1.8	22.8	28+	- 6.7	24	0	8	2.8	67	112	51	54	11	4	51	51	0.5	30	15.6	32	23	10	5	13	5.9	
WICHITA FALLS	303	980.4	1017.6	14.4	0.0	7.1	-1.2	26.7	28	- 9.4	24	0	14	- 1.7	58	21	- 14	18	4	0	T	0	0.9	22	15.6	1	21	10	7	11	5.2	
UTAH																																
MILFORD	1533			7.8	- 8.9	- 0.6	0.7	17.8	26	-21.1	12	0	27			26	8	11	6		305	127						12	9	7	4.5	
SALT LAKE CITY	1286	872.7	1019.9	6.7	- 5.6	0.6	0.3	15.6	26	-14.4	15	0	27	- 6.7	62	29	- 1	14	6	1	241	102	0.5	16	15.2	SW	27	9	7	12	6.0	67
WENDOVER	1291			6.7	- 3.9	1.4	0.9	16.7	27	- 8.9	11	0	27			6	- 2	4	4		T	T						8	13	7	5.0	
VERMONT																																
BURLINGTON	101	1002.7	1015.6	- 1.1	-12.2	- 6.7	1.4	8.9	8	-23.9	5	0	27	-12.8	63	24	- 22	10	7	0	109	127	1.2	24	22.4	SE	25	4	7	17	7.2	54
VIRGINIA																																
LYNCHBURG	279			8.3	- 3.9	2.2	-1.6	21.7	28	-17.8	1	0	20			85	18	48	9		94	76			15.2	W	25	10	5	13	5.6	56
NORFOLK	8	1017.6	1018.6	10.6	- 0.6	5.0	-0.3	25.6	12	-13.3	1	0	19	- 2.2	64	64	- 17	36	7	0	99	102	1.3	25	29.5	SW	25	7	7	14	6.2	50
RICHMOND	49	1012.5	1018.7	10.0	- 2.2	3.8	-0.6	21.7	28+	-16.1	1	0	20	- 3.9	63	70	- 3	28	9	0	168	152	1.0	23	15.2	NW	22	11	6	11	5.5	62
ROANOKE	350	974.9	1018.2	8.3	- 3.3	2.4	-1.6	20.0	8	-15.0	1	0	18	- 5.6	60	90	17	37	9	0	102	102	2.1	28	16.5	32	19	10	6	12	5.6	
WASHINGTON																																
OLYMPIA	59	1012.5	1020.0	8.9	1.7	5.3	0.3	15.6	25+	- 5.0	9	0	10	3.3	87	125	- 43	35	17	0	T	0	2.7	21	14.3	20	27+	0	6	22	8.9	
SEATTLE TACOMA	122	1003.1	1019.6	8.9	3.3	6.1	1.2	15.0	25	0.0	28	0	1	2.2	79	99	- 9	31	15	0	T	0	2.0	20	19.2	21	27	1	4	23	8.7	
SPOKANE	718	932.3	1017.9	3.9	- 3.9	0.1	1.2	10.6	19	-11.1	2	0	24	- 4.4	74	29	- 19	17	12	0	58	127	2.5	21	20.1	SW	27	3	7	18	7.6	40
STAMPEDE PASS R	1206			0.6	- 3.9	- 1.9	1.1	10.0	18	- 7.8	3+	0	26			281	23	37	23		1869	3378						1	3	24	9.0	
TATOOSH ISLAND R	31	1015.2	1018.4	7.8	3.9	5.8	-0.3	10.0	18	1.7	20+	0	0	3.3	85	331	110	76	22	0	T	0	1.6	19	28.6	W	27	1	6	21	8.7	19
WALLA WALLA U	289			10.0	2.2	6.2	2.6	18.9	17	- 2.8	11+	0	9			14	- 25	5	9		T	T			15.2	W	8	5	4	19	7.6	34

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No. of days								No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	°C.	°C.	°C.	C.		°C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
WASHINGTON																																
YAKIMA	321	979.7	1019.1	8.9	- 2.8	3.1	1.9	17.2	19	- 7.8	2	0	25	- 2.8	71	2	- 20	1	3	0	T	102	2.0	27	14.3	20	5	6	7	15	6.9	
WEST INDIES																																
SAN JUAN P.R.	5	1015.2	1017.8	27.8	21.1	24.4	0.8	30.6	25+	17.8	15	0	0	18.9	72	20	- 54	6	14	0	0	0	4.5	8	17.9	E	7	1	24	3	5.7	59
SWAN ISLAND	9			27.8	23.9	25.9	0.2	28.3	25+	21.1	26	0	0			7	- 23	2	9	0	0	0						12	11	5	4.7	
WEST VIRGINIA																																
BECKLEY	763	927.2	1018.8	6.7	- 5.6	0.4		18.9	10	-20.6	3	0	21	- 5.6	67	54		20	11	0	279	203	2.7	24	17.9	26	25	5	8	15	7.1	
CHARLESTON	286	983.1	1018.1	8.3	- 4.4	2.0	-1.1	21.1	10	-17.2	5+	0	20	- 4.4	65	51	- 38	24	9	0	170	102	2.0	23	13.4	24	25	5	7	16	6.9	
ELKINS	600	944.8	1017.8	6.7	- 7.2	- 0.2	-0.8	18.3	10	-24.4	1	0	22	- 5.6	68	49	- 34	14	15	0	284	152	2.5	25	15.6	26	25	2	11	15	7.7	
HUNTINGTON	252	987.5	1018.4	8.3	- 4.4	2.2	-1.0	20.6	10	-16.1	5+	0	21	- 5.0	63	55	- 22	22	10	0	69	76	1.6	23	15.6	24	25	7	6	15	6.4	
PARKERSBURG U	187			6.7	- 5.6	0.7	-1.2	18.9	10	-17.2	5+	0	21			85	13	47	11		132	76			13.4	SW	25					39
WISCONSIN																																
GREEN BAY	208	989.2	1016.0	- 3.9	-14.4	- 9.3	-1.6	5.6	20	-26.7	2	0	28	-14.4	66	22	- 6	11	9	0	160	178	2.3	28	14.3	NE	11	7	8	13	6.2	57
LA CROSSE	199	992.2	1018.2	- 3.3	-16.7	-10.0	-3.0	7.8	27	-35.0	2	0	28	-13.9	72	18	- 8	9	6	0	168	178	1.3	27	13.4	28	10	8	7	13	6.3	
MADISON	262	983.7	1016.5	- 2.2	-12.8	- 7.4	-0.4	9.4	20	-30.6	4	0	28	-10.6	76	19	- 10	8	9	0	119	356	2.0	28	13.9	NW	21+	7	8	13	6.2	61
MILWAUKEE	205	990.5	1016.8	- 1.7	-10.0	- 6.0	-0.7	8.3	20	-25.0	3+	0	27	- 9.4	77	26	- 9	11	10	0	257	305	2.3	26	17.9	SW	10	9	7	12	5.9	59
WYOMING																																
CASPER	1627	834.1	1017.0	1.1	-11.7	- 5.2	-2.1	11.7	27	-26.1	23	0	25	-11.1	62	9	- 6	3	9	0	218	127	4.6	23	16.1	24	27	9	8	11	5.9	
CHEYENNE	1867	807.7	1016.2	3.3	-10.0	- 3.3	-0.7	13.3	26	-21.1	23	0	26	-11.7	55	7	- 8	2	7	0	140	76	4.9	30	19.2	NW	26	8	10	10	5.8	65
LANDER	1696	825.6	1017.2	3.3	-11.7	- 4.4	-0.1	13.3	26	-21.1	11	0	28	-11.7	60	21	4	7	8	0	399	152	0.6	28	15.2	NW	27+	5	11	12	6.2	67
SHERIDAN	1208	876.1	1017.6	2.2	-12.2	- 4.8	-0.2	17.8	19	-22.8	23+	0	26			18	- 1	5	10	0	318	102	2.0	30	17.0	NW	22	5	4	19	7.6	45

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.
A Maximum hourly average.
B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

FEBRUARY 1965

State and station	Current season		Normals
	This month	Period July through this month	July through this month
ALABAMA			
BIRMINGHAM	571	2183	2071
HUNTSVILLE	614	2617	2479
MOBILE	342	1321	1307
MONTGOMERY	459	1818	1885
ALASKA			
ANCHORAGE PRK STRIP	1461	8361	7785
ANCHORAGE	1530	8477	
ANNETTE	846	5416	4767
BARROW	2562	14452	13360
BARTER ISLAND	2720	14340	13165
BETHEL	1952	9875	9160
COLD BAY	1121	6638	6425
FAIRBANKS	2334	11774	10695
JUNEAU	1154	6659	6210
KING SALMON	1615	8598	7885
KOTZEBUE	2217	11262	10778
MC GRATH	2155	11171	10497
NOME	1992	10049	9584
ST. PAUL ISLAND	1347	7433	7174
SHEMYA	899	6342	6258
YAKUTAT	1218	7128	6143
ARIZONA			
FLAGSTAFF	983	4831	4973
PHOENIX	346	1398	1473
TUCSON	383	1412	1477
WINSLOW	762	3484	3794
YUMA	190	925	869
ARKANSAS			
FORT SMITH	658	2630	2670
LITTLE ROCK	604	2414	2650
TEXARKANA	494	1923	2078
CALIFORNIA			
BAKERSFIELD	405	1814	1731
BISHOP	586	2943	3203
BLUE CANYON	680	3602	3542
BURBANK	282	1239	1170
EUREKA U	533	3119	3043
FRESNO	423	1944	1967
LONG BEACH	305	1295	1168
LOS ANGELES	271	1098	1183
LOS ANGELES U	197	868	938
MT SHASTA R	708	3880	3953
OAKLAND	371	1862	1992
RED BLUFF	387	1927	1959
SACRAMENTO	434	2004	2089
SANDBERG U	594	2905	2842
SAN DIEGO	249	1001	994
SAN FRANCISCO	404	2069	2033
SAN FRANCISCO U	302	1920	1984
SANTA CATALINA	314	1292	1180
SANTA MARIA	400	2095	1924
STOCKTON	427	1991	2106
COLORADO			
ALAMOSA	1299	6792	6205
COLORADO SPRINGS	1034	4284	4545
DENVER	1044	4203	4484
GRAND JUNCTION	893	4024	4358
PUEBLO	987	3839	4072
CONNECTICUT			
BRIDGEPORT	993	4159	4019
HARTFORD	1068	4672	4577
NEW HAVEN	992	4247	4193
DELAWARE			
WILMINGTON	873	3779	3690
DIST.OF COLUMBIA			
WASH NATL AP	785	3274	3236
FLORIDA			
APALACHICOLA U	284	978	1095
DAYTONA BEACH	138	550	724
FORT MYERS	36	158	380
JACKSONVILLE	231	859	1044
KEY WEST	4	14	99
LAKELAND U	82	368	562
MIAMI	25	92	195
ORLANDO	89	372	655
PENSACOLA	341	1240	1244
TALLAHASSEE	323	1316	1247
TAMPA	96	460	581
WEST PALM BEACH	36	131	222
GEORGIA			
ATHENS	540	2194	2335
ATLANTA	586	2313	2361
AUGUSTA	432	1837	1957
COLUMBUS	441	1751	1949
MACON	452	1872	1778
ROME	616	2589	2647
SAVANNAH	359	1450	1520
IDAHO			
BOISE	781	4081	4323
IDAHO FALLS 42NW R	1233	6254	6416
IDAHO FALLS 46W R	1134	5948	6156
LEWISTON	705	4013	4093
POCATELLO	952	4802	5113
ILLINOIS			
CAIRO U	713	2952	3040
CHICAGO O HARE	1134	5146	4834
CHICAGO MIDWAY	1048	4633	4526
MOLINE	1096	4869	4812
PEORIA	1058	4714	4534
ROCKFORD	1194	5334	5057
SPRINGFIELD	973	4217	4152
INDIANA			
EVANSVILLE	867	3705	3510
FORT WAYNE	1083	4729	4616
INDIANAPOLIS	989	3221	4242
SOUTH BEND	1058	4800	4682
IOWA			
BURLINGTON	1078	4650	4619
DES MOINES	1247	5290	5025
DUBUQUE	1282	5662	5466
SIOUX CITY	1294	5591	5226
WATERLOO	1353	5921	5483
KANSAS			
CONCORDIA	1074	4278	4159
DODGE CITY	905	3869	3780
GOODLAND	1035	4390	4472
TOPEKA	955	4050	3994
WICHITA	851	3573	3612
KENTUCKY			
COVINGTON	894	3846	3946
LEXINGTON	851	3660	3568
LOUISVILLE	808	3480	3549
LOUISIANA			
ALEXANDRIA	431	1734	1592
BATON ROUGE	343	1312	1319
LAKE CHARLES	298	1157	1225
NEW ORLEANS	316	1164	1154
SHREVEPORT	432	1672	1799
MAINE			
CARIBOU	1493	7184	6950
PORTLAND	1212	5691	5311
MARYLAND			
BALTIMORE	838	3534	3558
MASSACHUSETTS			
BLUE HILL OBS R	1079	4747	4517
BOSTON	1032	4436	4031
NANTUCKET	983	4048	3861
PITTSFIELD	1190	5510	5424
WORCESTER	1136	5101	4977
MICHIGAN			
ALPENA	1313	5959	5909
DETROIT	1070	4491	4512
DETROIT M WAYNE CO	1088	5001	4530
DETROIT WILLOW RUN	1147	4989	4544
FLINT	1117	5175	5263
GRAND RAPIDS	1145	5137	
HOUGHTON LAKE	1303	6072	
LANSING	1145	5187	4977
MARQUETTE U	1370	6083	5790
MUSKEGON	1098	4872	4719
SAULT STE MARIE	1454	6654	6283
MINNESOTA			
DULUTH	1650	7565	7117
INTERNATIONAL FALLS	1756	8237	7747
MINNEAPOLIS	1486	6435	6226
ROCHESTER	1494	6585	6121
ST CLOUD	1583	7042	6561
MISSISSIPPI			
JACKSON	500	1820	
MERIDIAN	504	1967	1898
VICKSBURG U	450	1699	1690
MISSOURI			
COLUMBIA	908	3743	3873
KANSAS CITY	911	3707	3626
ST JOSEPH	978		
ST LOUIS	869	3820	3748
SPRINGFIELD	788	3366	3499
MONTANA			
BILLINGS	1110	5443	5122
GLASGOW	1507	7264	6676
GREAT FALLS	1055	5787	5475
HAVRE	1361	7199	6362
HELENA	1070	5584	5860
KALISPELL	1138	6214	5919
MILES CITY	1307	6616	5712
MISSOULA	1124	6097	5924
NEBRASKA			
GRAND ISLAND	1190	5197	4904
LINCOLN U	1182	4732	4427
NORFOLK	1290	5549	5217
NORTH PLATTE	1158	5082	4930
OMAHA	1191	4862	4748
SCOTTSBLUFF	1060	4828	4840
VALENTINE	1150	5497	5429
NEVADA			
ELKO	937	4994	5300
ELY	1037	5276	5403
LAS VEGAS	427	2040	2257
RENO	695	3890	4547
WINNEMUCCA	829	4378	4835
NEW HAMPSHIRE			
CONCORD	1191	5569	5342
MT WASHINGTON OBS	1733	9693	9372
NEW JERSEY			
ATLANTIC CITY	890	3837	3503
ATLANTIC CITY U	851	3373	3331
NEWARK	905	3713	3631
TRENTON U	882	3741	3695
NEW MEXICO			
ALBUQUERQUE	709	3250	3384
CLAYTON	865	3650	3778
RATON	1012	4456	4487
ROSWELL	693	2779	3080
SILVER CITY	680	2889	2839
NEW YORK			
ALBANY	1193	5187	5035
BINGHAMTON	1176	5112	5184
BUFFALO	1092	4913	4971
NEW YORK U	867	3659	3576
J.F. KENNEDY	909	3715	3745
NEW YORK LA GUARDIA	858	3590	3517
ROCHESTER	1096	4917	4810
SYRACUSE	1125	4879	4889
NORTH CAROLINA			
ASHEVILLE	751		
CAPE HATTERAS R	538	1868	1970
CHARLOTTE	565	2503	2532
GREENSBORO	676	2895	2972
RALEIGH	616	2730	2692
WILMINGTON	465	1784	1894
WINSTON SALEM	683	2719	2827
NORTH DAKOTA			
BISMARCK	1533	7556	6557
FARGO	1618	7643	6843
WILLISTON	1557	7732	6802
OHIO			
AKRON	1081	4559	4436
CINCINNATI OBS	867	3717	3642
CLEVELAND	1032	4472	4555
COLUMBUS	999	4219	4227
DAYTON	957	4073	4187
MANSFIELD	1098	4622	4631
TOLEDO	1088	4897	4725
YOUNGSTOWN	1098	4706	4648
OKLAHOMA			
OKLAHOMA CITY	706	2973	2975
TULSA	711	2848	3061
OREGON			
ASTORIA	576	3558	3476
BURNS U	846	4912	4988
EUGENE	572	3202	3297
MEACHAM	923	5395	5299
MEDFORD	621	3291	3614
PENDLETON	664	3833	3846
PORTLAND	599	3628	3303
SALEM	607	3483	3309
SEXTON SUMMIT R	732	4247	4083
PENNSYLVANIA			
ALLENTOWN	969	4344	4299
ERIE	1072	4512	4545
HARRISBURG	902	4096	3953
PHILADELPHIA	883	3799	3840
PITTSBURGH	1018	4281	4399
PITTSBURGH U	936	3796	3764
READING U	879	3774	3733
SCRANTON	1027	4585	4635
WILLIAMSPORT	1047	4561	4409
RHODE ISLAND			
BLOCK ISLAND	982	4038	3872
PROVIDENCE	1018	4370	4265
SOUTH CAROLINA			
CHARLESTON	392	1572	1688
CHARLESTON U	354	1310	1479
COLUMBIA	466	1954	2046
FLORENCE	479	1951	1956
GNVLE SPARTANBURG	572	2377	2383
SOUTH DAKOTA			
ABERDEEN	1505	7297	6341
HURON	1415	6726	6123
RAPID CITY	1098	5338	5228
SIOUX FALLS	1452	6348	5836
TENNESSEE			
BRISTOL	772	3188	3216
CHATTANOOGA	674	2700	2626
KNOXVILLE	701	2822	2760
TENNESSEE			
MEMPHIS	614	2464	2607
NASHVILLE	698	2835	2837
OAK RIDGE	724	3004	2981
TEXAS			
ABILENE	538	1901	2163
AMARILLO	762	3011	3131
AUSTIN	431	1391	1437
BROWNSVILLE	136	535	526
CORPUS CHRISTI	252	840	805
DALLAS	512	1821	1948
DEL RIO	397	1312	
EL PASO	504	2135	2276
FORT WORTH	530	1977	1987
GALVESTON U	276	930	1016
HOUSTON U	256	884	1074
HOUSTON	284	1044	1168
LUBBOCK	683	2574	2862
MIDLAND	604	1955	2179
PORT ARTHUR	298	1144	1216
SAN ANGELO	514	1819	1901
SAN ANTONIO	419	1375	1312
VICTORIA	294	1014	1000
WACO	465	1591	1694
WICHITA FALLS	563	2398	2328
UTAH			
MILFORD	949	4500	4790
SALT LAKE CITY	889	4261	4513
WENDOVER	850	4101	4413
VERMONT			
BURLINGTON	1256	5946	5925
VIRGINIA			
LYNCHBURG	803	3337	3216
NORFOLK	667	2570	2635
RICHMOND	726	3097	3047
ROANOKE	794	3253	3210
WASHINGTON			
OLYMPIA	652	4109	3657
SEATTLE TACOMA	611	3638	3560
SPOKANE	915	5243	4867
STAMPEDE PASS R	1016	6580	6206
TATOOSH ISLAND R	625	4073	3785
WALLA WALLA U	607	3639	3652
YAKIMA	763	4653	4504
WEST VIRGINIA			
BECKLEY	895	4008	
CHARLESTON	820	3476	3423
ELKINS	930	4357	4194
HUNTINGTON	806	3534	3405
PARKERSBURG U	803	3703	3603
WISCONSIN			
GREEN BAY	1388	5964	5800
LA CROSSE	1427	6060	5665
MADISON	1294	5880	5720
MILWAUKEE	1222	5392	5432
WYOMING			
CASPER	1181	5470	5223
CHEYENNE	1088	4914	5112
LANDER	1142	5251	5665
SHERIDAN	1158	5641	5471

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

FEBRUARY 1965

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				∅ ALL OTHER			
								†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS
Alabama	2	1	0	10	5					3	0	5	C	0	1	2	0												
Alaska *																													
Arizona *																													
Arkansas	10	3	0	13	6					0	0	4	0																
California										0	0	3	0																
Colorado *																													
Connecticut *																													
Delaware										0	0	3	0																
Florida	4	I	0	8	5					0	0	3	0																
Georgia										0	0	5	0																
Hawaii						0	0	0	4																	2	0	6	4
Idaho *																													
Illinois	1	1	0	0	5													3	1	?	0								
Indiana	1	1	0	0	2													0	few	6	0					3	0	0	0
Iowa																		0	0	6	0	0	0	5	0				
Kansas																								5					
Kentucky																3			?	?									
Louisiana	5	1	0	4	5					0	0	4	0					0	0	4	0	1	0	4	0	0	0	4	5
Maine										0	0	5	0													0 0	0 0	R 5 S 5	0 0
Maryland										0	2	4	0																
Massachusetts										0	0	5	0													0	0	R 6	0
Michigan										0	0	5	0					0	0	6	0								
Minnesota *																													
Mississippi	3	2	0	1	5	0	0	3	0	0	0	5	0					0	0	4	0					0	0	4	0
Missouri *																													
Montana *																													
Nebraska																		0	0	4	0								
Nevada *																													
New Hampshire										0	0	5	0													0	0	R 5	0
New Jersey										0	0	4																	
New Mexico *																													
New York												5											2	4				F 5	
North Carolina										0	0	5	0																
North Dakota										1	0	5	0																
Ohio																						0	Many	5					
Oklahoma						0	0	3	0	2	1	5	0	0	0	5	0					0	0	5	0				
Oregon										1	S	5	2																
Pacific Area *																													
Pennsylvania										0	0	6	0																
Puerto Rico *																													
Rhode Island *																													
South Carolina										1	5	4	0																
South Dakota N																													
Tennessee	1	1	0	0	4					0	0	5	0					3	S	?	0					0	3	5	0
Texas	5	2	0	1	5					1	0	0	0	0	1	0	0												
Utah	1	1	0	0	4																								
Vermont										0	2	6	0													0	0	R 4	0
U.S. Virgin Is. *																													
Virginia										0	1	4	0									0	0	4	0	1	1	0	0
Washington										0	0	5	0																
West Virginia *																													
Wisconsin																								5	0				
Wyoming *																													

C	Crop Damage
R	Rain (floods)
S	Surf
F	Flooding
N	No report received by printing deadline

* No occurrence of storms or unusual weather phenomena.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
∅ For breakdown of "All Others", and for detailed listing of other storms, see the U. S. Weather Bureau monthly publication STORM DATA.

† Storm damages are placed in categories varying from 1 to 9 as follows:

1	Less than $50
2	$50 to $500
3	$500 to $5,000
4	$5,000 to $50,000
5	$50,000 to $500,000
6	$500,000 to $5,000,000
7	$5,000,000 to $50,000,000
8	$50,000,000 to $500,000,000
9	$500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

FEBRUARY 1965

The most damaging floods during February occurred in the East Gulf of Mexico Drainage. Flooding in the Tombigbee Basin in Alabama and Mississippi was moderate with total damages estimated at over $1 million. Heavy flooding occurred on the Pearl River in Mississippi with the crest at Jackson, Miss., reaching a stage of 32 feet, 14 feet above flood stage. This crest ranks 6th in height to the 37.2 feet record crest of April 1902.

ST. LAWRENCE DRAINAGE

Lake Michigan.--Light flooding occurred on the Red Cedar in the upper Grand River Basin in Michigan from the 10th to the 12th. This rise was due to snowmelt and rainfall of 1.5 inches on the 9th. A sudden warming to temperatures in the 40's and 50's beginning about the 6th caused the 3 to 5 inches of old snow on the ground to melt. Little damage resulted from these floods, limited mostly to water in basements and water over roads.

The main stem of the Grand rose to generally 2 feet below flood stage. During this rise there were a couple of minor icejams with no damage resulting. There was the usual overflow of residential and other areas in the normal flood plain. At the beginning of the month, the river was generally frozen with frequent open areas. The ice was quite thick and solid.

Lake Erie.--Minor flooding occurred in the headwaters of the Maumee River Basin in Indiana and Ohio between the 10th and 14th. Only low farmland or low park areas were affected with little or no damage.

There were local minor overflows in western New York from the 7th to the 12th due mainly to icejams and poor drainage. An icejam in Cattarangus Creek made necessary the evacuation of many people at Sunset Bay.

Lake Ontario.--The rise in the Genesee River Valley in New York from the 8th to the 15th was due mostly to snowmelt. Considerable water was available in the snowpack in the headwaters area, with Whitesville reporting 5 inches on February 1 with a water content of 1.63 inches. Mt. Morris, N. Y., reported a depth of 4 inches, with a water content of 0.97 inch. Less than one-half inch rainfall occurred in any 24-hour period. The Genesee River at Scio, N. Y., crested at 7.2 feet (flood stage 8 ft.,) at 5 a.m. on the 8th. In the lower tributaries, the rises were slow and gradual. Oatka Creek at Garbutt, N. Y., crested slightly above flood stage on the 12th. No damage was reported.

ATLANTIC SLOPE DRAINAGE

Abnormally warm weather a few days prior to the 9th caused some ice breakups on small rivers and streams in southern New England. Local icejams were reported in Connecticut and western Massachusetts on the 9th, with some minor overflow on the Pomperaug River in Southbury, Conn. The latter icejam was broken by mechanical means, thus relieving the danger. Heavy rains on the 25th in southern and eastern New England caused some smaller streams and brooks to overflow their banks, but this was short-lived and no damage was reported.

Minor flooding occurred on the Millstone and Raritan Rivers in New Jersey on the 8th. This rise was due to rainfall amounts ranging from more than 1 inch to over 2.5 inches over central and northern New Jersey.

Brief flooding of several small streams in southeastern Pennsylvania occurred on the 8th. Flooding was minor on the Raritan and Perkiomen Creeks and moderate on the Neshaminy Creek at Langhorne. The rapid rise and resultant flooding were due to heavy rain on the afternoon and night of the 7th. The rainfall during the 12-hour period averaged 2.25 inches. Some homes were flooded by the Neshaminy Creek.

Icejams caused minor flooding along the Tulpehocken and Manatawny Creeks in southeastern Pennsylvania. Several thousand dollars damage resulted when Manatawny Creek overflowed into Memorial Park, Pottstown, Pa. The Schuylkill River overflowed its banks to the west of Pottstown on the 8th. At Reading, Pa., the Schuylkill crested 0.2 foot below flood stage on the 8th.

Minor flooding occurred on the Rapidan River at Rapidan, Va., on the 7th and 8th, due to rainfall averaging near 3 inches. The crest at Rapidan was 2.5 feet above flood stage on the 8th.

Light to moderate flooding occurred from the 7th to the 10th in the lower James River Basin in Virginia. Near flood stages were reached at several points on the upper James above Lynchburg, Va. Small streams overflowing in Fluvanna, Albemarle, and Nelson Counties inundated approaches to a number of bridges on secondary highways and disrupted traffic. This rise was due to rainfall during the night of the 6th and 7th ranging from 2 inches to in excess of 3 inches. The heavier amounts were concentrated in the Rivanna, Rockfish, and Hardware Basins. Minor damage resulted from the overflow of farm- and pasturelands downstream from Scottsville, Va. Operations in the Richmond Harbor were suspended for several days, a number of barge docks were inundated. Costs were mostly confined to evacuation of dock areas, protection of barges, and some cleanup with resuming operations. A number of secondary roads were closed with no significant damages resulting when waters receded.

Widespread and generally heavy rains over eastern North Carolina and southern Virginia on the 7th caused flooding on the Neuse, Cape Fear, and Roanoke Rivers. Precipitation totals ranged from nearly 3-1/2 inches on the upper Dan to around 1/2 inch over a small area in the lower portions of the Neuse, Tar, and Roanoke Basins. A second period of rainfall from the 13th to the 17th was sufficient to cause near to a little above bankfull stages on the lower reaches of the Cape Fear. On the Neuse, these additional rains did little more than prolong the high stages caused by the previous rains. No damages were reported.

One to 2 inches of precipitation on the 7th and 8th produced light flooding on streams in South Carolina. The only heavy flooding was along the main Edisto after midmonth. The Pee Dee River rose 19 feet at Cheraw, S. C., to slightly above flood stage. Downstream at Peedee flooding began on the 10th and continued through the 25th, with a flat prolonged crest that was about 2 feet above flood stage. The Black at Kingstree, S. C., rose steadily after the 7th, overflowing on the 18th, and returning to its banks on the 23d. Low swamps were inundated on the Waccamaw in the Conway, S. C., area, but flood stage was not exceeded. Light overflow began on the 14th along the North Fork Edisto at Orangeburg and continued almost all month. Minor flooding occurred along the Broad River at Blair, S. C., where the Broad crested at nearly 2 feet above flood stage on the 26th. Minor flooding occurred in the swamplands of the Congaree below Columbia, S. C. A period of prolonged flooding began on the 15th at Givhans State Park on the main Edisto which continued into March. Lumbering operations were suspended on the Pee Dee in the Peedee area after the first week of the month. The almost continuous high water along the main Edisto since the beginning of 1964 has eroded stream banks, damaged secondary roads, and caused some loss to owners of lodges, camps, and private roads.

Minor flooding occurred on streams in Georgia during February. The rainfall was well distributed and most of it occurred during the period between the 6th and 18th. All flooding occurred after the middle of the month. The heaviest rainfall occurred below Jackson and Sinclair Dams, with the result that neither lake was anywhere near full at any time during the month. Jackson Lake fluctuated in the narrow range from 526.0 to 527.7 feet and Sinclair Lake from 333.2 to 337.7 feet.

EAST GULF OF MEXICO DRAINAGE

Rainfall occurred practically every day from the 6th to the 18th throughout the Apalachicola River System. The heavier falls of 1 to 2 inches or more occurred on the 6-7th, 12-13th, and 17-18th, causing rather strong, but not excessive runoffs. The flooding on the Flint River was due mostly to heavy rains on the 12-13th and 17-18th. Only lowland areas were affected with little if any damages resulting. The Apalachicola River at Blountstown, Fla., was above flood stage throughout the month except for 1 day. It was still almost 4 feet above flood stage at the close of the month after a crest of 6 feet above flood stage on the 21st. The high river level at Blountstown served to keep logging operations at a minimum. The areas flooded are wooded and unpopulated and no damages are known to have occurred.

Moderate to heavy rains, falling every 4 to 6 days, resulted in a gradual rise on the Alabama River. Flood stage was slightly exceeded at Millers Ferry, Ala., on the 18th and at Claiborne, Ala., on the 19th. Rainfall amounts of about 2 inches on the 16th and 17th were the heaviest. The Cahaba River at Centreville, Ala., rose sharply to above flood stage briefly on the 12th due to 3- to 4-inch rainfall on the 10th and 11th.

Moderate flooding occurred in the Tombigbee Basin in Alabama and Mississippi between the 11th and 27th. This rise was due to rains from the 9th to the 12th averaging 4 to 4.5 inches over the headwaters of the Tombigbee and Black Warrior Rivers. The rainfall was heavier over the middle section of the Tombigbee averaging 7.5 inches. Additional heavy rains near the end of the month prolonged the flooding in the lower rivers. Total damages were over $1 million.

Heavy rain from the 9th to the 12th caused flooding on the Pearl and Chickasawhay Rivers in Mississippi. Additional heavy rain on the 16th and 17th caused overflows along the Leaf and Pascagoula Rivers and prolonged the flooding along the Pearl River. The crest at Jackson, Miss., was 14 feet above flood stage on the 18th or 3 feet below the 35.0-foot crest of March 1961.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--The snow cover in the Upper Mississippi Basin on February 28, as compared with that of other years is given in the following table:

COMPARATIVE SNOW DEPTHS (INCHES)

Station	1965	1964	1963	1962	1961	1960	1959	1958	1957	1956
(Minnesota)										
Bemidji	10	9	4	24	5	5	4	T	14	22
Alexandria	4	T	2	17	0	4	1	0	4	12
New Ulm	3	T	2	17	0	T	T	0	0	6
Minneapolis	4	0	3	24	0	2	0	0	T	7
Rochester	1	0	3	13	2	3	13	0	T	6
(Wisconsin)										
Park Falls	20	7	16	33	6	17	10	3	16	20
Wausau	5	11	7	30	1	5	9	0	1	7
Portage	T	0	6	24	0	4	10	T	0	T

The flooding on the Pecatonica River in Wisconsin and on the Rock River in Illinois was due to rapid snowmelt and icejams. The snow cover in the beginning of the month ranged from 10 inches in southern Wisconsin to 4 inches in the southern section of the Rock Basin. Temperatures were well below zero the first 4 days of the month. The rivers were completely frozen over. Temperatures rose to the upper 40's and low 50's on the 5th, 6th, and 7th. By the morning of the 8th, the snow cover was reduced to 1 to 2 inches in the upper reaches. Most of the remainder of the snow cover melted on the 9th, accompanied by 0.2- to 0.4-inch rainfall.

Severe cold weather beginning the latter part of January and extending into February produced rapid ice formation on the Illinois and Mississippi Rivers. An ice gorge formed on the Mississippi River late on the 2d at Greenfield Bend near Cairo, Ill., but cleared during the night. Navigation pools in the upper Mississippi River were frozen over up to Alton Dam. Below Alton Dam, heavy floating ice extended to the mouth of the Ohio River. The Illinois River was practically frozen over below Morris, Ill., with an ice gorge near the mouth. Ice conditions remained severe with varying amounts of coverage until warm weather on the 6th and 7th depleted most of the ice in the Illinois and the Mississippi River below Alton Dam. The flooding on the Kankakee and Vermillion Rivers in Illinois, beginning on the 2d was due to ice action. Heavy rainfall of 2 to 3 inches on the 8th and 9th caused minor flooding on the Big Muddy at Murphysboro, Ill., on the 16th. The Illinois River remained above flood stage at Meredosia, Ill., through the 21st. The Mississippi River at Grafton, Ill., rose to flood stage on the 11th due to backing up of water by ice blocks. No appreciable damage resulted from the minor flooding due to the season of the year.

Missouri Basin.--Precipitation in the form of snow was light and scattered during February from the Missouri River in South Dakota westward to the Black Hills. There were only brief accumulations of snow in this area during the month. Except for drifts at the end of the month, the ground was bare. From eastern South Dakota into southwest Minnesota and northwest Iowa most of the snow (6 to 12 inches) occurred between the 9th and 11th. A strong warming trend on the 27th and 28th, with maximum temperatures rising into the 40's, caused rapid melting in northwest Iowa and southeast South Dakota. The Floyd River rose to bankfull stage during the night of the 28th and March 1 from Alton to Merrill, Iowa. In the Hinton and James, Iowa, area the river rose 1 to 2 feet over its banks. The ice was generally broken up along the Floyd below LeMars, Iowa, and jammed into the lower section of the river. No damage resulted from this overflow.

Icejams began to form during the last week of February along the lower reaches of the Elkhorn River between Waterloo, Nebr., and the mouth. No damage was reported.

The greatest snowfall (25.4 inches) since snow records began at Omaha, Nebr., in 1885 was recorded in February. The previous record snowfall during February was 21.9 inches in 1942 and 1929. The previous 24-hour snowfall record of 16.4 inches at Omaha on March 14, 1923 was exceeded on February 11, 1965 by a record 24-hour snowfall of 18.3 inches. A mild period on the 26th to the 28th accompanied by some rain on the 28th caused rapid snowmelt and rapid runoff with flooding in the lower reaches of the Boyer River in western Iowa. The ground was still frozen to considerable depth and practically all of the snowmelt was surface runoff. This high volume of water tore loose some of the ice in the stream, causing many local icejams. Many families were evacuated in the southern and eastern parts of the Missouri River Valley in Iowa. Highways 30 and 30A were closed due to high water.

Light to moderate overflows developed on the Big Blue River from near DeWitt, Nebr., downstream into Tuttle Creek Reservoir on the night of February 28-March 1. The Black Vermillion River at Frankfort, Kans., overflowed moderately during the first 2 days of March. Flooding occurred in the upper Kansas River Valley on Mill Creek at Paxico, Kans., and on Vermillion Creek at Wamego, Kans. Minor flooding occurred on the Little Blue at Fairbury, Nebr., on February 21. Rising stages from rapid snowmelt during the latter part of the month were augmented by runoff from rainfall of around an inch on March 1 in the overflow areas of the Big Blue Basin. Tributaries in the upper Kansas Basin rose to flood stage due to heavier rainfall which exceeded 2 inches locally. Deep snow (10 to 15 inches) occurred in north-central Kansas across most of the Big Blue River Basin on the 10-12th. Additional snow, 3 to 8 inches, occurred on the 23d-24th. The greater part of the snowmelt was released slowly by gradual daytime warming and nighttime freezing. Variable ice conditions were widespread during the month but without any significant effect on stages. Considerable ice was still present on the reservoirs at the end of the month.

Light to moderate rain and continued melting over northwest Missouri on the 9th and 10th caused minor flooding on the Grand River at Sumner, Mo., on the 11th.

Ohio Basin.--Backwater from ice gorges on the Allegheny River on the 7th and 8th resulted in flood stages being exceeded at West Hickory, Pa., by 1.0 foot and at Oil City, Pa., by 0.6 foot. Damages were minor with basements in some businesses flooded and several main highways covered with 1 to 2 feet of water. Elsewhere along the Allegheny River and major tributaries, river levels were from one-half to near bankfull with minor rises on the Monongahela and upper Ohio Rivers.

Minor flooding occurred on Paint Creek at Bourneville, Ohio, on the 12th and 13th. Bankfull or near bankfull conditions developed during midmonth on the Scioto.

Minor overflow occurred along the Green River in Kentucky between the 12th and 18th due to locally heavy rains on the 10th and 12th. The flooding closed a few county roads and caused some inconvenience.

General flooding occurred along major streams in the Wabash Basin in Indiana between the 8th and 21st. Flash flooding of small streams reached considerable proportion in some area. This rise was due to heavy rainfall which averaged more than 1.25 inches over the upper Wabash to more than 2 inches in the lower Wabash. The rainfall averaged from 2 to 2.5 inches over the White and East Fork with amounts of near 3 inches or a little more in some areas. At Seymour, Ind., on the East Fork, a combination of swirling floodwaters and large cakes of ice knocked out 200 feet of the Water Company dam across the river. Numerous county roads were heavily damaged. Several bridges were washed out and others were damaged. Much bottom land was flooded, but crop damage was at a minimum due to the time of the year.

Minor flooding occurred on the Harpeth River at Kingston Springs, Tenn., on the 12th due to rainfall averaging 2 inches on the 10th and 11th. Some low farmland was inundated.

Light flooding occurred on South Chickamauga Creek near Chickamauga, Tenn., from the 11th to the 14th. There was some flooding along the main stem of the Tennessee at Whitesburg, Ala., and Gilbertsville, Ky., between the 11th and 21st.

Minor flooding occurred in the extreme lowlands on the Ohio River from Dam 47, Newburgh, Ind., to Cairo, Ill., between the 13th and 21st. This rise was due to general rains over the lower Ohio, Cumberland, and Tennessee Basins from the 9th through the 12th. Several stations reported over 4 inches of rain during this period. Some expense was incurred by the cities of Paducah, Ky., and Cairo, Ill., in the operation of their flood-wall projects and pumping.

White Basin.--Moderate to heavy rainfall from early morning on the 8th to the afternoon of the 11th caused flooding on the Black from the 11th to the 14th and White at Clarendon, Ark., from the 17th to the 21st. The lower portion of the Black had 3.75 inches and the lower portion of the White had about 6 inches. Rainfall over the Cache Basin averaged 4.5 inches. The Cache River at Patterson, Ark., has been in continuous flood since January 9 and continued above flood stage during February.

Red Basin.--The moderate to heavy rainfall from the 8th to the 11th caused flooding along the Little Missouri, Saline, and Ouachita Rivers in Arkansas and on the Sulphur River at Naples, Tex., between the 10th and 21st. The rainfall averaged 5.75 inches over the Little Missouri; 5 inches over the upper Saline and Ouachita Rivers during the period. The rain began over the Sulphur Basin during the night of the 7th and continued through the 9th and 10th. The rainfall ranged from about 5 inches in the headwaters to about 2.5 inches at Naples, Texas.

Lower Mississippi Basin.--Heavy rains from the 9th to the 12th caused flooding on small streams in Mississippi. The most serious flooding occurred on the Big Black River where moderate flooding occurred along the entire river. Light flooding occurred on the Coldwater River at Sarah, Miss., and on the Tallahatchie at Swan Lake, Miss. Damages were light except along the Big Black where considerable damages resulted to roads, bridges, pastures, and woodlands.

WEST GULF OF MEXICO DRAINAGE

General rains from the 6th to the 12th with heavy amounts on the 9th and 12th caused flooding on the Calcasieu at Hineston, La., from the 12th to the 18th. Flooding was minor and no damages are believed to have occurred.

Heavy rain over central and northeast Texas with more than 3 inches in the upper Trinity on the 8th and 9th caused flooding in the reach at and above Trinidad, Tex., between the 9th and 18th. All branches of the Trinity below the reservoirs, and other major tributaries down to and including Chambers Creek had some flooding. The only significant residential flooding occurred in South Dallas on the afternoon of the 10th with about 7.5 feet of overflow. The East Fork reached 3 to 4 feet of overflow on the 10th and 11th.

There was general inundation of lowlands along the West Fork below Fort Worth to Dallas. The highest stage since 1957 occurred at Grand Prairie, Tex., with no appreciable damage reported. Residential flooding in Dallas was confined to the frequently flooded areas of Roosevelt Heights and South Dallas. Many homes in the area were flooded, and many persons were evacuated. Most of the damage below Dallas and along the East Fork was agricultural, largely loss of grazing land and damage to fences.

The flood crest continued downstream along the main stem of the Trinity reaching 7 feet above flood stage at Rosser, Tex., on the 12th and 10 feet above flood stage at Trinidad on the 14th.

The Trinity stayed above flood stage at Rosser for 6 days and at Trinidad for 7 days. Chambers Creek was out of its banks east of Corsicana for 5 days, reaching a maximum overflow of about 6 feet. The Trinity crested at Long Lake on the 20th at a stage of 39.45 feet, 0.55 foot below flood stage. Flooding at Liberty, Tex., began on the afternoon of the 17th and continued until March 3. The crest at Liberty was flat, reaching a crest of 26.48 feet from 8 p.m. on the 20th to 4 a.m. on the 21st. Flooding below Liberty at Moss Bluff persisted until March 14.

Heavy rains on the 16th over the Little River Basin below Belton Dam on the Leon River caused nearly 4-foot overflow of the Little River at Cameron, Tex., on the 17th and 18th.

General heavy rain (3 to 4 inches) over the Guadalupe, Lavaca, San Marcos, and Navidad Rivers on the 15th and 16th caused some flooding of the lowlands between the 17th and 23d. Principal damage was to flooded low pastureland.

Low-lying areas along the Nueces River at Calallen, Tex., were flooded from February 25 to March 2. Flood waters covered several thousand acres of farm and ranch land. Many dwellings were isolated by the flood waters. Only a few homes were damaged as most of them were of the summer cottage type, raised on pilings.

PACIFIC SLOPE DRAINAGE

Coquille Basin.--Heavy rainfall during the latter part of January and the first part of February caused flooding along the North Fork near Myrtle Point, Oreg., from January 28 into the first part of February. The crest of 34.6 feet occurred on January 29 and was 6.6 feet above flood stage. Considerable damage resulted to roads, bridges, and farmlands. The high waters along this branch were complicated by numerous logjams.

Columbia Basin.--Minor flooding occurred on the Portneuf River at Pocatello, Idaho, in the beginning of February. No damage was reported.

Streams in the Columbia Basin were falling throughout February. However, the lower Willamette River below Oregon City, Oreg., the lower Columbia River and the Pudding and Tualatin Rivers in Oregon remained above flood stage as late as February 4.

Puget Sound.-- The Snohomish River crested at Snohomish, Wash., on January 31 at a stage of 30.2 feet, 5.2 feet above flood stage. It was still about 1 foot above flood stage on February 1.

FLOOD STAGE DATA

(All dates in February unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
ST. LAWRENCE DRAINAGE	Ft.			Ft.	
Lake Michigan					
Red Cedar: Williamston, Mich.	7	10	11	8.4	10
East Lansing, Mich.	7	11	12	7.7	11
Lake Erie					
St. Marys: Decatur, Ind.	13	11	11	14.05	11
St. Joseph: Montpelier, Ohio	10	11	14	12.95	12
Maumee: Ft. Wayne, Ind.	15	10	12	16.4	10
Lake Ontario					
Oatka Creek: Garbutt, N. Y.	5	12	12	5.05	12
ATLANTIC SLOPE DRAINAGE					
Millstone: Blackwells Mills, N.J.	8	8	8	8.1	8
Raritan: Manville, N. J.	12	8	8	13.9	8
Bound Brook, N. J.	8	8	8	10.1	8
Neshaminy Creek: Langhorne, Pa.	7	8	8	9.8	8
Perkiomen Creek: Graterford, Pa.	11	8	8	E13.0	8
Brandywine Creek: Chadds Ford,Pa.	9	8	8	9.8	8
Rapidan: Rapidan, Va.	14	7	8	16.5	8
Jackson: Covington, Va.	7	7	8	8.0	8
Rivanna: Palmyra, Va.	15			22.1	8
James: Bremo Bluff, Va.	19	7	10	(22.8 (20.5	8 9
Columbia, Va.	18	7	10	25.4	8
State Farm, Va.	12	8	10	16.5	9
Richmond (Westham), Va.	12	8	10	15.4	9
Richmond (City Locks),Va.	9	9	10	11.1	9
Dan: Danville, Va.	11	8	8	#11.1	8
Roanoke: Randolph, Va.	21	9	9	#22.7	9
Williamston, Va.	10	21	26	#10.3	25
Neuse: Neuse, N. C.	14	9	12	#17.4	11
Smithfield, N. C.	13	8	16	17.75	13
Goldsboro, N. C.	14	12	23	18.9	18
Kinston, N. C.	14	15	25	16.7	20
Cape Fear: Moncure, N. C.	20	8	8	21.5	8
Fayetteville, N. C.	35	9	10	38.8	9
Lock No.3,Tarheel,N.C.	42	9	12	53.2	10
Lock No.2, Elizabethtown, N.C.	20	16	17	20.4	17
Rocky: Norwood, N. C.	15	8	9	17.0	8
Pee Dee: Cheraw, S. C.	30	9	9	30.0	9
Peedee, S. C.	19	10	25	(20.8 (20.9	13 19
Black: Kingstree, S. C.	12	18	24	12.8	20-21
Broad: Blair, S. C.	14	(8 (26	8 26	14.0 15.9	8 26
North Fork Edisto: Orangeburg,S.C.	8	14 25	23 27	(8.45 (9.2 8.1	15 19 26
Edisto: Givhans, S. C.	10	15	1/	#13.7	22-23
Savannah: Clyo, Ga.	11	Oct. 29 16	4 1/	(12.4 (13.8 (15.7 14.1	Dec. 11 Dec. 27 Jan. 4-5 23
Ogeechee: Midville, Ga.	6	19	21	6.4	19
Dover, Ga.	7	18	28	9.0	22
Eden, Ga.	9	16	28	12.4	22-23
Ocmulgee: Abbeville, Ga.	12	16	26	13.75	21
Lumber City, Ga.	15	20	21	15.1	20
Oconee: Mount Vernon, Ga.	16	18	24	16.85	20,21
Altamaha: Charlotte, Ga.	15	17	28	19.05	21
Satilla: Waycross, Ga.	16	16	21	16.65	18
Atkinson, Ga.	13	14	28	16.4	22
EAST GULF OF MEXICO DRAINAGE	Ft.			Ft.	
Flint. Albany, Ga.	20	19	22	23.1	20
Bainbridge, Ga.	25	20	24	26.2	22
Apalachicola: Blountstown, Fla.	15	Jan. 26 9	7 28	18.3 21.0	Jan. 28 21
Cahaba: Centreville, Ala.	23	12	12	23.35	12
Alabama: Millers Ferry, Ala.	40	18	20	40.7	19
Claiborne, Ala.	40	19	22	40.9	20-21
Old Town Creek: Tupelo, Miss.	21	11	12	22.9	12
East Fork Tombigbee: Fulton, Miss.	16	11 27	15 27	17.4 16.2	12 27
Tibbee: Tibbee, Miss.	23	11	15	28.6	12
Noxubee: Macon, Miss.	26	11	17	29.55	12
Black Warrior. Oliver Lock & Dam, Tuscaloosa, Ala.	47	12	14	51.2	12
Warrior Lock & Dam, Ala.	30	12	18	36.7	16
Tombigbee: Amory, Miss.	20	11	16	26.3	12
Aberdeen, Miss.	34	12	18	39.9	14
Columbus, Miss.	29	12	18	33.4	14
Gainesville, Ala.	36	12	25	47.1	20
Demopolis, Ala.	48	13	26	58.3	18,19
Jackson Lock & Dam,Ala.	43	13	Mar. 5	52.9	23
Chickasawhay: Enterprise, Miss.	20	13	15	23.9	14
Shubuta, Miss.	30	18	18	30.7	18
Leaf: Beaumont, Miss.	20	18	21	22.4	20
Pascagoula: Merrill, Miss.	22	19	23	23.0	21
Pearl: Edinburg, Miss.	20	14	19	24.35	15
Jackson, Miss.	18	11	1/	32.0	18
Monticello, Miss.	19	12	1/	23.85	22
Columbia, Miss.	17	15	1/	18.75	25
Bogalusa, Miss.	15	13	1/	19.6	20
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Pecatonica: Martintown, Wis.	11	8	15	16.1	12
Rock: Joslin, Ill.	10	8	21	14.8	12
Moline, Ill.	13	12	14	13.7	12
Kankakee: Momence, Ill.	4	(2 (10	3 10	5.1 5.0	2 10
Vermillion: Lowell, Ill.	10	(2 (10	8 11	10.5 10.7	2 11
Illinois: Havana, Ill.	14	Jan. 26	1	15.1	Jan. 28
Meredosia, Ill.	428	Jan. 24	21	(431.0 (431.2	3 7
Big Muddy: Murphysboro, Ill.	16	16	16	16.0	16
Mississippi: Grafton, Ill.	18	11	11	18.0	11
Missouri Basin					
Floyd: Alton, Iowa	12	28	Mar. 1	13.0	Mar. 1
James, Iowa	16	28	Mar. 2	18.4	Mar. 1
Vermillion Creek: Wamego, Kans.	24	Mar. 1	Mar. 1	25.2	Mar. 1
Mill Creek: Paxico, Kans.	19	Mar. 1	Mar. 1	19.1	Mar. 1
Little Blue: Fairbury, Nebr.	10	21	21	10.1	21
Black Vermillion: Frankfort,Kans.	19	Mar. 1	Mar. 2	26.2	Mar. 1
Big Blue: Beatrice, Nebr.	16	Mar. 1	Mar. 1	19.35	Mar. 1
Barneston, Nebr.	18	Mar. 1	Mar. 1	22.1	Mar. 1
Marysville, Kans.	35	Mar. 1	Mar. 1	35.8	Mar. 1
Blue Rapids, Kans.	20	Mar. 1	Mar. 1	#23.8	Mar. 1
Grand: Sumner, Mo.	26	11	11	27.0	11
Ohio Basin					
Allegheny: West Hickory, Pa.	14	8	8	14.95	8
Oil City, Pa.	21	8	8	21.6	8

FLOOD STAGE DATA

(All dates in February unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
MISSISSIPPI SYSTEM (Cont'd.)	Ft.			Ft.	
Ohio Basin (Cont'd.)					
Paint Creek: Bourneville, Ohio	10	12	13	10.3	13
Green: Lock 4, Woodbury, Ky.	33	12	15	35.3	13
Lock 2, Calhoun, Ky.	23	14	18	25.6	16
Eagle Creek: Zionsville, Ind.	T 7	10	10	9.3	10
Muscatatuck: Austin, Ind.	T16	8	14	#19.3	13
East Fork: Seymour, Ind.	14	11	14	16.6	12
Bedford, Ind.	20	15	16	20.25	15
White: Anderson, Ind.	10	10	12	11.1	10
Centerton, Ind.	T603	11	11	603.0	10
Spencer, Ind.	14	11	14	17.8	12
Elliston, Ind.	18	11	15	22.1	13
Petersburg, Ind.	16	11	19	20.4	17
Hazleton, Ind.	16	12	21	#20.6	18
Skillet Fork: Wayne City, Ill.	15	10	13	18.6	11
Little Wabash: Wilcox, nr., Ill.	16	10	13	18.8	11-12
Wabash: Wabash, Ind.	12	10	13	15.7	13
Lafayette, Ind.	11	10	15	16.8	12
Covington, Ind.	16	12	15	19.15	14
Montezuma, Ind.	14	11	16	16.7	15
Terre Haute, Ind.	14	11	16	15.1	16
Mt. Carmel, Ill.	17	16	19	#17.7	18
Saline: Harrisburg, Ill.	13	10	14	20.0	11
Harpeth: Kingston Springs, Tenn.	15	12	12	17.85	12
South Chickamauga Creek: Chickamauga, Tenn.	10	11	14	12.85	13
Tennessee: Whitesburg, Ala.	560	11	15	561.3	13
Gilbertsville, Ky.	320	12	21	326.8	15
Ohio: Dam 47, Newburgh, Ind.	38	14	16	39.2	15
Mt. Vernon, Ind.	35	16	16	35.1	16
Shawneetown, Ill.	33	14	20	36.3	17
Dam 50, Fords Ferry, Ky.	34	13	21	38.9	17
Dam 52, Brookport, Ill.	37	14	19	38.8	16,17
Dam 53, Grand Chain, Ill.	42	15	19	43.0	16,17
Cairo, Ill.	40	17	18	40.0	17
White Basin					
Black: Black Rock, Ark.	14	11	14	15.3	12
Cache: Patterson, Ark.	7	Jan. 9	1/	9.0	Jan. 12
White: Clarendon, Ark.	26	17	21	26.1	19-20
Red Basin					
Little Missouri: Boughton, Ark.	20	12	13	20.7	12
Saline: Benton, Ark.	20	11	12	22.6	12
MISSISSIPPI SYSTEM (Cont'd.)	Ft.			Ft.	
Red Basin (Cont'd.)					
Ouachita: Arkadelphia, Ark.	17	10 11	10 13	20.9	12
Camden, Ark.	26	11	21	34.9	16
Sulphur: Naples, Tex.	22	11	21	31.1	13
Lower Mississippi Basin					
Coldwater: Sarah, Miss.	18	10	13	18.0	12
Tallahatchie: Swan Lake, Miss.	26	12	21	28.0	15
Big Black: Pickens, Miss.	16	11	22	20.3	14
Bovina, Miss.	28	12	1/	38.3	19
WEST GULF OF MEXICO DRAINAGE					
Calcasieu: Hineston, La.	12	12	18	13.7	13,14
Trinity: Carrollton, Tex.	6	9	9	6.7	9
Dallas, Tex.	30	9	11	37.5	10
Rosser, Tex.	26	9	14	33.0	12
Trinidad, Tex.	28	12	18	38.2	14
Liberty, Tex.	24	17	Mar. 3	26.5	20-21
Little River: Cameron, Tex.	30	17	18	33.7	17
Navidad: Ganado, Tex.	21	18	20	24.5	18
Lavaca: Edna, Tex.	21	18	19	23.35	18
Guadalupe: Gonzales, Tex.	20	17	19	26.3	18
Victoria, Tex.	21	18	23	27.3	21
Nueces: Calallen, Tex.	7	25	Mar. 2	8.8	27
PACIFIC SLOPE DRAINAGE					
Coquille Basin					
North Fork: Myrtle Point (nr.), Oreg.	E28	Jan. 28		34.6	Jan. 29
Columbia Basin					
Portneuf: Pocatello, Idaho	6			6.7	Feb. 2
Pudding: Aurora, Oreg.	20	Jan. 27	4	27.4	Jan. 29
Tualatin: Farmington, Oreg.	29	Jan. 28	4	32.6	Jan. 30
Oswego, Oreg.	20	Jan. 31	1	20.2	Jan. 31
Willamette: Oregon City (Upper), Oreg.	14	Jan. 29	1	17.2	Jan. 30
Oregon City (Lower), Oreg.	27	Jan. 28	3	39.3	Jan. 30
Portland, Oreg.	18	Jan. 29	3	23.7	Jan. 31
Columbia: Vancouver, Wash.	16	Jan. 28	4	22.6	Jan. 31
St. Helens, Oreg.	17	Jan. 30	2	19.3	1
Longview, Wash.	12	Jan. 29	4	16.1	Jan. 31
Puget Sound					
Snohomish: Snohomish, Wash.	25	Jan. 28	1	30.2	Jan. 31

* Provisional
# Highest Stage Observed
E Estimated
T Tentative
1/ Continued at end of month

RAWINSONDE DATA

Average monthly values

FEBRUARY 1965

ALBANY, N. Y. 1006 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	86	-7.5	69	254	3.3
1000	28	134			264	3.7
950	28	533	-7.9	61	271	9.9
900	28	954	-9.2	63	286	16.3
850	28	1,396	-9.4	63	291	23.1
800	28	1,864	-9.8	59	290	27.6
750	28	2,362	-11.2	54	288	32.6
700	28	2,890	-12.8	52	278	33.8
650	28	3,453	-15.0	47	276	38.3
600	28	4,056	-17.9	42	273	42.5
550	28	4,701	-21.4	R36	273	47.0
500	28	5,400	-25.8	R36	273	50.9
450	28	6,153	-30.7	R35	274	55.8
400	28	6,984	-36.1	R34	273	59.6
350	28	7,901	-41.5	R39	267	62.9
300	28	8,933	-47.6		266	65.7
250	28	10,122	-52.8		269	70.1
200	28	11,550	-55.3		262	71.3
175	28	12,403	-54.4		269	60.8
150	28	13,392	-54.1		267	56.7
125	28	14,558	-55.8		264	55.0
100	28	15,974	-57.6		261	52.8
80	28	17,375	-59.2		260	50.3
70	28	18,212	-58.8		264	46.4
60	28	19,182	-58.1		264	45.6
50	28	20,328	-58.7		265	38.7
40	28	21,728	-58.5		261	35.9
30	27	23,533	-57.7		267	38.9
25	27	24,682	-57.7		264	45.5
20	26	26,089	-57.1		267	44.7
15	21	27,946	-56.0		276	42.7
10	6	30,511	-56.9			

ALBUQUERQUE, N. MEX. 836 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	1,619	-.1	60	19	1.4
1000	28	156				
950	28	576				
900	28	1,019				
850	28	1,482				
800	28	1,969	.6	48	308	4.7
750	28	2,485	-2.1	46	309	10.3
700	28	3,031	-5.1	44	308	15.0
650	28	3,608	-8.4	44	297	14.4
600	28	4,227	-12.3	43	294	15.9
550	28	4,885	-16.7	38	293	17.3
500	28	5,597	-21.7	R34	295	19.6
450	28	6,358	-27.3	R30	294	19.6
400	28	7,203	-33.9	R29	290	21.2
350	28	8,125	-40.7	R25	283	22.5
300	28	9,158	-47.8		280	26.2
250	28	10,344	-54.2		284	30.5
200	28	11,761	-56.6		278	35.4
175	28	12,607	-56.9		273	34.8
150	28	13,582	-57.8		274	35.7
125	28	14,723	-60.6		274	34.2
100	28	16,103	-63.1		276	27.2
80	28	17,473	-64.4		278	18.5
70	28	18,290	-63.6		279	17.7
60	28	19,239	-62.1		282	14.4
50	28	20,370	-60.2		287	10.7
40	27	21,768	-59.3		289	9.1
30	27	23,576	-57.5		309	9.9
25	26	24,730	-56.3		304	8.9
20	25	26,146	-55.3		300	11.1
15	13	27,976	-52.5			
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AMARILLO, TEXAS 890 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	1,095	-2.5	72	284	4.5
1000	28	157				
950	28	568				
900	28	1,008				
850	28	1,461	1.0	56	292	8.9
800	28	1,948	.9	47	296	10.7
750	28	2,464	-1.2	43	285	13.8
700	28	3,013	-4.0	40	269	17.3
650	28	3,589	-7.5	37	270	18.6
600	28	4,213	-11.5	34	270	20.8
550	28	4,869	-15.8	R35	266	22.5
500	28	5,585	-20.8	R36	265	24.7
450	28	6,347	-26.4	R34	263	27.4
400	28	7,194	-33.0	R30	259	28.4
350	28	8,119	-39.7	R27	258	33.6
300	28	9,156	-47.0		259	39.6
250	28	10,344	-53.8		259	45.1
200	27	11,771	-57.1		259	46.8
175	27	12,617	-56.1		262	48.2
150	27	13,593	-57.7		263	44.1
125	27	14,737	-60.0		264	41.8
100	26	16,123	-63.1		266	36.7
80	26	17,492	-64.0		269	26.8
70	26	18,310	-63.3		271	20.6
60	26	19,262	-61.6		272	16.9
50	26	20,396	-59.9		271	12.6
40	25	21,797	-58.5		289	12.2
30	21	23,611	-57.4		298	8.5
25	19	24,768	-55.9		295	8.5
20	14	26,183	-53.8		319	7.4
15	8	28,024	-53.5			
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ANCHORAGE, ALASKA 1002 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	29	-12.4	72	24	2.7
1000	28	60			25	4.7
950	28	454	-9.7	60	24	4.1
900	28	872	-10.1	63	80	4.5
850	28	1,311	-11.8	66	115	4.9
800	28	1,773	-14.3	66	154	5.6
750	28	2,257	-16.9	61	177	5.6
700	28	2,774	-19.8	56	212	5.1
650	28	3,318	-22.9	53	237	5.1
600	28	3,903	-26.3	48	252	8.2
550	28	4,522	-29.9	46	258	11.7
500	28	5,200	-33.9	43	261	15.7
450	28	5,929	-38.3	36	269	20.8
400	28	6,733	-43.0	R29	269	27.6
350	28	7,625	-47.2		268	30.1
300	28	8,637	-49.9		265	33.6
250	28	9,826	-50.3		267	31.9
200	27	11,290	-48.4		271	33.2
175	27	12,169	-48.4		270	33.4
150	27	13,183	-48.4		269	33.0
125	27	14,381	-49.3		274	33.6
100	27	15,841	-49.9		279	34.6
80	27	17,299	-50.1		280	30.7
70	27	18,170	-50.4		281	32.4
60	27	19,175	-50.5		285	32.2
50	27	20,363	-50.7		291	32.2
40	26	21,821	-50.5		296	33.6
30	25	23,699	-50.0		302	34.8
25	23	24,903	-49.4		307	37.5
20	22	26,385	-48.3		313	37.9
15	11	28,289	-46.2			
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*** ANNETTE, ALASKA 1007 MB**

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	27	37	.9	80	150	4.3
1000	27	92			153	5.4
950	27	502	-1.3	85	185	10.9
900	27	933	-3.9	88	206	13.6
850	27	1,382	-6.5	88	224	15.2
800	27	1,855	-8.8	76	239	16.9
750	27	2,350	-11.4	68	249	19.6
700	27	2,879	-14.4	65	256	23.3
650	26	3,434	-17.6	61	264	26.6
600	26	4,035	-21.1	53	264	30.9
550	26	4,672	-24.7	53	266	34.2
500	26	5,363	-29.0	54	266	38.1
450	26	6,104	-33.6	51	268	43.3
400	26	6,928	-39.2	50	277	47.2
350	26	7,833	-45.0		280	50.9
300	26	8,851	-50.4		285	57.9
250	25	10,023	-55.4		286	59.1
200	23	11,433	-54.2		288	51.7
175	23	12,292	-52.8		291	46.6
150	22	13,283	-52.2		292	43.1
125	22	14,458	-53.8		292	39.0
100	22	15,890	-54.2		293	35.7
80	22	17,319	-54.5		300	32.6
70	22	18,174	-54.2		301	30.7
60	21	19,162	-54.1		305	27.8
50	21	20,331	-54.0		310	26.4
40	19	21,761	-53.7		318	27.4
30	19	23,612	-53.2		325	29.1
25	18	24,789	-52.7		325	32.1
20	17	26,244	-51.2		329	33.6
15	14	28,141	-50.4		330	38.3
10	[illegible]	30,827	-48.5			

ATHENS, GA. 990 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	246	2.9	81	316	1.9
1000	28	163				
950	28	581	4.7	61	274	6.2
900	28	1,022	4.5	55	271	11.5
850	28	1,488	3.8	50	272	16.1
800	28	1,980	2.5	50	269	21.4
750	28	2,498	-.1	50	267	26.0
700	28	3,050	-2.4	47	265	29.7
650	28	3,629	-5.2	45	263	36.5
600	28	4,261	-8.7	40	261	41.4
550	28	4,923	-12.6	37	261	44.1
500	28	5,652	-17.2	37	259	48.4
450	28	6,426	-22.6	38	257	53.8
400	28	7,289	-28.5	37	256	57.9
350	28	8,232	-35.4	R36	256	63.1
300	28	9,288	-43.2		257	72.8
250	28	10,494	-51.1		257	84.3
200	28	11,924	-56.5		259	98.3
175	28	12,767	-58.0		261	96.2
150	28	13,733	-60.5		262	81.0
125	28	14,860	-64.0		262	70.3
100	28	16,215	-66.9		264	52.8
80	27	17,562	-67.1		266	39.4
70	26	18,373	-65.3		267	27.8
60	26	19,316	-63.3		268	22.3
50	26	20,442	-61.1		275	17.5
40	26	21,836	-58.8		274	16.5
30	26	23,651	-56.7		276	17.5
25	25	24,810	-55.4		273	18.5
20	23	26,240	-53.6		269	21.6
15	14	28,069	-51.7			
10	5	30,741	-48.3			

*** BARROW, ALASKA 1028 MB**

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	[illegible]	-32.7	55	50	3.5
1000	28	206	-27.7	71	52	8.4
950	28	583	-22.8	72	53	14.6
900	28	977	-21.3	65	52	15.2
850	28	1,398	-21.3	60	53	14.8
800	28	1,845	-22.5	57	52	14.8
750	28	2,318	-24.2	50	52	15.3
700	28	2,818	-26.6	51	46	14.8
650	28	3,350	-29.4	50	44	14.8
600	28	3,919	-32.6	50	41	14.8
550	28	4,524	-36.1	46	34	16.1
500	28	5,184	-40.0	41	29	16.7
450	28	5,895	-44.3		21	16.1
400	28	6,680	-48.9		12	17.7
350	28	7,548	-53.3		1	18.1
300	28	8,532	-57.1		346	17.3
250	28	9,683	-57.1		327	19.0
200	28	11,104	-54.5		310	22.9
175	28	11,959	-54.1		306	26.4
150	28	12,949	-54.0		299	31.7
125	28	14,119	-53.8		296	38.3
100	28	15,552	-53.8		293	46.2
80	28	16,986	-53.2		293	55.0
70	28	17,845	-53.1		292	59.1
60	27	18,854	-52.3		293	65.9
50	26	20,035	-51.9		293	70.1
40	26	21,481	-51.7		295	77.9
30	25	23,374	-50.5		294	78.5
25	23	24,573	-50.4		294	79.8
20	19	26,019	-50.0		298	81.8
15	12	27,945	-48.0			
10	10	30,613	-45.8			

BARTER IS., ALASKA 1025 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	26	15	-35.9	71	268	4.3
1000	26	188	-31.5	47	269	1.4
950	26	562	-25.1	48	63	1.9
900	26	951	-22.5	48	42	4.5
850	26	1,370	-22.5	47	66	7.8
800	26	1,814	-23.5	46	62	7.8
750	26	2,283	-25.0	44	44	7.8
700	26	2,784	-27.1	41	22	9.5
650	26	3,312	-29.8	39	27	11.7
600	26	3,882	-32.6	39	24	11.3
550	26	4,489	-36.0	36	14	11.7
500	26	5,147	-39.7	R28	7	12.4
450	26	5,866	-43.8		342	13.6
400	25	6,648	-48.3		337	15.0
350	25	7,518	-52.7		329	16.9
300	24	8,508	-56.0		322	20.6
250	24	9,668	-55.3		313	26.4
200	23	11,108	-53.4		308	29.5
175	23	11,969	-52.9		306	32.8
150	20	12,975	-52.3		306	37.1
125	19	14,155	-52.2		306	42.0
100	19	15,600	-51.9		305	50.3
80	19	17,044	-52.3		304	60.4
70	18	17,909	-52.5		304	64.3
60	18	18,905	-52.2		306	69.2
50	16	20,085	-52.3		308	76.0
40	16	21,529	-51.9		309	81.4
30	16	23,397	-50.8		308	88.0
25	14	24,599	-49.9		307	94.8
20	8	26,054	-49.9			
15	5	27,908	-47.0			
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BETHEL, ALASKA 1004 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	39	-20.6	74	21	8.4
1000	28	68			27	8.5
950	28	459	-13.0	63	56	8.5
900	28	869	-12.1	63	59	4.3
850	28	1,306	-12.6	57	15	1.9
800	28	1,767	-14.5	50	326	2.9
750	28	2,255	-16.9	47	306	4.3
700	28	2,770	-19.2	44	299	5.6
650	28	3,319	-22.1	44	290	6.4
600	28	3,903	-25.0	R43	280	8.5
550	28	4,530	-28.7	42	278	10.9
500	28	5,207	-33.0	R39	275	13.8
450	28	5,939	-37.4	R37	277	14.2
400	28	6,746	-42.1	45	272	16.3
350	28	7,640	-47.1		257	17.5
300	28	8,651	-50.9		264	19.2
250	28	9,835	-51.3		265	21.4
200	28	11,291	-48.9		262	24.3
175	28	12,170	-48.1		257	23.1
150	28	13,186	-47.9		259	23.5
125	28	14,388	-48.2		258	22.9
100	28	15,857	-49.0		262	22.7
80	28	17,320	-49.3		265	23.1
70	27	18,190	-49.3		268	23.1
60	27	19,201	-49.0		274	22.1
50	27	20,397	-48.9		278	19.4
40	27	21,862	-48.6		283	21.0
30	26	23,753	-48.2		290	20.2
25	25	24,960	-47.5		298	21.2
20	24	26,450	-46.4		303	23.5
15	21	28,367	-45.2		304	30.9
10	12	31,046	-43.5			

BISMARCK, N. DAK. 954 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	505	-14.3	69	314	4.9
1000	28	144				
950	28	538			305	7.4
900	28	951	-8.6	60	299	15.9
850	28	1,395	-7.9	53	304	20.2
800	28	1,866	-8.9	50	303	22.7
750	28	2,363	-11.4	51	304	28.0
700	28	2,891	-13.9	51	299	30.7
650	28	3,447	-16.8	50	297	32.6
600	28	4,049	-19.9	49	296	36.3
550	28	4,683	-23.5	45	296	40.4
500	28	5,382	-27.8	46	293	43.7
450	28	6,121	-32.9	42	291	44.9
400	28	6,951	-39.1	40	291	46.4
350	28	7,853	-45.4		288	49.0
300	28	8,866	-51.8		288	51.5
250	28	10,037	-55.7		291	52.6
200	28	11,453	-56.2		288	49.3
175	28	12,303	-54.7		289	47.6
150	28	13,290	-54.6		289	46.0
125	28	14,455	-55.3		288	44.9
100	28	15,876	-56.4		290	41.0
80	28	17,291	-57.1		290	37.5
70	28	18,134	-57.6		291	35.2
60	28	19,108	-57.6		293	32.4
50	28	20,260	-57.3		296	34.0
40	26	21,668	-57.7		300	31.1
30	24	23,495	-57.3		299	31.1
25	20	24,645	-56.8		301	31.7
20	17	26,043	-56.7		299	39.2
15	7	27,824	-56.5			
10						

BOISE, IDAHO 919 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	868	-.2	80	170	1.9
1000	28	183				
950	28	598				
900	28	1,033	2.0	61	341	1.0
850	28	1,494	.8	54	283	6.4
800	28	1,979	-2.2	56	293	12.4
750	28	2,486	-5.5	56	296	15.9
700	28	3,027	-8.2	52	300	18.3
650	28	3,595	-10.9	49	306	21.8
600	28	4,211	-14.3	46	305	24.1
550	28	4,863	-18.3	43	305	28.4
500	28	5,572	-22.8	39	306	30.3
450	28	6,333	-28.1	35	306	33.0
400	28	7,172	-34.4	36	306	36.5
350	28	8,093	-41.0	36	312	37.9
300	28	9,125	-48.4		315	39.8
250	28	10,306	-55.7		314	41.4
200	28	11,713	-59.1		310	40.6
175	28	12,554	-56.7		303	42.3
150	28	13,532	-56.1		303	41.0
125	27	14,679	-57.0		299	36.1
100	27	16,084	-59.4		300	31.3
80	27	17,481	-59.0		301	26.6
70	26	18,319	-58.5		309	24.3
60	26	19,289	-57.7		315	18.8
50	26	20,440	-57.5		322	15.5
40	24	21,856	-56.2		328	12.4
30	22	23,685	-55.2		340	14.4
25	21	24,855	-54.6		346	14.2
20	19	26,275	-54.5		346	18.5
15	16	28,128	-52.7		3	19.6
10	9	30,811	-48.5			
7						

*** BOOTHVILLE, LA. 1018 MB**

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	16	1	9.5	89	17	6.0
1000	16	146	11.0	69	25	8.2
950	16	571	8.9	71	38	6.6
900	16	1,021	7.8	62	346	3.7
850	16	1,493	7.2	53	290	8.7
800	16	1,990	5.1	48	278	14.2
750	16	2,513	2.9	46	264	18.8
700	16	3,072	.6	41	263	20.4
650	16	3,661	-2.6	35	259	26.0
600	16	4,295	-6.2	32	266	27.6
550	16	4,965	-10.0	33	258	28.6
500	16	5,700	-15.2	35	254	36.7
450	16	6,484	-20.1	41	248	46.6
400	16	7,353	-26.2	44	246	59.1
350	16	8,305	-33.4	43	245	66.2
300	16	9,369	-41.2	40	247	72.1
250	16	10,586	-48.5		246	88.6
200	16	12,031	-54.6		243	92.9
175	14	12,884	-57.0			
150	13	13,846	-61.7			
125	13	14,965	-65.7			
100	12	16,301	-69.9			
80	10	17,636	-69.4			
70	10	18,435	-67.8			
60	10	19,369	-64.1			
50	9	20,498	-60.1			
40	8	21,888	-57.9			
30	6	23,712	-55.0			
25	6	24,882	-53.4			
20	6	26,330	-49.9			
15	6	28,220	-48.2			
10	5	30,907	-43.8			
7						

*** BROWNSVILLE, TEXAS 1015 MB**

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	7	13.2	87	340	1.6
1000	28	127	14.2	81	37	2.9
950	28	563	12.9	81	137	6.0
900	28	1,015	12.2	67	170	7.2
850	28	1,493	10.8	60	196	9.5
800	28	1,998	8.8	53	217	11.8
750	28	2,528	7.0	45	236	14.6
700	28	3,095	3.7	47	244	19.8
650	28	3,688	-.2	42	245	21.8
600	28	4,329	-4.5	41	246	28.0
550	28	5,001	-9.5	45	245	32.2
500	28	5,738	-14.2	43	243	38.3
450	28	6,524	-19.1	37	241	45.6
400	28	7,398	-25.3	38	243	50.9
350	28	8,354	-32.4	39	243	59.4
300	28	9,422	-40.5	28	243	66.2
250	28	10,641	-48.8		244	75.2
200	28	12,084	-55.8		245	81.6
175	28	12,929	-58.3		246	82.2
150	28	13,890	-62.8		247	75.8
125	28	14,994	-68.2		248	67.0
100	27	16,320	-73.2		248	52.3
80	27	17,623	-73.4		251	35.4
70	26	18,401	-71.7		252	25.6
60	25	19,322	-67.2		255	17.3
50	25	20,435	-62.7		252	10.9
40	25	21,820	-59.8		270	9.9
30	23	23,627	-56.4		258	13.4
25	22	24,784	-55.1		255	15.5
20	21	26,207	-53.2		256	20.2
15	20	28,074	-49.3		255	22.7
10	16	30,761	-44.7		253	33.8
7	7	33,131	-41.9			

BUFFALO, N. Y. 989 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	218	-4.6	71	247	7.4
1000	28	129				
950	28	528	-6.1	71	246	15.2
900	28	953	-8.0	71	252	19.8
850	28	1,397	-8.8	66	260	24.3
800	28	1,866	-9.5	61	264	29.3
750	28	2,364	-11.3	59	267	31.7
700	28	2,891	-13.2	57	268	35.4
650	28	3,452	-15.2	54	268	39.8
600	28	4,056	-17.9	49	270	45.6
550	28	4,699	-21.3	45	271	50.5
500	28	5,399	-25.6	42	272	52.3
450	28	6,152	-30.7	42	272	56.1
400	28	6,984	-36.1	41	271	61.2
350	28	7,899	-41.8	42	269	70.5
300	28	8,929	-47.9		268	78.5
250	28	10,116	-53.1		264	79.8
200	28	11,542	-55.6		262	74.2
175	28	12,394	-55.0		262	71.9
150	27	13,372	-55.4		265	60.4
125	26	14,524	-56.6		263	54.4
100	25	15,928	-57.1		265	49.7
80	24	17,335	-57.7		263	41.0
70	23	18,174	-58.8		263	40.0
60	21	19,141	-59.6		261	39.2
50	20	20,288	-58.5		269	36.1
40	16	21,687	-58.7		277	27.2
30	14	23,494	-58.2		280	29.9
25	13	24,652	-57.5		276	35.2
20	12	26,053	-56.9		277	35.2
15	11	27,871	-56.2			
10	5	30,493	-52.9			
7						

#* BURRWOOD, LA. 1017 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	12	3	15.3	88	80	4.5
1000	12	148	16.3	83	101	7.6
950	12	584	14.1	84	160	15.0
900	12	1,040	13.1	68	184	13.8
850	12	1,518	11.4	55	211	14.4
800	12	2,024	9.1	48	223	17.3
750	12	2,554	6.6	43	238	21.2
700	12	3,119	3.7	39	245	23.9
650	12	3,718	.3	36	250	27.6
600	12	4,355	-3.5	38	254	29.7
550	12	5,033	-8.1	40	249	33.2
500	12	5,772	-12.7	35	250	33.4
450	12	6,567	-18.0	38	252	37.5
400	12	7,440	-24.3	32	253	43.1
350	12	8,398	-31.9	33	256	50.9
300	12	9,468	-40.6	15	254	54.4
250	12	10,685	-49.8		256	64.1
200	12	12,118	-57.9		261	77.3
175	12	12,956	-59.5		262	80.6
150	12	13,914	-62.8		262	74.0
125	12	15,023	-68.0		258	58.7
100	11	16,349	-72.6		257	48.8
80	11	17,662	-71.5		256	36.7
70	11	18,456	-68.8		258	23.9
60	11	19,387	-63.9		260	13.4
50	11	20,513	-61.4		257	9.3
40	11	21,910	-57.9			
30	11	23,736	-55.0		276	17.1
25	11	24,903	-54.0		267	18.5
20	11	26,340	-52.4		278	20.2
15	11	28,216	-48.5		274	26.6
10	11	30,925	-43.0			
7	6	33,362	-40.1			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

FEBRUARY 1965

*CANTON IS., PACIFIC AREA
+ 1007 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	4	29.4	65	74	14.4
1000	28	64	28.2	64	73	15.5
950	28	510	22.6	68	81	16.1
900	28	986	19.8	61	84	15.2
850	28	1,477	17.3	52	89	13.8
800	28	1,993	15.7	39	87	5.8
750	28	2,534	13.7	32	57	3.1
700	28	3,117	11.0	28	61	3.5
650	28	3,728	7.7	25	84	3.3
600	28	4,386	3.9	27	87	5.2
550	28	5,073	- .4	28	126	3.3
500	28	5,844	- 4.5	24	113	1.2
450	28	6,658	- 8.9	21	337	2.5
400	28	7,571	-14.6	19	261	3.7
350	28	8,568	-21.8	21	245	5.4
300	28	9,683	-30.5	23	204	8.0
250	28	10,952	-40.8	19	204	12.6
200	28	12,430	-52.9		208	16.3
175	28	13,278	-59.8		210	14.6
150	28	14,225	-67.0		224	12.0
125	28	15,304	-74.8		232	9.1
100	28	16,575	-82.0		235	8.5
80	28	17,832	-76.5		244	6.2
70	28	18,610	-71.6		260	11.7
60	28	19,528	-67.6		268	19.6
50	28	20,634	-64.4		271	23.3
40	28	22,009	-61.2		273	22.5
30	28	23,804	-59.2		142	2.7
25	27	24,955	-56.9		91	28.7
20	27	26,380	-53.1		91	50.7
15	20	28,248	-48.3		90	65.7
10	9	30,931	-43.0			
7						
5						

CAPE HATTERAS, N. C.
1018 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	4	6.0	78	343	4.1
1000	28	149	7.1	70	324	6.2
950	28	566	6.2	65	289	12.4
900	28	1,013	4.5	58	275	17.5
850	28	1,478	3.2	57	267	20.8
800	28	1,969	1.7	54	258	23.1
750	28	2,490	.3	46	261	29.3
700	28	3,039	- 2.2	47	264	34.4
650	28	3,620	- 5.1	46	262	39.2
600	28	4,249	- 8.4	45	264	45.3
550	28	4,911	-12.3	45	266	47.6
500	28	5,642	-17.1	46	269	54.2
450	28	6,418	-22.1	42	266	62.2
400	28	7,281	-28.1	38	267	65.3
350	28	8,226	-35.3	R36	269	72.1
300	27	9,278	-43.3	R28	272	73.4
250	27	10,485	-50.7		274	83.3
200	27	11,921	-55.4		276	92.1
175	27	12,769	-57.0		277	91.1
150	27	13,739	-59.5		276	82.0
125	27	14,873	-62.3		273	70.3
100	27	16,242	-64.8		277	53.8
80	27	17,601	-65.0		275	32.6
70	26	18,418	-63.7		276	26.0
60	26	19,366	-62.0		278	22.7
50	26	20,500	-59.6		279	15.7
40	25	21,903	-57.4		293	11.3
30	24	23,728	-55.7		282	10.5
25	22	24,887	-53.8		279	9.9
20	22	26,324	-52.2		277	10.9
15	21	28,187	-51.3		272	21.0
10	17	30,844	-46.6			
7	10	33,220	-43.8			
5						

CARIBOU, ME.
990 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	191	-14.2	72	272	3.7
1000	28	114				
950	28	509	-12.9	65	278	8.2
900	28	916	-12.7	64	286	12.4
850	28	1,353	-12.5	60	282	14.4
800	28	1,815	-13.0	56	267	15.7
750	28	2,306	-14.7	54	261	18.6
700	28	2,827	-16.3	49	262	22.9
650	28	3,384	-18.9	47	265	25.8
600	28	3,975	-21.6	47	266	28.7
550	28	4,612	-25.2	48	263	31.3
500	28	5,299	-29.6	46	263	33.0
450	28	6,043	-34.4	45	264	36.3
400	28	6,859	-40.1	39	267	39.0
350	28	7,760	-45.2	43	269	43.3
300	27	8,782	-49.2		278	55.0
250	27	9,971	-51.5		272	59.1
200	27	11,417	-52.2		274	59.4
175	26	12,278	-51.9		272	50.5
150	25	13,274	-52.1		266	48.4
125	24	14,452	-52.9		263	44.7
100	24	15,884	-54.7		262	45.3
80	24	17,308	-56.0		261	43.1
70	24	18,155	-56.7		257	39.8
60	24	19,132	-57.4		258	39.6
50	24	20,283	-58.1		263	37.7
40	23	21,693	-58.5		258	38.5
30	23	23,500	-58.6		266	41.0
25	22	24,641	-59.7		269	44.1
20	21	26,042	-58.8		275	44.1
15	19	27,869	-57.6		272	50.5
10	17	30,440	-55.0		272	71.3
7	9	32,648	-55.4			
5						

CHARLESTON, S. C.
1018 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	13	6.6	81	330	3.1
1000	28	157	8.0	73	350	1.9
950	28	584	7.8	66	269	4.3
900	28	1,027	7.0	60	264	8.9
850	28	1,496	5.5	57	253	14.8
800	28	1,990	3.7	51	259	20.2
750	28	2,513	1.6	46	260	24.3
700	28	3,066	- .8	44	255	28.6
650	28	3,653	- 3.5	42	259	31.3
600	28	4,285	- 7.2	R40	260	35.5
550	27	4,949	-11.4	R36	261	41.4
500	27	5,681	-16.3	R34	262	44.5
450	27	6,459	-21.6	R34	262	50.3
400	27	7,325	-27.7	R35	262	57.9
350	27	8,273	-34.5	R30	263	63.9
300	27	9,333	-42.5	R33	263	70.5
250	27	10,543	-50.8		266	79.1
200	27	11,975	-56.2		267	88.6
175	27	12,819	-58.2		268	87.6
150	26	13,787	-61.3		268	82.2
125	25	14,902	-65.3		267	69.0
100	25	16,250	-68.0		265	53.8
80	25	17,587	-68.4		265	40.2
70	25	18,391	-66.0		264	29.7
60	25	19,330	-63.6		265	22.7
50	25	20,456	-61.0		269	16.7
40	24	21,852	-58.8		273	14.6
30	24	23,667	-56.3		273	14.4
25	24	24,831	-54.1		270	17.9
20	22	26,266	-52.7		269	18.6
15	11	28,128	-49.8			
10						
7						
5						

* COLD BAY, ALASKA
1002 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	30	- 4.0	84	350	1.4
1000	28	40			327	7.0
950	28	442	- 5.1	72	4	5.2
900	28	867	- 7.7	81	339	2.7
850	28	1,311	- 9.1	67	289	4.1
800	28	1,780	-10.5	58	298	10.7
750	28	2,276	-12.4	57	289	12.6
700	28	2,800	-14.7	58	282	13.6
650	28	3,358	-17.7	57	265	13.8
600	28	3,953	-21.1	54	259	16.7
550	28	4,588	-25.1	54	254	20.0
500	28	5,278	-29.4	52	267	22.3
450	28	6,019	-34.0	44	265	28.7
400	28	6,840	-39.6	47	262	31.1
350	28	7,742	-45.1		261	35.0
300	28	8,760	-50.2		254	39.6
250	28	9,946	-51.4		244	38.5
200	28	11,399	-49.0		241	34.0
175	28	12,277	-48.5		240	28.9
150	28	13,291	-48.4		241	26.8
125	28	14,490	-49.1		234	23.5
100	28	15,952	-49.6		242	23.5
80	28	17,410	-49.9		244	15.3
70	28	18,281	-50.4		243	13.8
60	28	19,288	-49.7		251	11.8
50	28	20,479	-49.7		261	7.2
40	28	21,940	-49.2		276	6.4
30	28	23,828	-48.5		301	5.4
25	27	25,028	-47.8		332	4.9
20	27	26,503	-46.7		7	7.2
15	25	28,416	-45.3		11	11.5
10	22	31,137	-43.5		28	16.5
7	14	33,564	-41.4		55	18.5
5	5	35,862	-42.0			

COLUMBIA, MO.
989 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	238	- 3.7	78	240	1.0
1000	28	149				
950	28	555	- 3.3	71	257	6.4
900	28	985	- 2.5	63	270	15.5
850	28	1,438	- 2.6	57	278	20.4
800	28	1,919	- 3.8	50	278	21.0
750	28	2,424	- 5.7	45	278	22.7
700	28	2,966	- 8.2	43	276	26.2
650	28	3,534	-10.8	39	274	30.3
600	28	4,150	-14.2	R36	271	34.4
550	28	4,800	-18.1	R32	272	40.0
500	28	5,513	-22.3	R31	270	43.3
450	28	6,271	-27.6	R31	266	50.3
400	28	7,116	-33.8	R33	264	54.4
350	28	8,039	-40.3	R26	265	55.0
300	28	9,074	-47.7		262	54.4
250	28	10,260	-54.0		261	54.6
200	28	11,681	-56.4		262	55.8
175	28	12,528	-56.4		267	55.6
150	28	13,506	-57.0		267	55.0
125	28	14,655	-58.9		270	51.9
100	28	16,049	-60.8		273	45.1
80	28	17,434	-61.7		271	35.2
70	28	18,260	-61.6		272	30.9
60	28	19,216	-60.6		275	26.8
50	28	20,354	-59.5		277	24.9
40	26	21,753	-59.2		283	21.6
30	24	23,553	-58.0		285	15.2
25	20	24,726	-56.5		285	17.3
20	17	26,131	-56.1		274	19.0
15	10	27,950	-55.0			
10						

CORPUS CHRISTI, TEXAS
1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	25	6	12.1	85	12	3.9
1000	25	131	12.4	80	76	3.3
950	25	562	10.8	75	134	5.8
900	25	1,012	10.2	70	174	6.8
850	25	1,487	8.6	64	216	8.0
800	25	1,987	6.9	60	241	10.7
750	25	2,514	4.9	56	247	13.2
700	25	3,076	1.7	57	249	16.9
650	25	3,663	- 1.7	51	251	23.1
600	25	4,302	- 5.9	50	250	27.6
550	25	4,972	-10.7	56	250	31.5
500	25	5,704	-15.6	51	252	35.0
450	25	6,482	-20.7	46	250	37.5
400	25	7,353	-26.5	44	251	44.7
350	25	8,303	-33.8	46	249	49.5
300	25	9,366	-41.6		249	55.6
250	25	10,581	-49.4		251	64.3
200	24	12,022	-54.9		250	68.2
175	21	12,877	-57.2		249	67.2
150	19	13,846	-61.3		250	55.8
125	14	14,965	-66.6		256	55.2
100	9	16,288	-70.1			
80	7	17,601	-70.5			
70	5	18,388	-67.3			
60						
50						
40						
30						
25						
20						
15						
10						

DAYTON, OHIO
981 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	297	- 3.6	76	237	3.5
1000	28	140				
950	28	550	- 3.3	67	242	12.6
900	28	975	- 3.0	64	261	20.4
850	28	1,427	- 4.6	59	264	22.5
800	28	1,904	- 6.3	59	263	23.7
750	28	2,408	- 7.3	51	261	28.0
700	28	2,945	- 9.3	44	263	32.2
650	28	3,514	-11.6	41	267	36.7
600	28	4,127	-14.7	39	269	39.6
550	28	4,778	-18.8	36	269	43.5
500	28	5,485	-23.1	36	267	50.3
450	28	6,245	-28.1	37	269	52.6
400	28	7,086	-33.8	R38	262	57.3
350	28	8,010	-40.0	R33	260	62.7
300	28	9,048	-46.7		256	67.0
250	28	10,239	-53.4		260	69.5
200	28	11,662	-56.4		263	66.0
175	28	12,510	-56.2		263	63.3
150	28	13,490	-56.8		264	62.9
125	28	14,641	-58.4		265	56.9
100	28	16,036	-61.1		267	50.7
80	28	17,419	-61.7		269	39.2
70	28	18,245	-61.4		267	35.7
60	27	19,201	-60.3		270	32.6
50	27	20,339	-59.8		268	28.4
40	26	21,741	-58.9		271	26.4
30	23	23,550	-57.7		272	26.4
25	22	24,704	-56.9		272	30.1
20	21	26,117	-56.2		272	32.1
15	20	27,943	-54.8		270	36.9
10	9	30,540	-52.2			

DEL RIO, TEXAS
980 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	314	6.5	77	75	2.3
1000	28	146				
950	28	569	7.5	69	143	3.1
900	28	1,015	7.0	62	207	7.8
850	28	1,485	6.7	50	226	9.1
800	28	1,982	5.6	43	247	11.5
750	28	2,508	2.8	40	255	14.4
700	28	3,063	- .3	40	256	15.0
650	28	3,647	- 4.1	40	253	18.6
600	28	4,279	- 8.2	36	250	24.1
550	28	4,944	-12.4	35	247	28.0
500	28	5,671	-17.5	R36	247	33.2
450	28	6,447	-23.3	35	247	36.7
400	28	7,306	-29.3	R33	248	42.0
350	28	8,246	-36.2	R34	250	47.2
300	28	9,300	-43.7		248	53.0
250	28	10,506	-50.3		247	65.5
200	27	11,951	-55.3		247	73.6
175	27	12,801	-56.6		247	73.2
150	26	13,773	-59.2		248	70.9
125	26	14,903	-63.8		252	58.5
100	26	16,259	-67.3		253	45.5
80	26	17,599	-67.8		257	31.5
70	24	18,404	-66.7		256	22.7
60	24	19,342	-64.4		261	15.5
50	24	20,465	-61.3		261	12.8
40	24	21,860	-58.7		260	9.9
30	23	23,678	-55.9		277	12.8
25	22	24,840	-54.7		272	17.3
20	22	26,273	-52.9		269	22.0
15	16	28,152	-49.8		265	28.0
10						

DENVER, COLO.
834 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	1,611	- 5.8	71	200	2.9
1000	28	168				
950	28	580				
900	28	1,011				
850	28	1,461				
800	28	1,941	- 1.8	44	293	5.8
750	28	2,452	- 4.2	42	301	14.2
700	28	2,994	- 7.2	42	304	16.9
650	28	3,566	-10.3	42	310	19.0
600	28	4,181	-13.9	42	308	20.2
550	28	4,829	-18.3	40	306	23.1
500	28	5,541	-23.0	39	305	26.0
450	28	6,296	-28.8	37	300	25.6
400	28	7,137	-35.6	R32	297	29.5
350	28	8,052	-42.5	R29	293	32.4
300	28	9,078	-49.5		294	33.0
250	28	10,254	-55.5		291	33.2
200	28	11,665	-57.1		283	38.1
175	28	12,513	-56.1		282	38.3
150	28	13,493	-56.7		281	37.5
125	28	14,645	-58.2		283	32.2
100	28	16,043	-60.0		281	28.9
80	28	17,436	-60.7		282	22.1
70	28	18,266	-60.3		278	17.9
60	28	19,233	-59.5		285	16.9
50	28	20,379	-58.6		296	13.8
40	26	21,787	-58.4		301	14.4
30	25	23,610	-56.7		309	12.4
25	21	24,763	-56.4		304	12.2
20	17	26,191	-55.1		327	11.8
15	7	28,107	-52.5			
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DODGE CITY, KANS.
924 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	792	- 4.8	81	323	2.9
1000	28	160				
950	28	567				
900	28	997	- 1.6	61	292	6.2
850	28	1,453	- .8	50	300	9.9
800	28	1,937	- 1.0	45	300	10.9
750	28	2,447	- 2.8	41	286	13.2
700	28	2,995	- 6.0	39	282	16.1
650	28	3,568	- 9.3	38	282	19.2
600	28	4,186	-13.1	38	277	22.3
550	28	4,841	-17.4	36	274	24.5
500	28	5,553	-22.3	R34	270	27.4
450	28	6,312	-27.9	37	272	31.1
400	28	7,156	-34.3	R36	271	31.7
350	28	8,076	-41.3	R33	268	34.8
300	28	9,107	-48.4		260	41.8
250	28	10,290	-54.7		260	48.2
200	28	11,706	-57.3		262	46.6
175	28	12,554	-55.7		263	47.8
150	28	13,534	-56.9		266	43.9
125	27	14,684	-58.9		266	38.3
100	27	16,076	-61.2		266	32.6
80	26	17,458	-61.8		269	24.9
70	26	18,284	-61.4		270	21.4
60	26	19,241	-60.4		274	16.3
50	25	20,384	-59.6		279	15.0
40	21	21,790	-58.6		280	12.8
30	18	23,602	-57.6		295	12.2
25	18	24,753	-57.5		303	13.4
20	15	26,180	-55.0		300	14.2
15	10	28,025	-54.0			
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7						

EL PASO, TEXAS
881 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	1,193	3.9	50	294	2.3
1000	28	151				
950	28	575				
900	28	1,024				
850	28	1,489	5.6	38	301	3.5
800	28	1,983	3.1	40	285	9.7
750	28	2,503	- .1	41	282	14.0
700	28	3,053	- 3.4	38	275	13.4
650	28	3,630	- 7.2	32	274	15.0
600	28	4,254	-11.4	31	274	16.9
550	28	4,913	-15.8	R33	275	18.6
500	28	5,629	-20.5	R31	276	20.0
450	28	6,394	-25.8	R27	277	23.5
400	28	7,246	-31.7	R24	272	31.1
350	28	8,177	-38.4	R26	270	34.4
300	28	9,220	-45.9		268	35.2
250	28	10,416	-52.2		268	42.0
200	28	11,847	-55.4		268	48.4
175	28	12,697	-56.0		266	46.6
150	28	13,673	-57.8		264	46.6
125	28	14,813	-61.3		264	41.2
100	28	16,187	-64.2		266	34.6
80	28	17,546	-65.9		271	24.7
70	28	18,358	-64.2		270	19.2
60	28	19,306	-62.4		268	14.0
50	28	20,438	-60.1		276	10.3
40	28	21,833	-58.8		278	8.2
30	26	23,654	-56.6		276	10.1
25	24	24,823	-54.7		288	10.5
20	20	26,261	-53.3		291	9.7
15	16	28,122	-51.2		283	15.0
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7						

ELY, NEV.
808 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	1,908	- 6.5	71	193	2.7
1000	28	208				
950	28	622				
900	28	1,056				
850	28	1,509				
800	28	1,987	- 3.5	61	232	2.9
750	28	2,500	- 3.6	51	332	6.4
700	28	3,041	- 6.2	46	327	12.0
650	28	3,616	- 9.2	40	325	16.5
600	28	4,233	-12.7	35	322	18.3
550	28	4,889	-16.9	35	313	21.4
500	28	5,601	-21.6	35	317	24.3
450	28	6,365	-26.9	R35	316	26.2
400	28	7,207	-33.6	R35	318	29.1
350	28	8,131	-40.5	R32	323	32.6
300	28	9,163	-48.4		324	35.9
250	28	10,344	-54.9		317	38.1
200	28	11,754	-58.8		309	40.2
175	28	12,596	-57.2		307	38.3
150	27	13,570	-57.8		305	33.8
125	27	14,717	-59.2		303	30.3
100	26	16,108	-61.9		306	24.5
80	25	17,491	-62.4		303	21.4
70	25	18,315	-61.4		310	16.7
60	25	19,273	-60.2		316	13.0
50	25	20,414	-58.8		327	10.5
40	25	21,818	-57.6		336	7.8
30	25	23,638	-56.6		359	8.0
25	24	24,793	-55.9		360	7.8
20	23	26,217	-54.6		342	8.0
15	12	28,080	-53.0		338	7.6
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EMPALME, MEXICO
1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	12	11.2	62	322	3.5
1000	28	120	14.6	48	328	5.1
950	28	555	15.2	33	1	7.6
900	28	1,010	12.8	31	347	4.5
850	28	1,487	9.9	33	287	4.3
800	28	1,987	6.8	33	264	4.5
750	28	2,517	3.9	33	296	6.8
700	28	3,072	.9	R31	290	9.1
650	28	3,660	- 3.1	R28	290	12.2
600	28	4,291	- 7.4	R25	292	16.3
550	28	4,958	-11.9	R25	291	21.0
500	28	5,686	-16.9	R24	292	24.9
450	28	6,465	-22.9	R28	287	30.9
400	28	7,322	-29.4	R30	282	33.8
350	28	8,262	-36.4	33	279	39.0
300	28	9,313	-44.3		276	43.9
250	28	10,515	-51.1		277	53.6
200	28	11,952	-55.0		273	59.8
175	28	12,801	-57.3		274	59.6
150	28	13,771	-59.8		274	54.8
125	28	14,900	-63.8		269	49.0
100	28	16,256	-67.5		267	38.7
80	28	17,598	-68.1		272	31.7
70	28	18,403	-67.1		272	21.8
60	27	19,337	-64.6		273	14.2
50	26	20,462	-61.3		272	12.0
40	23	21,859	-58.3		274	7.2
30	22	23,680	-56.7		271	9.3
25	22	24,840	-55.0		274	14.2
20	21	26,271	-53.4		277	17.9
15	7	28,128	-51.4			
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* FAIRBANKS, ALASKA
998 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	27	135	-30.8	68	3	1.9
1000	27	120			33	2.1
950	27	497	-19.5	67	91	7.4
900	27	898	-19.2	65	93	11.3
850	27	1,323	-18.1	66	104	10.7
800	27	1,777	-18.2	65	111	7.2
750	27	2,254	-20.5	63	129	4.9
700	27	2,765	-22.8	56	120	2.5
650	27	3,302	-25.9	54	133	.8
600	27	3,880	-29.6	56	208	1.6
550	27	4,491	-33.4	56	251	3.1
500	27	5,160	-37.6	55	263	6.0
450	27	5,877	-42.0		278	8.0
400	27	6,671	-46.5		281	11.3
350	27	7,550	-50.3		286	15.0
300	27	8,549	-53.0		284	19.0
250	27	9,725	-52.2		281	26.0
200	27	11,175	-50.5		286	30.3
175	27	12,046	-50.0		288	34.2
150	27	13,054	-50.1		289	36.5
125	27	14,243	-50.6		291	40.8
100	27	15,697	-50.8		290	44.3
80	27	17,148	-50.8		292	46.8
70	27	18,017	-50.8		293	45.8
60	27	19,019	-50.9		295	47.4
50	27	20,203	-51.4		299	49.1
40	27	21,651	-51.5		301	51.1
30	27	23,516	-51.5		305	53.6
25	24	24,706	-50.8		307	58.3
20	20	26,181	-49.5		310	58.1
15	19	28,073	-48.1		309	64.1
10	17	30,791	-46.3		315	67.6
7	6	33,176	-44.3			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

FEBRUARY 1965

FLINT, MICH.
987 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	24	234	- 4.9	71	235	3.5
1000	24	128				
950	24	531	- 6.1	69	250	10.3
900	24	953	- 7.3	68	266	16.9
850	24	1,399	- 7.6	57	268	22.9
800	24	1,870	- 8.6	56	267	25.3
750	24	2,369	- 9.3	43	267	28.7
700	24	2,902	-11.2	44	267	33.4
650	23	3,474	-13.2	46	261	36.5
600	23	4,081	-16.4	44	264	38.5
550	23	4,728	-20.1	43	264	43.3
500	23	5,432	-24.6	43	266	49.9
450	23	6,183	-29.7	40	268	56.7
400	23	7,021	-35.3	39	272	64.5
350	23	7,939	-41.5	47	267	72.3
300	23	8,970	-47.9		261	83.7
250	23	10,155	-53.8		262	89.4
200	23	11,577	-56.1		262	82.8
175	23	12,428	-54.8		264	74.4
150	23	13,413	-55.2		265	67.8
125	23	14,572	-57.0		265	59.1
100	23	15,978	-58.7		267	53.4
80	23	17,379	-59.0		266	46.4
70	23	18,215	-59.3		266	42.5
60	23	19,181	-59.0		266	38.3
50	23	20,325	-58.9		269	30.1
40	22	21,730	-58.0		269	34.8
30	21	23,547	-57.7		268	32.4
25	21	24,700	-56.7		272	35.9
20	20	26,115	-55.8		271	37.7
15	19	27,934	-55.2		271	47.8
10	7	30,619	-50.9			

FORT WORTH, TEXAS
997 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	28	180	4.5	72	295	1.9
1000	28	158			357	3.7
950	28	578	5.1	60	249	4.1
900	28	1,018	4.8	57	246	6.8
850	28	1,484	4.0	57	246	9.5
800	28	1,976	2.7	53	250	11.5
750	28	2,500	.5	50	257	14.8
700	28	3,048	- 2.7	49	258	19.4
650	28	3,635	- 5.8	43	256	22.5
600	28	4,256	- 9.6	39	250	25.6
550	28	4,921	-14.2	36	246	28.2
500	28	5,640	-19.2	35	241	34.2
450	28	6,413	-24.6	37	242	37.3
400	28	7,265	-30.6	38	241	38.1
350	28	8,200	-37.6	R36	239	41.0
300	28	9,246	-45.4		241	49.9
250	28	10,443	-52.3		245	57.1
200	28	11,868	-56.7		249	59.4
175	28	12,714	-56.5		248	60.2
150	28	13,686	-59.2		256	60.6
125	28	14,819	-62.6		256	51.9
100	27	16,187	-66.0		263	41.2
80	26	17,535	-66.2		264	32.6
70	25	18,348	-64.5		267	23.9
60	25	19,294	-63.0		269	18.6
50	23	20,425	-60.6		272	15.7
40	23	21,818	-59.2		278	14.2
30	23	23,628	-57.5		293	12.6
25	20	24,790	-55.9		283	12.4
20	19	26,211	-54.4		279	17.9
15	15	28,062	-52.2		274	23.1
10	6	30,716	-48.5			

GLASGOW, MONT.
932 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	28	696	-13.4	72	14	2.5
1000	28	152				
950	28	542				
900	28	961	- 7.6	60	303	11.7
850	28	1,408	- 6.5	56	305	22.3
800	28	1,881	- 8.0	53	303	25.1
750	28	2,375	-10.5	56	300	28.9
700	28	2,908	-13.4	60	300	33.8
650	28	3,461	-16.7	56	298	35.0
600	28	4,066	-20.1	51	302	37.1
550	28	4,699	-23.9	47	303	43.1
500	28	5,396	-28.5	42	300	46.0
450	28	6,133	-33.5	41	301	47.2
400	28	6,960	-39.4	39	302	49.3
350	28	7,861	-45.5	38	304	49.9
300	28	8,875	-51.2		304	52.1
250	28	10,046	-55.4		306	56.9
200	28	11,465	-55.7		304	49.0
175	28	12,316	-55.1		302	47.6
150	28	13,303	-54.3		302	45.6
125	28	14,468	-55.1		301	42.3
100	28	15,889	-55.9		304	40.6
80	28	17,302	-57.3		302	37.3
70	28	18,147	-56.9		304	38.7
60	28	19,123	-56.5		303	32.8
50	28	20,278	-57.1		307	31.1
40	26	21,687	-57.3		309	32.8
30	24	23,503	-57.1		315	34.4
25	22	24,674	-56.2		315	36.9
20	19	26,086	-55.5		323	22.7
15	14	27,987	-53.2			
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GRAND JUNCTION, COLO.
852 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	27	1,474	- 2.8	80	136	3.3
1000	27	180				
950	27	593				
900	27	1,030				
850	27	1,487			137	6.0
800	27	1,970	- 1.7	54	143	5.1
750	27	2,480	- 4.2	55	290	1.9
700	27	3,022	- 7.5	52	301	8.4
650	27	3,594	-10.4	50	303	12.2
600	27	4,209	-14.0	51	303	16.9
550	27	4,863	-17.8	48	304	19.4
500	27	5,572	-22.7	47	300	22.5
450	27	6,329	-28.3	43	300	23.7
400	27	7,171	-34.7	37	304	24.5
350	27	8,089	-42.1	34	307	28.0
300	27	9,115	-49.3		311	27.6
250	27	10,292	-55.5		311	30.7
200	27	11,703	-57.6		303	31.5
175	27	12,550	-55.9		298	32.1
150	27	13,528	-56.8		297	30.7
125	27	14,678	-58.8		293	30.3
100	27	16,071	-61.0		291	22.5
80	27	17,453	-61.7		295	21.2
70	27	18,280	-61.3		296	17.5
60	27	19,239	-60.1		297	14.0
50	26	20,378	-59.2		307	11.1
40	26	21,777	-58.4		312	10.3
30	26	23,592	-57.4		320	9.9
25	25	24,748	-56.2		328	9.7
20	21	26,167	-55.3		329	11.5
15	14	28,006	-54.4		325	15.3
10	6	30,578	-50.6			

GREAT FALLS, MONT.
884 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	28	1,123	- 3.8	68	244	9.5
1000	28	136				
950	28	547				
900	28	979				
850	28	1,430	- 4.2	49	248	19.6
800	28	1,906	- 6.4	56	272	21.8
750	28	2,406	- 8.8	58	282	25.8
700	28	2,941	-11.4	58	285	30.3
650	28	3,503	-14.9	60	288	33.4
600	28	4,107	-18.4	59	291	34.4
550	28	4,749	-22.6	55	297	35.9
500	28	5,444	-27.8	51	300	39.4
450	28	6,190	-32.8	46	301	44.5
400	28	7,016	-38.1	45	303	48.4
350	28	7,923	-44.2	43	304	55.0
300	28	8,943	-50.8		307	58.3
250	28	10,115	-56.0		309	60.4
200	28	11,524	-57.2		302	49.7
175	27	12,368	-55.5		301	47.0
150	24	13,352	-55.3		304	49.7
125	22	14,507	-56.3		301	47.8
100	20	15,921	-58.2		301	40.8
80	19	17,316	-57.7		301	36.5
70	19	18,159	-56.9		304	32.6
60	18	19,132	-57.5		309	28.7
50	18	20,285	-57.3		311	26.6
40	17	21,698	-57.5		315	30.3
30	16	23,511	-56.7		319	28.9
25	12	24,687	-55.3		324	29.1
20	11	26,106	-54.8		319	28.2
15	7	28,009	-53.3			
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GREEN BAY, WIS.
989 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	28	210	-11.4	71	279	4.1
1000	28	123				
950	28	515	-11.0	64	280	8.2
900	28	931	-11.0	58	283	12.4
850	28	1,371	-10.4	52	287	16.3
800	28	1,838	-10.7	45	281	20.8
750	28	2,331	-11.7	40	279	25.4
700	28	2,860	-13.6	39	281	28.2
650	28	3,418	-16.3	40	281	33.0
600	28	4,019	-19.0	40	278	40.2
550	28	4,656	-22.8	42	278	42.3
500	28	5,354	-27.2	40	276	45.6
450	28	6,097	-32.3	36	277	50.5
400	28	6,926	-37.8	R33	276	52.4
350	28	7,834	-44.0	R29	276	59.2
300	28	8,856	-49.6		272	64.3
250	28	10,036	-53.6		267	66.8
200	28	11,464	-55.2		269	66.4
175	28	12,318	-54.3		271	68.0
150	28	13,308	-53.7		270	60.0
125	28	14,477	-55.0		272	55.2
100	28	15,898	-56.7		272	46.8
80	28	17,306	-58.0		273	47.0
70	28	18,147	-57.8		276	41.8
60	28	19,120	-57.9		277	36.3
50	27	20,277	-58.2		282	29.3
40	24	21,702	-57.8		289	26.2
30	24	23,517	-57.7		288	30.3
25	23	24,666	-57.4		284	31.9
20	21	26,071	-56.7		287	33.2
15	15	27,908	-55.8		291	38.1
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GREENSBORO, N. C.
986 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	28	273	1.3	76	288	2.3
1000	28	158				
950	28	574	3.1	56	274	7.4
900	28	1,011	2.3	52	261	13.8
850	28	1,472	1.3	49	264	17.9
800	28	1,959	.0	49	268	21.4
750	28	2,474	- 1.7	43	269	25.8
700	28	3,023	- 4.1	42	269	31.7
650	28	3,604	- 6.8	44	266	36.5
600	28	4,227	- 9.9	42	262	40.4
550	28	4,889	-13.9	43	260	45.6
500	28	5,612	-18.5	40	259	51.5
450	28	6,388	-23.6	R40	260	57.9
400	28	7,243	-29.8	R41	262	63.5
350	28	8,181	-36.8	R37	260	67.4
300	28	9,231	-44.4		265	73.2
250	28	10,433	-52.0		265	78.5
200	28	11,859	-57.1		269	88.2
175	28	12,702	-58.1		270	89.7
150	28	13,669	-59.7		269	82.2
125	28	14,803	-62.2		269	65.1
100	28	16,171	-65.1		271	53.8
80	28	17,529	-65.2		267	42.9
70	28	18,342	-64.3		268	34.4
60	27	19,288	-62.0		271	26.6
50	27	20,418	-60.8		272	22.5
40	26	21,811	-59.2		272	19.4
30	26	23,622	-56.9		273	22.0
25	26	24,780	-55.5		272	19.2
20	24	26,213	-54.5		273	19.6
15	22	28,060	-53.6		267	31.7
10						

GUAM, MARIANA IS.
998 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	28	111	24.2	84	82	7.8
1000	28	97				
950	28	548	21.9	80	77	20.8
900	28	1,014	19.0	75	81	22.3
850	28	1,504	16.5	65	82	19.6
800	28	2,019	14.6	45	80	17.3
750	28	2,559	12.8	30	85	14.2
700	28	3,138	10.1	R24	85	12.2
650	28	3,750	6.8	R20	91	10.7
600	28	4,403	3.1	R21	92	11.5
550	28	5,104	- 1.2	R23	105	10.1
500	28	5,856	- 5.2	R20	101	9.1
450	28	6,679	-10.3	R20	94	7.4
400	28	7,574	-15.9	R21	99	6.4
350	28	8,567	-22.7	R21	86	4.9
300	28	9,678	-31.2	R21	68	2.7
250	28	10,943	-41.4		203	3.7
200	28	12,417	-53.7		182	7.0
175	28	13,261	-61.0		164	8.7
150	28	14,201	-68.8		154	10.7
125	28	15,269	-77.2		143	13.6
100	28	16,525	-83.7		128	14.8
80	25	17,771	-80.3		116	6.6
70	25	18,534	-75.3		185	2.5
60	25	19,439	-70.9		259	5.8
50	25	20,532	-66.0		251	7.6
40	24	21,901	-60.5		187	2.1
30	24	23,718	-55.6		79	14.6
25	24	24,886	-53.7		86	24.9
20	21	26,329	-51.1		88	36.5
15	20	28,219	-47.1		86	42.2
10	13	30,917	-43.0			

HILO, HAWAII
1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	28	11	18.0	82	288	3.5
1000	28	120	19.0	76	320	5.2
950	28	558	16.7	76	360	8.5
900	28	1,020	13.6	79	4	6.8
850	28	1,497	10.7	77	348	3.5
800	28	2,003	7.7	74	309	2.5
750	28	2,532	6.5	46	267	3.7
700	28	3,098	3.8	31	268	7.0
650	28	3,696	.5	R23	272	8.7
600	28	4,334	- 3.3	R22	279	10.7
550	28	5,011	- 8.1	R20	276	14.0
500	28	5,750	-13.2	R21	269	20.0
450	28	6,535	-18.9	R24	268	25.8
400	28	7,411	-25.0	R29	263	29.7
350	28	8,369	-30.9	R34	259	37.9
300	28	9,448	-37.7	R32	257	46.6
250	28	10,687	-44.6		265	54.2
200	28	12,153	-53.1		275	63.1
175	28	13,005	-57.7		278	62.5
150	28	13,966	-62.8		283	56.7
125	28	15,073	-68.7		282	45.5
100	28	16,394	-73.1		285	29.3
80	28	17,702	-72.8		279	15.3
70	28	18,486	-71.5		282	9.5
60	27	19,406	-67.3		264	3.1
50	26	20,519	-62.5		176	1.2
40	26	21,909	-58.8		84	1.7
30	22	23,734	-54.8		44	3.5
25	22	24,908	-52.2		50	6.2
20	22	26,359	-50.1		47	4.9
15	17	28,258	-48.0		92	7.4
10	7	30,971	-45.0			

HUNTINGTON, W. VA.
989 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	28	246	- 1.6	74	193	2.5
1000	28	155				
950	28	565	- .5	58	224	10.9
900	28	997	- 1.8	57	247	17.3
850	28	1,451	- 3.1	57	261	22.0
800	28	1,931	- 3.8	52	266	24.7
750	28	2,438	- 5.9	49	267	28.9
700	28	2,978	- 7.8	44	267	33.8
650	28	3,548	-10.2	39	270	35.9
600	28	4,166	-13.1	35	270	40.0
550	28	4,819	-17.0	35	269	46.4
500	28	5,533	-21.6	R34	268	52.3
450	28	6,296	-26.5	38	267	56.5
400	28	7,145	-32.2	42	255	61.0
350	28	8,075	-38.5	48	259	62.2
300	28	9,118	-45.7		263	64.9
250	28	10,313	-52.4		265	71.1
200	28	11,740	-56.2		265	72.7
175	28	12,586	-57.0		264	73.8
150	27	13,554	-57.4		268	69.5
125	27	14,700	-59.9		269	60.4
100	26	16,090	-62.2		270	53.4
80	25	17,465	-62.5		266	37.5
70	25	18,287	-62.8		265	31.7
60	23	19,241	-60.9		262	28.4
50	23	20,380	-59.7		268	24.5
40	23	21,778	-58.8		270	25.6
30	23	23,592	-56.9		271	27.0
25	23	24,751	-55.6		273	26.6
20	23	26,177	-54.5		274	28.6
15	15	28,042	-53.7		265	37.5
10	7	30,683	-50.5			

* INTERNAT. FALLS, MINN.
970 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	28	360	-19.5	67	248	3.1
1000	28	129				
950	28	508	-17.5	71	256	4.5
900	28	917	-16.1	75	281	11.5
850	28	1,349	-14.1	68	292	17.9
800	28	1,809	-14.4	70	293	21.6
750	28	2,296	-15.6	64	292	25.6
700	28	2,816	-17.4	61	291	27.0
650	28	3,365	-19.9	62	292	31.1
600	28	3,960	-22.9	62	291	34.2
550	28	4,588	-26.2	67	290	38.1
500	28	5,278	-30.2	64	291	42.7
450	28	6,014	-33.8	60	292	48.6
400	28	6,834	-40.7	64	289	53.6
350	28	7,731	-46.6		289	58.1
300	28	8,739	-52.4		287	57.9
250	28	9,907	-55.6		285	58.7
200	27	11,339	-55.7		280	53.8
175	27	12,191	-54.5		279	49.3
150	27	13,178	-54.3		279	49.5
125	27	14,345	-55.0		280	47.8
100	27	15,766	-56.2		285	49.7
80	27	17,179	-57.3		279	40.8
70	27	18,020	-58.0		280	42.5
60	26	18,988	-58.6		285	41.0
50	25	20,143	-59.1		283	38.1
40	21	21,588	-58.4		291	33.4
30	19	23,416	-57.2		292	35.5
25	15	24,593	-57.5		301	37.9
20	13	26,024	-57.2		304	31.5
15	[illegible]	27,857	-56.6			
10	7	30,449	-55.8			
7						
5						

JACKSON, MISS.
1008 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	28	94	5.3	81	104	1.2
1000	28	154	5.9	75	78	2.1
950	28	576	6.9	61	182	2.9
900	28	1,020	6.5	52	240	5.6
850	28	1,489	5.4	50	265	9.7
800	28	1,983	3.5	48	269	14.6
750	28	2,502	1.4	44	267	17.7
700	28	3,059	- 1.1	39	267	22.1
650	28	3,643	- 4.3	R37	261	29.3
600	28	4,275	- 7.5	37	256	33.2
550	28	4,938	-12.0	38	254	37.5
500	28	5,670	-16.7	37	254	42.5
450	28	6,449	-22.0	R36	253	47.2
400	28	7,312	-27.9	R33	251	52.8
350	28	8,258	-34.8	R36	251	59.1
300	28	9,315	-43.2	56	253	68.0
250	28	10,521	-51.4		252	80.6
200	28	11,949	-56.7		253	89.9
175	28	12,793	-58.1		255	90.5
150	28	13,758	-60.8		257	83.5
125	28	14,882	-64.6		257	69.7
100	28	16,233	-68.4		261	53.4
80	27	17,567	-67.6		264	37.9
70	26	18,372	-66.4		268	28.6
60	26	19,313	-64.2		271	20.2
50	25	20,437	-61.5		271	14.8
40	23	21,819	-59.7		272	17.1
30	23	23,630	-56.9		278	19.2
25	21	24,785	-55.3		270	20.4
20	19	26,213	-52.8		265	25.8
15	15	28,089	-50.8			
10	5	30,720	-47.7			
7						
5						

JACKSONVILLE, FLA.
1020 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	28	5	10.0	86	345	4.5
1000	28	165	11.1	78	357	4.3
950	28	595	10.9	70	227	2.1
900	28	1,045	10.3	62	241	9.7
850	28	1,520	8.4	57	254	15.0
800	28	2,019	6.2	50	264	18.8
750	28	2,541	3.7	48	262	24.1
700	28	3,104	1.1	43	260	28.0
650	28	3,692	- 2.1	40	262	28.9
600	28	4,329	- 5.2	R34	264	32.8
550	28	4,999	- 9.2	R36	263	37.5
500	28	5,737	-14.0	R32	260	46.4
450	28	6,522	-19.2	R32	257	48.8
400	28	7,394	-25.6	33	259	57.3
350	28	8,348	-32.9	R34	259	63.7
300	28	9,413	-41.2	32	260	71.7
250	28	10,628	-49.5		263	83.3
200	28	12,065	-56.2		267	94.2
175	28	12,909	-58.8		266	89.6
150	28	13,867	-62.9		267	83.5
125	28	14,977	-67.3		269	66.6
100	27	16,310	-71.1		268	55.9
80	27	17,628	-70.8		266	35.7
70	27	18,423	-68.5		265	24.5
60	26	19,357	-65.2		264	14.2
50	26	20,478	-61.1		273	9.7
40	25	21,874	-58.2		285	8.0
30	25	23,699	-55.0		273	12.4
25	25	24,869	-53.0		271	17.5
20	24	26,316	-50.8		266	23.3
15	22	28,182	-48.3		266	31.7
10	12	30,874	-43.7			
7						
5						

JOHN F. KENNEDY INT. ARPT.NY
1018 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	28	5	- 2.0	65	309	6.8
1000	28	147	- 2.6	61	310	7.6
950	28	553	- 4.1	60	295	13.2
900	28	979	- 4.8	53	289	15.3
850	28	1,428	- 5.2	52	285	19.8
800	28	1,904	- 6.2	52	277	23.9
750	28	2,411	- 7.8	52	275	27.6
700	28	2,943	- 9.9	46	272	32.6
650	28	3,511	-12.4	43	273	38.7
600	28	4,119	-15.7	39	273	43.9
550	28	4,768	-19.3	R34	273	49.3
500	28	5,473	-24.0	R34	274	57.5
450	28	6,238	-28.7	R36	273	64.7
400	28	7,069	-34.2	41	273	68.4
350	28	7,991	-40.2	44	276	77.5
300	28	9,027	-47.0		273	82.8
250	28	10,219	-52.3		278	78.9
200	27	11,635	-55.5		276	76.9
175	27	12,486	-55.3		273	69.9
150	27	13,469	-55.8		270	66.0
125	27	14,624	-57.9		273	52.6
100	27	16,024	-59.7		271	44.1
80	27	17,416	-60.4		271	37.5
70	27	18,248	-59.9		271	32.8
60	27	19,213	-59.1		272	29.3
50	27	20,357	-58.8		268	24.3
40	27	21,756	-58.7		269	24.9
30	26	23,569	-56.5		268	26.2
25	24	24,732	-56.3		270	27.6
20	22	26,148	-56.4		269	35.4
15	19	27,989	-54.9		268	46.6
10	11	30,583	-53.2			
7	7	32,901	-46.5			
5	6	35,126	-42.5			

JOHNSTON IS., PACIFIC AREA
1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	27	3	23.2	67	68	14.0
1000	27	125	22.3	65	68	18.1
950	27	577	18.6	68	65	20.6
900	27	1,031	14.9	71	70	21.2
850	27	1,513	11.3	73	76	18.1
800	27	2,017	8.5	62	74	15.5
750	27	2,559	8.6	R29	64	14.2
700	27	3,121	7.4	R16	50	11.3
650	27	3,722	4.2	R14	30	9.7
600	27	4,374	.3	R14	7	9.7
550	27	5,058	- 4.3	R15	351	10.9
500	27	5,810	- 9.7	R15	336	14.6
450	27	6,615	-14.7	R17	325	20.0
400	27	7,500	-20.4	R18	320	29.3
350	27	8,478	-25.9	R19	315	40.4
300	27	9,581	-32.5	R20	309	48.4
250	27	10,844	-41.0	R22	305	51.9
200	27	12,325	-52.6		299	51.7
175	27	13,175	-59.3		300	53.2
150	27	14,124	-66.5		299	49.5
125	27	15,207	-73.8		301	43.7
100	24	16,486	-79.0		305	30.3
80	24	17,752	-78.5		313	13.6
70	24	18,521	-74.3		302	8.4
60	24	19,427	-69.7		276	3.5
50	23	20,529	-63.9		247	3.7
40	23	21,911	-59.3		96	2.9
30	21	23,732	-55.1		94	11.7
25	21	24,902	-53.2		81	18.5
20	19	26,343	-50.3		73	26.8
15	12	28,229	-48.1		84	26.6
10						
7						
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

FEBRUARY 1965

KEY WEST, FLORIDA
1017 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	26	3	21.1	78	87	3.5
1000	26	148	20.3	79	115	5.6
950	26	588	17.5	83	139	7.6
900	26	1,052	15.2	78	161	7.2
850	26	1,535	12.9	73	196	7.4
800	26	2,043	10.6	65	209	8.2
750	26	2,577	7.9	59	212	8.5
700	26	3,146	5.2	55	229	10.3
650	26	3,742	2.2	54	223	14.0
600	26	4,391	- 1.2	51	232	14.2
550	26	5,072	- 5.2	52	240	16.5
500	26	5,824	- 9.9	53	249	16.9
450	26	6,623	-15.4	50	258	21.4
400	26	7,509	-22.0	48	259	27.8
350	26	8,476	-29.6	49	260	31.3
300	26	9,557	-37.8	41	262	40.4
250	26	10,792	-45.7		264	54.2
200	26	12,249	-54.5		264	59.6
175	26	13,096	-59.2		264	58.3
150	26	14,049	-64.9		265	52.3
125	26	15,146	-70.4		263	46.0
100	26	16,453	-75.2		262	37.9
80	26	17,752	-75.9		260	28.4
70	26	18,516	-73.4		259	22.3
60	26	19,426	-69.4		264	13.8
50	26	20,530	-63.7		290	5.1
40	26	21,920	-57.8		286	6.2
30	26	23,750	-54.7		298	6.8
25	26	24,923	-52.2		283	8.2
20	26	26,376	-50.1		277	10.5
15	26	28,266	-47.1		272	14.2
10	19	30,975	-42.5		256	24.5
7	8	33,355	-41.7			

KING SALMON, ALASKA
1004 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	27	15	-14.4	80	84	1.6
1000	27	43			15	5.8
950	27	439	- 9.9	69	55	2.7
900	27	855	-10.4	63	329	1.9
850	27	1,294	-11.4	60	262	4.1
800	27	1,758	-13.0	57	250	6.2
750	27	2,247	-15.2	52	259	7.0
700	27	2,767	-17.9	48	260	9.7
650	27	3,319	-20.3	46	261	12.4
600	27	3,907	-23.8	44	266	14.0
550	27	4,535	-27.7	41	268	15.2
500	27	5,217	-32.2	39	268	18.3
450	27	5,953	-36.6	44	267	21.2
400	27	6,762	-41.5	45	263	22.7
350	27	7,658	-46.5		263	24.1
300	27	8,671	-50.1		263	26.0
250	27	9,859	-50.5		263	28.6
200	26	11,322	-48.7		265	27.8
175	26	12,200	-48.7		259	27.4
150	26	13,213	-48.5		264	25.4
125	26	14,411	-49.1		263	25.3
100	25	15,871	-49.9		266	21.0
80	25	17,329	-50.2		271	20.4
70	25	18,200	-50.2		272	18.1
60	24	19,203	-50.3		273	17.7
50	24	20,393	-50.1		288	17.5
40	22	21,854	-49.7		299	14.8
30	19	23,738	-48.6		305	15.7
25	18	24,938	-48.2		316	19.4
20	17	26,417	-46.4		324	22.3
15	8	28,347	-46.7			
10						
7						

KOROR, CAROLINE IS.
+ 1006 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	30	26.2	85	76	7.8
1000	28	79	25.9	85	76	9.5
950	28	526	22.7	84	70	18.3
900	28	1,001	19.7	80	71	20.6
850	28	1,493	17.3	73	75	17.7
800	28	2,010	15.1	67	73	15.5
750	28	2,551	12.6	59	76	14.4
700	28	3,132	9.4	56	77	13.2
650	28	3,739	6.0	52	77	16.9
600	28	4,395	2.4	50	85	16.3
550	28	5,090	- 1.3	48	87	15.9
500	28	5,848	- 5.6	46	93	14.6
450	28	6,665	-10.3	41	95	17.3
400	28	7,566	-15.7	37	96	17.3
350	28	8,559	-22.6	33	96	19.0
300	28	9,672	-31.0	R29	100	19.6
250	28	10,936	-41.6		104	21.2
200	28	12,408	-54.2		109	29.7
175	28	13,251	-61.2		114	32.1
150	28	14,190	-68.7		112	36.7
125	28	15,261	-76.1		102	35.9
100	28	16,526	-81.5		101	25.6
80	28	17,788	-76.5		30	1.2
70	28	18,564	-72.4		301	10.3
60	28	19,479	-68.2		275	15.5
50	26	20,581	-65.0		269	18.3
40	26	21,957	-60.6		263	10.5
30	26	23,764	-56.7		94	12.6
25	24	24,925	-55.4		92	34.4
20	22	26,357	-52.3		92	51.3
15	18	28,237	-47.9		91	58.3
10	9	30,930	-44.3			
7						

KOTZEBUE, ALASKA
1018 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	5	-25.1	69	74	4.9
1000	28	134	-19.5	57	71	8.4
950	28	517	-17.8	51	81	12.8
900	28	922	-18.4	50	80	13.4
850	28	1,348	-19.1	51	77	11.3
800	28	1,798	-19.9	49	76	11.3
750	28	2,278	-21.4	43	70	10.7
700	28	2,783	-23.7	39	58	9.9
650	28	3,323	-26.4	36	52	8.7
600	28	3,897	-29.7	R35	41	6.6
550	28	4,510	-33.2	R34	26	6.4
500	28	5,178	-37.0	R37	346	6.2
450	28	5,900	-41.0	38	342	8.4
400	28	6,694	-45.7		322	12.0
350	28	7,573	-50.6		310	12.6
300	28	8,568	-54.2		296	15.3
250	28	9,735	-54.1		288	18.5
200	28	11,175	-51.6		279	19.2
175	28	12,043	-50.8		278	23.3
150	28	13,048	-50.3		275	26.4
125	28	14,237	-50.4		275	28.2
100	28	15,694	-50.1		274	32.8
80	28	17,151	-50.0		276	38.1
70	28	18,024	-49.9		277	39.6
60	28	19,032	-49.9		282	42.7
50	28	20,224	-49.8		280	43.7
40	28	21,684	-49.9		285	44.1
30	28	23,566	-49.4		287	49.1
25	27	24,764	-48.7		289	51.9
20	27	26,233	-47.7		293	55.6
15	24	28,186	-45.2		292	59.6
10	14	30,896	-42.7		293	74.2
7						

KWAJALEIN, MARSHALL IS.
1009 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	26	4	26.3	75	63	17.1
1000	26	85	25.7	74	65	18.3
950	26	535	21.9	79	70	23.1
900	26	1,004	18.8	78	76	23.3
850	26	1,494	16.4	74	82	19.4
800	26	2,009	14.9	59	87	14.8
750	26	2,555	13.8	32	87	13.2
700	26	3,133	10.8	31	84	14.0
650	26	3,747	7.1	26	77	13.4
600	26	4,400	3.2	27	78	13.2
550	26	5,100	- 1.0	29	79	12.4
500	26	5,854	- 5.4	22	82	14.4
450	26	6,673	-10.6	18	76	15.7
400	26	7,569	-16.1	18	70	12.8
350	26	8,563	-21.8	22	68	9.3
300	26	9,679	-30.7	27	58	5.4
250	26	10,946	-40.8	36	121	3.3
200	26	12,425	-53.0	38	159	6.6
175	26	13,271	-60.5	38	164	6.8
150	26	14,213	-68.4	36	101	3.5
125	26	15,284	-76.6		65	6.0
100	23	16,547	-81.8		82	16.5
80	20	17,807	-78.4		89	4.5
70	19	18,578	-74.0		276	7.2
60	18	19,484	-70.2		268	16.9
50	18	20,576	-67.3		271	14.8
40	16	21,935	-62.2		275	7.2
30	15	23,726	-58.5		80	12.0
25	14	24,878	-55.9		85	31.7
20	14	26,305	-53.3		91	49.3
15	14	28,186	-47.5		91	59.8
10	13	30,896	-42.7		89	65.1
7	8	33,322	-39.8			

LAKE CHARLES, LA.
1017 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	5	9.2	83	65	3.9
1000	28	148	10.1	69	79	6.6
950	28	576	9.6	60	133	5.1
900	28	1,024	8.8	56	199	4.5
850	28	1,496	7.4	51	240	7.6
800	28	1,994	5.6	50	249	11.1
750	28	2,518	3.0	51	249	15.3
700	28	3,077	.4	41	253	20.8
650	28	3,669	- 2.6	38	252	26.2
600	28	4,301	- 6.2	R34	248	31.7
550	28	4,973	-10.7	R33	248	35.4
500	28	5,704	-15.7	R36	248	39.4
450	28	6,488	-21.1	R35	241	47.4
400	28	7,351	-27.2	R33	242	55.4
350	28	8,300	-34.3	31	244	62.0
300	28	9,360	-42.4	R30	245	70.7
250	28	10,570	-50.2		245	78.5
200	28	12,007	-55.6		245	85.5
175	28	12,855	-57.4		247	84.1
150	28	13,821	-61.2		250	76.0
125	28	14,943	-64.8		251	64.3
100	28	16,290	-68.9		253	51.3
80	26	17,625	-68.7		258	30.3
70	26	18,427	-66.6		253	24.3
60	26	19,368	-63.7		264	16.3
50	26	20,496	-60.5		269	12.8
40	25	21,894	-58.8		272	12.2
30	25	23,711	-55.9		271	12.0
25	25	24,875	-54.5		270	15.7
20	25	26,312	-52.2		271	19.8
15	23	28,183	-49.2		267	27.2
10	14	30,872	-43.9			
7						

LANDER, WYO.
825 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	1,696	- 8.2	63	232	2.7
1000	28	179				
950	28	584				
900	28	1,012				
850	28	1,466				
800	28	1,941	- 4.1	49	264	2.1
750	28	2,446	- 5.4	44	302	5.1
700	28	2,989	- 7.9	44	305	12.6
650	28	3,556	-11.7	43	303	20.0
600	28	4,171	-15.6	42	301	26.8
550	28	4,814	-19.5	37	300	30.5
500	28	5,526	-23.9	34	300	33.4
450	28	6,279	-29.4	R30	297	35.0
400	28	7,119	-36.0	R27	300	36.9
350	28	8,033	-42.9	R24	299	41.2
300	28	9,056	-49.9		300	43.3
250	28	10,230	-56.0		303	45.6
200	27	11,647	-57.7		299	44.1
175	27	12,493	-56.0		297	46.0
150	27	13,475	-55.8		296	43.9
125	27	14,633	-56.9		296	40.6
100	27	16,042	-58.0		293	31.5
80	27	17,441	-59.4		293	25.6
70	25	18,273	-59.1		298	21.6
60	25	19,243	-58.3		305	19.4
50	23	20,399	-58.1		307	16.7
40	23	21,807	-57.1		310	15.7
30	22	23,629	-56.6		315	15.9
25	20	24,788	-56.0		321	14.0
20	14	26,221	-54.6		350	13.8
15	5	28,112	-51.7			
10						
7						

LAS VEGAS, NEV.
940 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	660	5.6	42	311	5.1
1000	28	150				
950	28	574				
900	28	1,020	8.6	31	347	9.1
850	28	1,491	5.9	33	341	10.9
800	28	1,984	2.8	35	336	10.1
750	28	2,502	- .1	34	329	9.3
700	28	3,054	- 3.4	33	328	10.3
650	28	3,628	- 6.6	29	322	12.0
600	28	4,258	-10.7	R26	315	16.3
550	28	4,912	-15.2	R26	319	19.8
500	28	5,636	-19.9	R27	325	23.3
450	28	6,398	-25.8	R30	324	26.6
400	28	7,253	-31.9	R29	322	30.9
350	28	8,183	-39.0	R29	320	35.0
300	28	9,222	-46.8		317	35.9
250	28	10,409	-54.5		315	40.0
200	28	11,823	-57.3		308	38.9
175	28	12,668	-57.0		304	37.3
150	28	13,644	-57.2		299	34.6
125	28	14,791	-59.8		299	29.7
100	28	16,175	-62.5		296	26.4
80	23	17,565	-63.8		297	18.1
70	23	18,384	-63.4		304	15.7
60	23	19,336	-60.8		310	9.9
50	22	20,475	-59.5		326	7.6
40	22	21,877	-57.6		330	7.0
30	21	23,698	-55.9		353	7.2
25	20	24,860	-55.1		1	5.4
20	18	26,292	-53.4		351	4.9
15	9	28,170	-50.6			
10						
7						

* LIHUE, HAWAII
1012 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	36	18.1	75	9	6.8
1000	28	139	18.9	69	14	10.5
950	28	576	15.5	75	22	16.9
900	28	1,034	11.8	82	26	16.5
850	28	1,511	8.7	78	27	14.0
800	28	2,011	7.2	48	25	12.4
750	28	2,540	6.3	34	17	10.3
700	28	3,105	3.7	27	1	8.4
650	28	3,700	- .1	26	344	9.1
600	28	4,339	- 4.3	24	334	13.8
550	28	5,013	- 8.7	26	320	14.6
500	28	5,752	-13.8	26	311	18.5
450	28	6,538	-19.9	28	307	20.0
400	28	7,407	-26.5	27	297	25.3
350	28	8,359	-32.8	25	295	30.7
300	28	9,429	-39.5	20	287	37.9
250	27	10,655	-45.9		285	50.3
200	27	12,120	-52.2		287	60.8
175	27	12,976	-56.6		287	62.2
150	26	13,943	-61.4		286	57.5
125	25	15,056	-67.4		285	47.0
100	25	16,383	-72.3		279	37.1
80	23	17,692	-72.5		277	20.2
70	23	18,479	-70.8		279	12.4
60	22	19,398	-67.8		276	6.2
50	21	20,509	-62.7		190	2.7
40	20	21,899	-58.7		102	1.9
30	19	23,722	-55.3		352	3.1
25	19	24,891	-53.2		302	3.1
20	16	26,329	-51.1		289	6.8
15	16	28,208	-49.4		284	6.6
10	16	30,882	-46.2		204	7.0
7	7	33,304	-42.6			

LITTLE ROCK, ARK.
1009 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	79	2.4	81	295	1.7
1000	28	154	3.6	67	253	2.7
950	28	571	4.3	56	258	6.8
900	28	1,011	3.4	52	264	12.0
850	28	1,474	1.9	52	271	14.6
800	28	1,962	.2	51	278	17.1
750	28	2,477	- 1.7	44	274	22.0
700	28	3,025	- 4.3	38	270	24.5
650	28	3,601	- 7.2	34	264	28.9
600	28	4,228	-10.4	R30	264	33.4
550	28	4,886	-14.6	R24	263	36.1
500	28	5,608	-19.3	R26	257	42.5
450	28	6,377	-24.6	R28	253	45.1
400	28	7,233	-30.6	R31	252	50.7
350	28	8,167	-37.5	R29	252	57.1
300	28	9,214	-45.1		251	65.7
250	28	10,411	-52.5		253	72.1
200	28	11,835	-57.0		250	77.3
175	28	12,680	-57.0		252	79.3
150	28	13,651	-58.9		254	72.3
125	28	14,787	-62.1		255	62.9
100	28	16,155	-64.9		257	47.8
80	27	17,513	-65.0		260	37.1
70	26	18,326	-64.1		263	25.4
60	25	19,277	-61.9		265	22.3
50	24	20,409	-60.5		269	17.5
40	23	21,806	-59.5		276	16.9
30	23	23,614	-57.6		278	16.1
25	23	24,769	-56.2		270	16.1
20	20	26,190	-54.1		271	18.8
15	11	28,027	-52.9			
10	5	30,700	-49.2			
7						

MCGRATH, ALASKA
999 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	103	-25.9	61	277	.8
1000	28	95			226	.6
950	28	477	-19.7	62	62	10.1
900	28	878	-17.1	64	74	10.7
850	28	1,308	-15.4	62	82	7.0
800	28	1,766	-16.3	57	75	2.9
750	28	2,248	-18.1	55	15	2.9
700	28	2,763	-20.3	50	349	2.5
650	28	3,306	-23.3	44	300	3.3
600	28	3,891	-26.8	41	320	5.4
550	28	4,508	-30.6	40	302	6.6
500	28	5,187	-35.3	R38	293	9.3
450	28	5,913	-38.9	38	277	12.4
400	28	6,718	-43.5	31	285	16.5
350	28	7,607	-48.0		301	16.1
300	28	8,615	-51.3		295	21.8
250	28	9,797	-51.4		281	25.3
200	28	11,255	-49.0		277	27.2
175	28	12,133	-48.5		275	29.5
150	28	13,147	-48.5		276	32.1
125	28	14,345	-49.1		278	34.6
100	28	15,808	-49.4		280	34.8
80	28	17,268	-49.8		279	33.8
70	28	18,141	-49.8		283	34.2
60	28	19,150	-49.6		284	35.4
50	27	20,349	-49.4		286	34.6
40	26	21,802	-49.6		291	37.5
30	26	23,686	-49.2		297	38.9
25	25	24,879	-48.6		300	41.4
20	24	26,350	-47.6		308	48.0
15	21	28,232	-47.1		308	43.7
10						
7						

MAJURO, MARSHALL IS.
+ 1008 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	3	27.7	75	68	15.3
1000	28	75	26.7	73	67	16.9
950	28	518	22.7	74	64	24.1
900	28	996	19.5	75	72	23.3
850	28	1,487	16.9	74	79	21.4
800	28	2,003	15.2	62	86	18.1
750	28	2,546	13.5	48	86	15.9
700	28	3,128	10.8	40	85	15.9
650	28	3,739	7.2	38	86	15.3
600	28	4,396	3.4	34	84	14.4
550	28	5,093	- .6	35	84	13.0
500	28	5,852	- 4.8	37	94	15.2
450	28	6,674	- 9.4	R25	87	19.2
400	28	7,578	-14.5	R22	79	16.5
350	28	8,576	-21.5	R21	73	11.5
300	28	9,694	-29.8	R23	93	6.8
250	28	10,967	-40.0	24	146	5.1
200	28	12,451	-52.6		166	6.4
175	28	13,299	-59.9		153	5.4
150	28	14,245	-67.9		66	4.1
125	28	15,319	-76.1		54	12.4
100	28	16,588	-82.4		73	17.3
80	27	17,840	-78.4		66	6.8
70	27	18,616	-71.8		276	10.9
60	27	19,530	-68.5		271	19.6
50	27	20,637	-64.1		267	21.0
40	26	22,017	-60.5		268	12.2
30	24	23,829	-56.9		98	12.6
25	24	24,989	-55.5		92	31.9
20	19	26,425	-51.6		91	53.0
15	11	28,315	-46.5			
10						
7						

* MARCUS IS., N. PACIFIC
1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	9	21.5	69	45	4.7
1000	28	131	19.7	66	50	5.2
950	28	568	15.7	69	95	2.9
900	28	1,027	12.4	73	227	3.9
850	28	1,505	10.0	63	246	9.3
800	28	2,008	8.1	55	253	14.4
750	28	2,535	6.7	43	256	16.9
700	28	3,104	4.6	35	256	22.3
650	28	3,701	2.0	26	262	28.2
600	28	4,346	- 1.6	25	266	35.7
550	28	5,029	- 5.2	24	266	42.3
500	28	5,776	- 9.7	25	265	46.4
450	28	6,574	-14.3	24	267	52.4
400	28	7,468	-20.1	22	269	59.6
350	28	8,447	-25.4	20	270	68.4
300	28	9,551	-32.0	19	271	73.2
250	28	10,814	-41.4	19	272	73.2
200	28	12,292	-52.8		271	78.3
175	27	13,142	-59.0		269	73.6
150	27	14,094	-65.7		268	69.7
125	27	15,184	-72.0		267	62.2
100	27	16,480	-77.3		266	48.0
80	27	17,758	-76.6		265	31.1
70	27	18,533	-72.6		266	19.8
60	27	19,450	-67.4		265	10.3
50	27	20,563	-62.3		194	2.7
40	27	21,958	-57.5		151	3.3
30	27	23,794	-53.5		71	5.6
25	27	24,971	-52.0		135	4.1
20	27	26,424	-49.3		237	6.4
15	26	28,329	-45.3		249	11.8
10	19	31,056	-41.1		267	16.9
7	5	33,556	-37.6			

MEDFORD, OREG.
975 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	27	401	1.4	82	190	1.0
1000	27	192				
950	27	609	3.3	74	258	.8
900	27	1,046	3.7	64	209	1.7
850	27	1,510	2.6	54	263	2.7
800	27	1,999	.6	48	288	8.0
750	27	2,513	- 2.2	48	292	12.6
700	27	3,060	- 5.1	43	294	16.5
650	27	3,637	- 8.1	42	298	21.2
600	27	4,258	-11.3	39	301	24.3
550	27	4,917	-15.5	39	304	28.0
500	27	5,635	-20.2	40	306	30.5
450	27	6,400	-25.9	39	301	31.5
400	27	7,251	-32.3	36	300	34.6
350	27	8,178	-39.6	35	297	33.0
300	27	9,215	-47.7		303	33.8
250	27	10,397	-55.5		301	34.8
200	27	11,803	-59.3		294	37.1
175	27	12,641	-57.8		295	41.2
150	27	13,616	-57.5		297	37.7
125	26	14,767	-59.3		297	35.0
100	26	16,159	-60.7		301	27.8
80	25	17,548	-60.9		304	22.3
70	25	18,379	-60.2		307	17.5
60	25	19,343	-58.9		328	13.6
50	25	20,490	-57.7		333	11.5
40	25	21,902	-56.6		348	12.0
30	25	23,729	-55.2		10	10.9
25	25	24,894	-54.8		20	12.2
20	25	26,323	-53.8		26	14.6
15	19	28,180	-51.4		22	14.4
10	14	30,832	-48.3		8	19.6
7	5	33,300	-45.2			

* MIAMI, FLA.
1018 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	4	18.9	83	81	1.4
1000	28	155	19.2	79	102	4.5
950	28	594	16.4	80	137	8.0
900	28	1,055	13.8	74	166	7.0
850	28	1,536	11.9	60	199	5.8
800	28	2,042	9.9	50	237	8.2
750	28	2,572	7.2	42	242	11.1
700	28	3,141	4.2	39	247	13.8
650	28	3,738	1.1	39	249	17.1
600	28	4,382	- 2.0	36	249	20.0
550	28	5,060	- 6.3	38	252	23.3
500	28	5,809	-10.9	35	255	24.9
450	28	6,606	-16.3	35	262	30.9
400	28	7,489	-22.9	33	263	34.4
350	28	8,454	-30.4	33	262	38.7
300	28	9,531	-39.0	27	263	46.4
250	28	10,759	-46.9		268	63.7
200	28	12,209	-55.4		266	72.7
175	28	13,053	-59.7		268	72.7
150	28	14,005	-64.9		267	66.8
125	27	15,106	-70.6		266	56.3
100	27	16,412	-75.3		265	43.7
80	27	17,701	-75.5		263	26.2
70	27	18,478	-72.6		263	17.5
60	27	19,392	-68.4		267	11.7
50	27	20,501	-62.5		273	5.8
40	26	21,898	-57.3		286	8.2
30	26	23,730	-54.2		284	10.3
25	26	24,904	-52.4		278	12.0
20	25	26,349	-50.4		270	15.7
15	25	28,237	-47.3		266	21.4
10	23	30,939	-42.3		262	31.7
7	13	33,372	-40.3			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

*** MIDLAND, TEXAS — 915 MB**

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	874	2.1	72	29	1.0
1000	28	149				
950	28	568				
900	28	1,008	3.3	60	295	.8
850	28	1,473	4.9	54	268	7.6
800	28	1,968	4.0	49	277	12.6
750	28	2,486	1.3	45	275	14.0
700	28	3,042	- 2.3	48	267	14.2
650	28	3,624	- 6.3	47	265	15.5
600	28	4,248	-10.4	43	260	20.4
550	28	4,910	-14.8	45	259	26.6
500	28	5,629	-19.6	40	254	29.3
450	28	6,397	-25.0	39	250	33.0
400	28	7,249	-31.0	38	252	34.6
350	28	8,183	-38.2	36	251	39.4
300	28	9,226	-45.8		253	45.6
250	28	10,421	-52.4		253	50.1
200	28	11,850	-56.0		256	55.8
175	28	12,698	-56.2		252	56.9
150	28	13,673	-58.3		257	53.8
125	28	14,812	-61.8		260	43.9
100	27	16,181	-65.3		264	39.6
80	27	17,533	-66.5		267	29.1
70	27	18,343	-65.0		268	21.2
60	27	19,287	-63.1		265	16.5
50	26	20,413	-60.7		274	12.0
40	25	21,807	-59.4		276	11.1
30	24	23,614	-58.2		285	10.9
25	20	24,771	-57.0		283	11.1
20	20	26,191	-54.8		268	17.1
15	12	28,034	-52.5		269	25.8
10	9	30,662	-49.0			
7						
5						

MONTGOMERY, ALA. — 1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	61	5.0	76	20	2.1
1000	28	166	6.2	68	24	2.5
950	28	589	6.4	63	268	2.7
900	28	1,031	6.1	58	267	7.6
850	28	1,499	5.3	52	265	12.6
800	28	1,994	3.6	51	259	17.3
750	28	2,518	1.4	48	261	21.4
700	28	3,070	- .6	42	262	25.8
650	28	3,660	- 3.8	40	259	29.7
600	28	4,287	- 7.5	33	259	35.2
550	28	4,959	-11.7	R32	257	39.0
500	28	5,685	-16.2	R30	258	43.5
450	28	6,466	-21.5	R33	256	47.6
400	28	7,328	-27.4	36	254	54.6
350	28	8,275	-34.5	37	254	61.4
300	28	9,334	-42.4		254	69.5
250	28	10,543	-50.7		254	81.6
200	28	11,976	-56.2		257	86.2
175	28	12,321	-58.0		259	86.2
150	28	13,785	-61.2		260	81.0
125	28	14,905	-65.3		259	65.7
100	28	16,251	-68.6		259	50.1
80	28	17,586	-68.2		260	39.8
70	28	18,390	-66.4		259	31.9
60	27	19,331	-63.8		263	19.0
50	27	20,455	-61.2		269	17.9
40	27	21,849	-58.7		269	18.1
30	27	23,666	-56.2		269	14.6
25	27	24,830	-54.5		266	22.7
20	25	26,266	-52.9		266	24.5
15	25	28,133	-50.2		266	34.6
10	18	30,794	-47.0		262	53.2
7						
5						

NANTUCKET, MASS. — 1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	14	- 1.8	71	306	3.5
1000	28	131	- 2.8	66	289	5.6
950	28	536	- 4.0	59	281	10.5
900	28	963	- 4.5	46	280	14.6
850	28	1,413	- 6.1	48	279	19.0
800	28	1,886	- 7.5	53	273	23.7
750	28	2,388	- 8.5	52	272	29.1
700	28	2,922	-10.1	51	274	34.0
650	28	3,486	-12.7	47	274	38.9
600	28	4,099	-16.0	46	272	47.6
550	28	4,745	-19.8	38	269	49.7
500	28	5,451	-24.5	36	269	55.2
450	28	6,207	-29.3	R36	270	60.6
400	28	7,045	-34.3	R34	272	69.5
350	28	7,968	-40.2	39	272	76.7
300	28	9,005	-46.4		271	74.2
250	28	10,199	-52.2		272	76.9
200	28	11,632	-55.0		271	76.7
175	28	12,486	-54.3		270	68.6
150	28	13,474	-54.9		268	61.8
125	28	14,633	-56.9		267	56.7
100	28	16,041	-58.5		265	49.5
80	28	17,438	-60.2		262	40.8
70	28	18,271	-59.5		262	36.5
60	27	19,239	-58.8		259	29.3
50	27	20,383	-58.8		258	26.2
40	26	21,786	-58.2		265	27.8
30	26	23,603	-57.1		260	27.2
25	25	24,760	-56.9		264	27.2
20	25	26,175	-56.5		265	30.3
15	24	28,008	-54.9		268	43.7
10	20	30,621	-50.3		266	53.6
7	10	32,960	-46.7			
5						

NASHVILLE, TENN. — 998 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	27	177	1.2	76	212	1.7
1000	27	162			186	1.4
950	27	574	1.4	63	233	9.9
900	27	1,011	.4	61	249	18.3
850	27	1,468	- .2	55	259	20.8
800	27	1,953	- 1.2	49	263	22.3
750	27	2,465	- 3.2	48	265	26.4
700	27	3,010	- 5.8	48	262	30.3
650	27	3,583	- 8.3	44	265	34.0
600	27	4,206	-11.8	44	268	40.2
550	27	4,864	-15.4	42	266	47.2
500	27	5,582	-19.6	41	263	51.7
450	27	6,351	-24.5	43	256	58.1
400	27	7,206	-30.3	40	254	62.4
350	27	8,142	-37.4	R41	255	67.2
300	27	9,189	-45.1		253	69.2
250	27	10,386	-52.5		256	75.2
200	27	11,810	-56.8		253	83.7
175	27	12,656	-57.2		255	77.5
150	27	13,628	-58.6		258	72.7
125	27	14,767	-61.5		259	61.4
100	25	16,131	-63.4		261	49.1
80	24	17,498	-64.0		263	37.7
70	24	18,316	-63.4		263	32.2
60	24	19,266	-61.6		265	26.4
50	24	20,400	-60.3		265	20.4
40	24	21,796	-58.9		268	18.8
30	23	23,608	-57.2		269	24.9
25	22	24,763	-56.0		268	19.0
20	22	26,189	-54.1		268	26.6
15	21	28,032	-53.0		264	27.8
10	20	30,652	-51.1		263	48.0
7	15	32,981	-47.0		264	66.0
5	11	35,169	-45.1			

NOME, ALASKA — 1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	7	-21.4	62	26	6.2
1000	28	105			35	7.2
950	28	490	-16.7	49	62	9.7
900	28	896	-16.6	50	65	11.7
850	28	1,326	-16.5	46	63	10.9
800	28	1,781	-17.3	40	58	9.7
750	28	2,262	-19.2	37	50	8.4
700	28	2,774	-21.5	R34	36	7.2
650	28	3,314	-24.3	R32	11	6.0
600	28	3,897	-27.4	R30	356	5.6
550	28	4,513	-30.8	R28	336	7.0
500	28	5,191	-34.3	R29	321	8.5
450	28	5,918	-38.8	R30	303	10.9
400	28	6,721	-44.0	R33	298	14.0
350	28	7,607	-49.3		295	14.0
300	28	8,607	-53.4		286	17.1
250	28	9,778	-53.3		278	19.0
200	28	11,226	-49.9		270	20.6
175	28	12,100	-49.3		266	23.9
150	28	13,111	-49.1		267	26.2
125	28	14,307	-49.1		268	28.9
100	28	15,772	-48.9		268	31.5
80	28	17,237	-48.9		269	31.7
70	28	18,113	-49.0		271	34.0
60	28	19,126	-48.9		276	33.6
50	28	20,323	-48.8		278	34.0
40	27	21,789	-49.0		281	34.2
30	26	23,685	-48.2		285	35.2
25	25	24,880	-47.6		287	35.0
20	19	26,378	-45.5		290	35.2
15	12	28,403	-43.6		293	37.1
10	5	31,194	-41.0			
7						
5						

NORFOLK, VA. — 1018 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	9	2.9	73	268	1.6
1000	28	151	2.3	66	279	3.1
950	28	569	2.7	58	267	8.0
900	28	1,004	1.6	54	267	14.2
850	28	1,465	.4	49	267	16.3
800	28	1,950	- 1.1	48	272	20.6
750	28	2,462	- 3.0	43	269	26.6
700	28	3,009	- 4.8	42	267	32.4
650	28	3,587	- 7.5	42	267	37.9
600	28	4,208	-10.7	39	266	46.2
550	28	4,868	-14.3	38	264	51.1
500	28	5,590	-18.6	38	266	58.7
450	28	6,362	-23.7	38	267	65.3
400	28	7,218	-29.8	37	265	68.6
350	28	8,156	-37.0	37	268	71.7
300	28	9,205	-44.5		271	72.5
250	28	10,405	-51.5		274	86.2
200	28	11,833	-55.6		275	93.6
175	28	12,681	-56.8		276	87.4
150	28	13,654	-58.3		274	75.2
125	28	14,794	-61.1		274	66.0
100	28	16,175	-62.6		275	54.0
80	28	17,545	-63.7		271	36.3
70	28	18,365	-62.5		269	29.5
60	28	19,320	-61.0		274	22.5
50	28	20,458	-59.4		273	17.7
40	28	21,861	-57.7		278	15.2
30	28	23,682	-56.1		269	18.8
25	28	24,846	-54.4		272	18.8
20	27	26,281	-53.6		274	22.5
15	18	28,131	-52.3			
10						

*** NORTH PLATTE, NEBR. — 916 MB**

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	848	- 9.9	81	327	4.9
1000	28	162				
950	28	565				
900	28	983	- 6.8	72	315	8.0
850	28	1,433	- 4.1	55	304	16.3
800	28	1,911	- 4.8	49	308	17.3
750	28	2,416	- 6.2	44	307	18.6
700	28	2,955	- 8.7	43	304	22.7
650	28	3,523	-11.8	42	299	25.1
600	28	4,134	-15.6	42	297	26.8
550	28	4,781	-19.5	40	293	28.7
500	28	5,489	-24.1	37	293	30.9
450	28	6,244	-29.6	38	291	32.8
400	28	7,079	-35.9	38	288	34.4
350	28	7,994	-42.7	37	286	36.7
300	28	9,019	-49.5		282	40.2
250	28	10,197	-55.2		279	42.0
200	28	11,614	-56.4		275	42.5
175	28	12,464	-55.7		276	45.6
150	28	13,446	-55.8		279	44.3
125	28	14,602	-57.5		278	41.8
100	28	16,007	-59.0		277	35.5
80	27	17,405	-59.5		281	30.9
70	23	18,241	-59.7		282	26.6
60	23	19,207	-59.1		286	23.3
50	23	20,351	-58.8		291	19.2
40	21	21,761	-57.1		297	19.4
30	21	23,582	-56.9		297	17.5
25	19	24,743	-56.4		295	16.3
20	19	26,165	-55.5		296	18.1
15	11	27,996	-55.4		297	25.8
10	7	30,547	-53.4			

*** OAKLAND, CALIF. — 1019 MB**

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	6	9.0	73	40	2.1
1000	28	160	9.3	65	12	3.3
950	28	584	9.0	53	6	6.2
900	28	1,033	8.1	41	360	7.8
850	28	1,503	6.9	36	343	7.6
800	28	1,999	4.8	31	338	8.7
750	28	2,519	2.1	30	338	12.0
700	28	3,077	- 1.1	29	328	15.0
650	28	3,659	- 4.6	29	326	15.9
600	28	4,290	- 8.9	29	325	17.9
550	28	4,953	-13.7	33	322	19.0
500	28	5,676	-18.8	32	322	21.8
450	28	6,446	-24.6	33	319	23.3
400	28	7,299	-31.1	35	318	24.9
350	28	8,231	-38.7	39	318	27.8
300	28	9,271	-46.9		316	32.6
250	28	10,458	-54.9		320	36.7
200	27	11,861	-59.9		307	41.0
175	27	12,697	-58.6		307	40.6
150	27	13,666	-58.7		306	39.2
125	27	14,805	-61.0		304	30.5
100	27	16,184	-63.7		304	25.6
80	26	17,556	-63.3		318	19.8
70	25	18,380	-63.3		314	14.4
60	25	19,332	-61.8		329	12.6
50	25	20,467	-59.8		351	7.6
40	24	21,866	-58.7		13	8.0
30	22	23,682	-56.9		17	8.9
25	22	24,840	-55.7		25	9.7
20	21	26,268	-54.5		21	9.1
15	20	28,114	-52.5		2	12.2
10	13	30,772	-49.4		339	12.6

OKLAHOMA CITY, OKLA. — 971 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	392	- .1	78	324	1.9
1000	28	153				
950	28	565	1.3	66	239	3.1
900	28	1,002	2.0	58	244	11.1
850	28	1,463	1.7	53	253	14.6
800	28	1,951	.6	47	257	15.5
750	28	2,465	- 1.6	42	254	16.9
700	28	3,014	- 4.3	39	259	19.2
650	28	3,592	- 7.3	36	258	23.7
600	28	4,216	-11.0	34	258	26.8
550	28	4,872	-15.6	30	258	29.3
500	28	5,591	-20.4	R29	257	34.0
450	28	6,356	-25.8	R26	255	38.9
400	28	7,206	-32.0	R26	252	43.5
350	28	8,135	-39.2	R29	252	47.4
300	28	9,175	-46.7		252	52.1
250	28	10,364	-53.7		250	53.8
200	28	11,785	-57.0		251	56.9
175	28	12,632	-55.9		253	60.0
150	28	13,610	-57.7		254	54.6
125	28	14,753	-60.7		258	51.1
100	28	16,134	-63.2		262	41.4
80	28	17,504	-63.6		262	29.9
70	27	18,323	-62.6		268	26.0
60	27	19,276	-61.3		269	18.8
50	27	20,411	-59.9		269	16.7
40	27	21,808	-58.9		283	13.4
30	24	23,628	-57.3		280	13.0
25	24	24,784	-56.0		282	14.0
20	23	26,204	-54.4		285	17.1
15	20	28,063	-52.5		282	19.2
10	5	30,649	-50.9			

OMAHA, NEBR. — 969 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	403	- 8.9	81	302	3.7
1000	28	153				
950	28	554	- 7.1	74	312	7.4
900	28	976	- 4.8	63	298	13.8
850	28	1,426	- 4.7	56	300	17.3
800	28	1,902	- 5.9	55	290	18.6
750	28	2,406	- 7.5	52	288	21.2
700	28	2,942	- 9.8	49	285	23.7
650	28	3,507	-12.5	45	284	27.0
600	28	4,119	-16.0	41	283	30.1
550	28	4,764	-20.0	38	280	32.4
500	28	5,470	-24.5	37	279	34.6
450	28	6,220	-30.0	37	277	35.5
400	28	7,058	-36.2	R35	277	38.9
350	28	7,972	-42.4	R31	277	43.1
300	28	9,000	-48.3		271	48.8
250	28	10,184	-54.4		264	50.3
200	28	11,603	-56.4		270	52.4
175	28	12,451	-55.7		269	52.8
150	28	13,434	-55.7		269	50.7
125	28	14,592	-56.9		273	46.4
100	28	15,997	-58.9		273	43.3
80	28	17,396	-59.6		274	36.1
70	27	18,224	-59.6		277	32.2
60	27	19,188	-59.2		279	27.0
50	25	20,342	-58.6		281	22.9
40	22	21,736	-58.9		285	25.4
30	18	23,549	-57.8		287	27.6
25	16	24,697	-56.4		289	28.2
20	14	26,113	-55.4		290	33.8
15	10	27,952	-54.1			
10	5	30,532	-49.4			

*** PEORIA, ILL. — 993 MB**

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	200	- 6.2	77	310	1.7
1000	28	145				
950	28	550	- 4.8	64	273	8.9
900	28	975	- 4.5	56	283	16.3
850	28	1,425	- 4.5	54	286	21.2
800	28	1,902	- 5.3	52	279	24.9
750	28	2,406	- 7.1	50	275	27.0
700	28	2,944	- 9.3	45	277	30.7
650	28	3,512	-11.7	44	276	34.0
600	28	4,125	-14.8	39	275	38.3
550	28	4,777	-18.8	39	274	41.6
500	28	5,483	-23.3	38	272	45.1
450	28	6,241	-28.4	R34	270	51.5
400	28	7,081	-34.1	R34	267	57.5
350	28	8,003	-40.8	R27	266	63.3
300	28	9,037	-47.4		264	68.8
250	28	10,227	-53.0		264	70.1
200	28	11,654	-55.8		266	68.8
175	28	12,505	-54.8		264	68.6
150	28	13,490	-55.5		266	65.1
125	28	14,648	-57.1		267	60.2
100	28	16,054	-58.3		270	44.5
80	28	17,452	-59.9		269	40.0
70	28	18,287	-59.0		271	33.8
60	28	19,255	-58.5		273	29.5
50	28	20,403	-57.5		276	27.0
40	28	21,811	-57.3		281	25.4
30	27	23,624	-56.3		278	28.4
25	26	24,783	-55.5		280	30.3
20	25	26,208	-54.9		283	31.9
15	23	28,045	-53.3		277	39.4
10	20	30,653	-49.6		279	46.6
7	13	33,015	-45.8			

***1/ PITTSBURGH, PA. — 974 MB**

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	353	- 4.2	69	227	3.7
1000	28	149				
950	28	554	- 4.1	66	232	10.3
900	28	980	- 4.9	65	255	20.0
850	28	1,430	- 5.7	57	266	23.9
800	28	1,904	- 7.3	55	268	27.8
750	28	2,403	- 9.2	57	268	31.5
700	28	2,937	-11.0	53	271	35.0
650	28	3,500	-12.8	44	273	37.5
600	28	4,112	-15.9	R39	274	39.8
550	28	4,760	-19.7	R40	273	46.2
500	28	5,465	-24.1	43	275	49.3
450	28	6,220	-28.8	44	273	55.9
400	28	7,062	-33.9	45	269	66.2
350	28	7,986	-40.0	49	266	72.1
300	28	9,022	-46.8		266	75.6
250	28	10,215	-52.9		267	79.8
200	28	11,639	-56.7		271	82.2
175	28	12,485	-56.6		269	76.5
150	28	13,462	-56.9		270	74.0
125	28	14,611	-59.2		270	68.8
100	28	16,004	-60.2		271	56.3
80	28	17,396	-60.1		268	38.3
70	28	18,227	-60.4		264	34.0
60	28	19,186	-60.6		265	30.1
50	26	20,315	-59.1		273	28.0
40	26	21,715	-58.2		272	29.1
30	26	23,529	-57.6		267	27.8
25	26	24,680	-57.2		271	32.4
20	25	26,082	-56.3		275	39.6
15	24	27,920	-54.8		271	45.5
10	21	30,527	-52.7		271	54.6
7	14	32,834	-48.4			

PONAPE, CAROLINE IS. — + 1003 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	39	27.6	78	63	8.7
1000	28	69	27.3	78	64	10.7
950	28	513	23.4	79	68	20.4
900	28	994	19.9	78	74	21.4
850	28	1,485	17.1	74	78	20.6
800	28	2,002	15.3	63	85	17.5
750	28	2,548	13.7	46	92	15.9
700	28	3,127	10.7	36	92	15.7
650	28	3,738	7.0	36	90	16.3
600	28	4,395	3.3	36	86	16.3
550	28	5,091	- .6	38	94	17.7
500	28	5,853	- 4.9	40	100	17.9
450	28	6,674	- 9.6	32	94	19.8
400	28	7,577	-14.9	R26	92	18.8
350	28	8,575	-21.6	R24	89	15.9
300	28	9,692	-29.9	R24	94	14.6
250	28	10,964	-40.2	R23	117	14.8
200	28	12,447	-52.6		120	17.5
175	28	13,295	-59.9		113	16.9
150	28	14,241	-67.7		96	17.5
125	28	15,316	-75.9		85	21.8
100	28	16,580	-83.0		94	26.6
80	28	17,839	-75.8		107	7.0
70	28	18,617	-71.8		270	8.0
60	27	19,533	-68.2		270	16.5
50	26	20,638	-64.3		273	19.4
40	22	22,016	-60.7		271	14.0
30	19	23,822	-57.0		87	8.5
25	16	24,987	-55.6		95	27.8
20	10	26,427	-52.2			
15	6	28,316	-47.9			
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PORTLAND, ME. — 1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	20	- 8.3	66	298	2.5
1000	28	125	- 8.1	57	307	3.3
950	28	529	- 8.5	54	285	8.4
900	28	943	- 8.6	53	278	9.1
850	28	1,386	- 9.3	51	284	13.0
800	28	1,854	-10.2	51	285	19.4
750	28	2,347	-11.8	55	279	25.4
700	28	2,877	-13.3	57	273	29.7
650	28	3,437	-15.8	54	268	33.2
600	28	4,039	-19.1	50	267	35.9
550	28	4,679	-22.6	43	273	39.0
500	27	5,383	-26.7	37	276	46.6
450	27	6,133	-31.5	R36	276	52.4
400	27	6,962	-36.9	R35	276	61.0
350	27	7,876	-42.1	R36	276	68.8
300	27	8,907	-47.5		275	74.0
250	27	10,099	-51.8		276	72.3
200	27	11,537	-53.4		274	69.3
175	27	12,397	-53.2		274	62.5
150	26	13,386	-53.0		271	56.3
125	26	14,553	-54.3		267	51.7
100	26	15,980	-56.3		264	45.6
80	26	17,393	-57.5		264	41.4
70	26	18,231	-57.4		265	37.7
60	24	19,216	-57.4		266	32.6
50	23	20,367	-58.2		262	30.7
40	22	21,775	-57.7		263	29.9
30	20	23,594	-57.3		263	28.2
25	20	24,747	-57.3		263	29.7
20	18	26,160	-56.8		263	33.0
15	9	27,975	-55.1			
10	7	30,617	-51.2			
7	6	33,011	-45.0			

RAPID CITY, S. DAK. — 902 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	966	- 6.7	69	335	5.1
1000	28	147				
950	28	550				
900	28	978			327	5.4
850	28	1,429	- 3.7	47	319	16.7
800	28	1,906	- 5.9	49	319	20.8
750	28	2,404	- 8.2	50	318	24.1
700	28	2,943	-10.5	50	315	27.6
650	28	3,507	-13.6	47	310	29.7
600	28	4,115	-16.9	42	306	30.7
550	28	4,760	-21.0	39	302	34.4
500	28	5,462	-25.4	37	299	36.7
450	28	6,213	-30.9	36	298	38.9
400	28	7,043	-37.4	R33	293	38.7
350	28	7,951	-44.3	R24	292	41.4
300	28	8,969	-50.5		292	43.7
250	28	10,142	-55.7		291	44.7
200	28	11,560	-56.0		292	44.9
175	28	12,411	-55.2		289	42.2
150	28	13,396	-54.7		288	42.5
125	28	14,561	-55.6		285	39.0
100	28	15,978	-57.2		289	34.4
80	27	17,381	-57.4		291	30.9
70	27	18,225	-57.5		292	28.0
60	27	19,199	-57.3		295	26.0
50	27	20,352	-57.4		295	23.1
40	27	21,761	-57.3		301	21.4
30	25	23,587	-56.5		303	21.4
25	24	24,741	-55.6		315	19.2
20	15	26,158	-55.4		325	17.7
15						
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See reference note at end of table

RAWINSONDE DATA

Average monthly values

FEBRUARY 1965

ST. CLOUD, MINN.
977 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	316	-15.2	71	286	2.1
1000	28	136				
950	28	527	-13.1	70	294	5.6
900	28	939	- 9.9	62	300	14.2
850	28	1,382	- 9.0	50	301	20.0
800	28	1,851	- 9.6	50	298	23.5
750	28	2,346	-11.5	52	299	26.4
700	28	2,875	-14.2	51	300	29.7
650	28	3,431	-16.9	53	297	32.2
600	28	4,033	-19.7	53	295	34.8
550	28	4,668	-23.5	52	291	39.4
500	28	5,366	-27.9	51	289	41.6
450	28	6,109	-33.0	50	288	43.7
400	28	6,935	-38.8	45	290	47.0
350	28	7,839	-45.1	42	289	51.3
300	28	8,855	-50.9		287	52.6
250	28	10,027	-55.4		280	57.5
200	28	11,445	-56.2		277	55.6
175	28	12,295	-55.3		278	52.4
150	28	13,281	-54.5		278	50.9
125	28	14,445	-55.6		280	45.8
100	28	15,862	-56.5		282	42.5
80	28	17,272	-57.9		279	41.0
70	28	18,112	-58.3		283	39.2
60	28	19,081	-58.7		285	36.9
50	28	20,226	-58.8		288	34.8
40	28	21,628	-58.6		291	34.2
30	28	23,438	-58.2		290	35.0
25	25	24,595	-57.9		293	35.9
20	24	26,006	-57.3		294	36.7
15	16	27,794	-57.1		276	42.7
10						

ST. PAUL IS., ALASKA
1007 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	10	- 8.4	86	33	8.4
1000	28	61			38	8.4
950	28	458	-10.1	78	60	7.6
900	28	875	-10.1	62	72	5.1
850	28	1,315	-11.6	50	22	2.5
800	28	1,778	-13.3	41	320	2.7
750	28	2,271	-15.3	40	269	3.7
700	28	2,787	-17.5	41	275	5.6
650	28	3,338	-20.5	43	262	8.2
600	28	3,928	-23.8	41	260	10.9
550	28	4,558	-27.3	R39	262	13.8
500	28	5,240	-31.7	36	261	15.5
450	28	5,976	-36.5	37	260	19.8
400	28	6,786	-42.2	39	253	22.7
350	28	7,678	-48.0		250	24.5
300	28	8,684	-52.3		243	26.4
250	28	9,859	-52.8		230	27.0
200	28	11,309	-49.5		224	24.3
175	28	12,186	-48.8		226	22.3
150	28	13,200	-48.2		232	22.1
125	28	14,401	-48.6		233	19.6
100	28	15,867	-48.7		234	17.5
80	27	17,329	-49.3		232	14.6
70	25	18,204	-49.2		234	12.2
60	25	19,216	-49.1		239	10.9
50	25	20,413	-49.0		245	9.5
40	25	21,878	-48.6		247	7.8
30	24	23,776	-47.8		275	7.6
25	24	24,981	-46.7		289	7.2
20	23	26,460	-45.5		301	7.6
15	22	28,398	-43.3		338	9.9
10	11	31,170	-40.5			

SALEM, OREG.
1014 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	61	3.8	92	196	3.9
1000	28	176	4.5	82	204	4.3
950	28	593	4.3	73	233	8.7
900	28	1,033	2.8	65	241	10.9
850	28	1,494	.8	57	256	12.8
800	28	1,980	- 1.2	55	274	15.3
750	28	2,488	- 3.9	55	280	19.2
700	28	3,033	- 6.8	53	286	22.5
650	28	3,601	- 9.9	54	290	25.4
600	28	4,222	-13.2	50	295	29.3
550	28	4,873	-17.2	50	300	32.4
500	28	5,587	-21.8	49	301	35.9
450	28	6,349	-27.1	47	301	38.9
400	28	7,193	-33.2	44	302	41.6
350	28	8,117	-40.2	38	302	42.0
300	28	9,151	-48.2		300	43.3
250	28	10,328	-56.7		299	44.1
200	28	11,729	-59.4		292	43.5
175	28	12,567	-58.0		292	42.9
150	28	13,539	-57.9		292	44.3
125	28	14,687	-58.4		293	39.8
100	28	16,088	-59.0		300	30.3
80	28	17,484	-60.1		303	22.5
70	28	18,318	-58.8		310	19.8
60	27	19,279	-57.7		313	15.5
50	24	20,430	-57.1		327	15.5
40	24	21,843	-56.9		343	13.4
30	22	23,667	-55.8		355	13.2
25	21	24,829	-55.1		358	14.6
20	21	26,257	-53.9		360	18.5
15	18	28,119	-50.9		11	18.1
10	6	30,757	-48.7			

SALT LAKE CITY, UTAH
872 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	1,288	- 2.1	68	144	1.0
1000	28	188				
950	28	599				
900	28	1,037				
850	28	1,494	.2	57	188	2.1
800	28	1,979	- 1.5	51	257	4.7
750	28	2,488	- 4.8	51	296	8.9
700	28	3,030	- 8.0	53	307	13.0
650	28	3,599	-11.0	46	314	16.5
600	28	4,213	-14.6	48	307	19.2
550	28	4,863	-18.5	43	304	22.1
500	28	5,572	-23.1	38	302	27.0
450	28	6,331	-28.7	35	301	26.8
400	28	7,169	-34.8	R35	305	27.8
350	27	8,087	-41.9	34	310	29.3
300	27	9,114	-49.2		313	32.1
250	27	10,291	-55.7		313	35.7
200	27	11,699	-58.4		310	38.9
175	27	12,544	-55.9		308	37.3
150	27	13,522	-57.0		303	35.9
125	27	14,673	-58.6		301	32.2
100	27	16,069	-60.4		301	29.1
80	27	17,457	-61.0		299	24.3
70	27	18,286	-60.6		305	19.6
60	27	19,250	-58.9		311	16.3
50	27	20,394	-59.0		310	14.0
40	26	21,800	-57.6		325	10.9
30	25	23,622	-56.6		328	11.3
25	25	24,779	-56.1		333	12.4
20	25	26,202	-54.9		348	12.6
15	21	28,054	-53.3		331	15.0
10	9	30,641	-50.7			

SAN ANTONIO, TEXAS
989 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	243	6.2	82	9	4.5
1000	28	148				
950	28	572	7.5	71	109	2.5
900	28	1,017	8.1	64	182	7.0
850	28	1,488	6.8	65	223	10.7
800	28	1,985	5.2	56	239	13.4
750	28	2,512	3.0	50	242	13.8
700	28	3,067	- .2	47	241	19.4
650	28	3,652	- 3.7	42	240	23.5
600	28	4,285	- 7.8	36	239	28.6
550	28	4,952	-12.3	38	241	32.4
500	28	5,680	-17.0	40	241	36.9
450	28	6,454	-22.7	41	241	42.0
400	28	7,318	-28.7	38	243	48.4
350	28	8,261	-35.7	R36	244	54.8
300	28	9,316	-43.3		243	66.2
250	28	10,523	-51.0		242	74.0
200	28	11,960	-55.4		244	80.0
175	28	12,808	-57.2		246	78.5
150	28	13,777	-60.1		247	75.2
125	28	14,903	-64.7		249	58.9
100	28	16,252	-68.6		254	45.1
80	27	17,584	-68.8		253	33.4
70	27	18,386	-66.7		253	26.4
60	27	19,323	-64.8		256	17.7
50	26	20,444	-61.2		267	11.7
40	25	21,836	-59.0		266	11.3
30	23	23,652	-56.7		270	14.8
25	21	24,808	-55.1		261	18.5
20	20	26,244	-53.0		260	29.9
15	5	28,129	-49.4			
10						

SAN DIEGO, CALIF.
1002 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	124	7.9	81	49	2.1
1000	28	144			49	2.9
950	28	571	11.4	46	340	2.1
900	28	1,023	10.2	35	321	4.7
850	28	1,497	7.9	31	310	6.4
800	28	1,995	5.7	29	311	8.0
750	28	2,516	2.9	R28	311	10.7
700	28	3,076	.2	30	315	15.2
650	28	3,659	- 3.9	28	317	18.8
600	28	4,293	- 7.8	R26	316	19.2
550	28	4,956	-12.3	R25	318	18.6
500	28	5,686	-17.5	R24	320	20.2
450	28	6,460	-23.5	R26	323	23.5
400	28	7,317	-30.5	R26	318	26.2
350	28	8,254	-37.4	R28	313	29.9
300	28	9,301	-45.2		309	39.2
250	28	10,498	-52.8		307	53.6
200	28	11,917	-57.8		299	56.3
175	28	12,759	-57.9		298	50.5
150	28	13,729	-58.6		298	43.9
125	28	14,867	-61.5		295	35.4
100	28	16,241	-64.3		291	29.5
80	28	17,602	-65.2		291	23.3
70	28	18,415	-64.4		300	16.5
60	28	19,361	-62.6		311	8.4
50	28	20,492	-59.9		313	5.6
40	28	21,891	-57.6		323	5.1
30	27	23,711	-55.8		324	4.5
25	27	24,874	-54.6		318	2.5
20	24	26,315	-53.0		293	3.3
15	12	28,192	-49.9			
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5						

* SAN JUAN, P. R.
1017 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	6	22.1	77	91	6.0
1000	28	152	22.0	73	87	12.8
950	28	589	18.5	76	82	16.5
900	28	1,058	15.0	74	85	16.9
850	28	1,540	11.9	73	83	17.5
800	28	2,047	10.6	51	79	15.3
750	28	2,583	9.9	26	76	12.2
700	28	3,156	8.3	19	75	11.3
650	28	3,761	5.1	18	70	8.9
600	28	4,413	1.1	18	71	6.2
550	28	5,095	- 3.7	19	97	4.9
500	28	5,852	- 8.8	18	109	1.9
450	28	6,654	-14.9	20	282	1.6
400	28	7,541	-21.1	18	310	3.7
350	28	8,512	-28.3	17	312	9.7
300	28	9,600	-35.9	17	299	16.9
250	28	10,844	-44.2		306	27.8
200	28	12,308	-53.7		304	39.0
175	28	13,156	-59.2		301	38.5
150	28	14,107	-65.5		296	34.4
125	28	15,197	-72.3		297	28.7
100	28	16,490	-77.8		301	18.5
80	26	17,756	-78.8		302	10.1
70	26	18,522	-74.8		296	7.4
60	26	19,426	-69.6		304	6.0
50	26	20,534	-61.7		337	5.8
40	25	21,935	-56.7		53	8.4
30	25	23,774	-53.2		77	17.1
25	24	24,959	-50.9		83	21.8
20	20	26,416	-48.9		85	23.5
15	13	28,316	-45.8		92	25.8
10	7	31,043	-43.4			
7						
5						

SAN NICOLAS, CALIF.
996 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	174	10.0	76	315	7.8
1000	28	140				
950	28	568	12.5	39	328	9.5
900	28	1,022	11.2	28	323	5.1
850	28	1,497	8.7	27	319	6.8
800	28	1,996	6.4	27	317	8.0
750	28	2,520	3.9	25	317	11.3
700	28	3,080	.9	26	321	14.2
650	28	3,665	- 3.1	28	317	15.3
600	28	4,300	- 7.5	28	318	16.9
550	28	4,960	-12.4	24	318	17.9
500	28	5,691	-17.8	26	314	19.0
450	28	6,460	-23.9	28	310	21.8
400	28	7,320	-30.3	29	308	24.3
350	28	8,255	-37.7	28	305	29.1
300	28	9,300	-45.4		310	35.7
250	28	10,495	-53.1		306	44.9
200	28	11,911	-58.7		302	54.8
175	28	12,749	-59.1		300	53.4
150	28	13,715	-59.4		299	44.1
125	28	14,849	-62.3		300	37.7
100	28	16,219	-65.2		299	31.1
80	28	17,575	-65.9		300	22.7
70	28	18,386	-65.1		309	16.1
60	28	19,331	-63.5		309	13.2
50	28	20,458	-60.9		323	6.8
40	28	21,853	-58.8		349	5.2
30	26	23,668	-57.0		8	4.3
25	25	24,825	-55.3		351	3.3
20	25	26,254	-53.9		322	4.1
15	21	28,107	-51.4		339	3.5
10	21	30,762	-47.9		295	8.7
7	17	33,146	-43.8		306	7.6
5	8	35,435	-41.7			

SANTA MONICA, CALIF.
1013 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	38	10.7	63	22	5.1
1000	28	142	12.1	56	28	4.5
950	28	573	11.2	47	35	2.9
900	28	1,022	10.3	32	10	3.3
850	28	1,495	8.0	29	338	4.5
800	28	1,993	5.5	R28	326	7.0
750	28	2,515	2.7	R27	317	11.1
700	28	3,073	- .3	R24	316	14.4
650	28	3,661	- 3.7	R23	317	16.5
600	28	4,290	- 8.1	R26	318	19.0
550	28	4,955	-13.0	R23	315	18.5
500	28	5,680	-18.3	R21	318	22.0
450	28	6,452	-24.4	R22	315	22.9
400	28	7,305	-31.1	R26	312	24.9
350	28	8,238	-38.4	R26	309	27.8
300	28	9,281	-46.3		311	35.5
250	28	10,472	-53.8		312	46.6
200	28	11,884	-59.2		306	50.5
175	28	12,721	-58.7		305	48.0
150	28	13,688	-59.6		303	40.0
125	28	14,822	-61.9		300	34.8
100	28	16,193	-64.8		299	28.7
80	28	17,552	-65.3		302	23.5
70	28	18,364	-64.7		305	17.9
60	28	19,311	-62.6		316	11.5
50	28	20,439	-60.7		333	8.7
40	27	21,834	-58.7		340	7.6
30	26	23,648	-56.8		342	6.6
25	26	24,806	-55.5		351	7.6
20	26	26,234	-53.7		337	6.8
15	21	28,090	-51.5		6	6.4
10	13	30,724	-49.6			
7						
5						

*2/SAULT STE. MARIE, MICH.
987 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	221	-12.1	76	28	2.3
1000	28	116				
950	28	506	-12.4	71	296	3.5
900	28	921	-13.7	72	278	9.1
850	28	1,354	-14.0	66	278	15.0
800	28	1,815	-13.9	55	277	20.8
750	28	2,304	-14.9	49	277	25.8
700	28	2,825	-16.0	49	274	29.3
650	28	3,380	-18.0	43	275	34.2
600	28	3,977	-20.7	42	273	36.7
550	28	4,611	-24.3	41	274	39.4
500	28	5,304	-28.7	44	274	43.5
450	28	6,044	-33.8	42	273	48.0
400	28	6,865	-39.4	43	273	54.6
350	28	7,768	-45.1	R37	273	60.4
300	28	8,784	-50.7		271	68.0
250	28	9,960	-54.6		265	69.5
200	28	11,387	-54.4		269	62.0
175	28	12,243	-53.4		269	61.0
150	27	13,223	-53.6		271	56.5
125	27	14,393	-54.4		271	56.1
100	27	15,819	-55.5		272	50.7
80	27	17,236	-57.0		268	47.0
70	27	18,079	-57.4		270	43.5
60	25	19,042	-57.6		270	42.7
50	23	20,192	-58.7		272	41.4
40	23	21,593	-58.9		270	40.6
30	19	23,397	-59.4		274	42.0
25	17	24,545	-58.5		281	41.4
20	16	25,964	-57.2		279	42.9
15	16	27,789	-55.8		283	46.6
10	9	30,409	-50.8			
7						
5						

SHEMYA, ALASKA
991 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	26	38	.3	82	148	9.3
1000	26	- 39			105	7.8
950	26	367	- 2.4	74	157	12.2
900	26	797	- 6.0	78	156	13.8
850	26	1,242	- 9.2	77	164	14.8
800	26	1,709	-11.7	63	163	13.8
750	26	2,198	-14.5	53	168	14.0
700	26	2,721	-17.7	52	168	14.4
650	26	3,270	-21.4	49	154	13.8
600	26	3,857	-25.4	46	155	15.0
550	26	4,480	-29.1	46	155	17.7
500	26	5,160	-33.6	46	165	18.3
450	26	5,888	-38.4	44	177	18.8
400	26	6,694	-43.5	50	184	22.0
350	26	7,582	-48.5		197	23.7
300	26	8,590	-50.8		204	21.4
250	26	9,775	-50.6		211	22.0
200	26	11,240	-47.3		209	21.2
175	26	12,124	-46.9		204	19.2
150	25	13,143	-46.2		207	20.2
125	24	14,351	-46.4		210	19.6
100	24	15,831	-47.1		217	18.6
80	24	17,308	-47.4		205	15.5
70	24	18,189	-47.6		208	12.0
60	23	19,200	-47.9		196	11.3
50	23	20,403	-47.5		198	10.1
40	21	21,866	-47.6		164	8.2
30	21	23,770	-46.5		150	7.4
25	21	24,981	-46.0		117	8.0
20	20	26,477	-44.6		117	13.2
15	19	28,405	-43.5		101	14.8
10	13	31,160	-42.7			

* SHREVEPORT, LA.
1009 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	79	6.3	82	123	1.7
1000	28	152	6.5	71	123	2.7
950	28	580	6.5	63	195	8.7
900	28	1,016	5.4	60	231	8.9
850	28	1,483	4.2	57	252	10.9
800	28	1,975	2.3	54	261	14.2
750	28	2,496	.5	45	263	16.9
700	28	3,047	- 2.2	43	259	20.2
650	28	3,630	- 5.8	41	256	25.8
600	28	4,255	- 9.3	38	247	31.1
550	28	4,920	-13.4	35	245	32.8
500	28	5,642	-18.0	39	244	39.4
450	28	6,418	-23.4	38	241	44.3
400	28	7,273	-29.6	39	240	49.5
350	28	8,211	-36.7	39	242	56.3
300	28	9,262	-44.4		246	66.6
250	28	10,462	-52.0		247	73.2
200	28	11,890	-56.4		247	78.1
175	28	12,736	-57.4		250	76.5
150	28	13,705	-60.0		253	72.1
125	28	14,832	-64.0		251	62.5
100	28	16,188	-66.6		256	51.3
80	28	17,534	-66.5		255	38.1
70	28	18,341	-66.1		259	26.8
60	27	19,283	-63.3		266	18.5
50	27	20,409	-61.3		266	16.5
40	26	21,798	-59.8		270	14.0
30	25	23,605	-57.5		281	13.0
25	25	24,760	-56.1		284	12.8
20	22	26,185	-54.1		269	22.7
15	20	28,046	-51.4		267	28.4
10	18	30,700	-47.0		270	35.5

SPOKANE, WASH.
932 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	722	- 1.5	79	204	4.9
1000	28	156				
950	28	574				
900	28	1,000	.2	69	231	11.1
850	28	1,457	- 1.8	63	260	14.6
800	28	1,938	- 4.5	58	265	17.5
750	28	2,444	- 7.4	59	272	19.8
700	28	2,979	- 9.9	55	284	23.3
650	28	3,545	-12.8	55	287	27.4
600	28	4,154	-16.4	59	289	31.9
550	28	4,804	-20.4	55	291	35.0
500	28	5,503	-25.2	54	291	38.5
450	28	6,256	-30.3	50	296	42.0
400	28	7,089	-35.8	44	297	47.2
350	28	8,006	-41.8	42	302	51.5
300	28	9,034	-48.9		308	59.8
250	28	10,212	-56.0		308	62.5
200	28	11,617	-58.9		306	55.8
175	28	12,463	-55.5		303	47.8
150	28	13,447	-55.1		301	47.2
125	28	14,606	-56.7		301	41.6
100	28	16,020	-57.5		301	35.7
80	28	17,430	-57.7		304	27.6
70	28	18,272	-57.6		303	25.6
60	27	19,249	-56.6		312	25.8
50	27	20,405	-56.6		315	22.5
40	26	21,823	-55.9		323	20.2
30	26	23,656	-55.0		332	20.2
25	25	24,821	-54.9		334	20.8
20	21	26,255	-54.2		344	23.7
15	14	28,088	-53.0		341	34.0
10						

SWAN ISLAND, W. I.
1013 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	10	24.7	80	95	9.7
1000	28	120	23.9	80	91	12.8
950	28	567	20.6	82	98	16.1
900	28	1,033	17.4	78	105	16.3
850	28	1,520	14.5	74	111	13.8
800	28	2,031	12.0	60	117	12.8
750	28	2,569	10.3	43	117	11.5
700	28	3,140	7.4	33	123	10.7
650	28	3,749	4.0	32	126	7.8
600	27	4,394	- .2	29	131	5.8
550	27	5,087	- 2.7	R19	145	1.0
500	27	5,837	- 6.9	R19	318	2.3
450	27	6,649	-12.4	R18	281	5.1
400	27	7,540	-18.9	R18	268	9.3
350	27	8,520	-26.3	R20	279	18.5
300	27	9,615	-34.7	R22	274	33.4
250	27	10,863	-43.8		259	43.1
200	27	12,327	-54.1		259	45.6
175	27	13,170	-60.4		262	39.6
150	27	14,116	-67.0		263	30.9
125	26	15,196	-74.2		258	22.0
100	24	16,480	-79.1		243	11.5
80	23	17,742	-80.3		270	5.6
70	21	18,508	-75.8		290	4.1
60	21	19,409	-71.1		304	4.3
50	21	20,504	-64.6		321	2.7
40	20	21,892	-58.2		60	4.9
30	19	23,727	-53.6		85	13.8
25	17	24,903	-50.8		91	17.5
20	17	26,362	-49.1		92	23.5
15	15	28,254	-46.1		94	29.5
10	6	30,932	-43.7			

TAMPA, FLA.
1018 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	8	13.9	90	74	3.3
1000	28	155	15.3	79	98	5.1
950	28	587	14.6	69	172	7.0
900	28	1,047	12.8	62	213	7.8
850	28	1,526	10.9	55	241	9.9
800	28	2,030	9.0	50	247	14.2
750	28	2,560	6.1	45	250	19.2
700	28	3,125	3.3	43	252	20.8
650	28	3,722	.3	37	250	24.5
600	28	4,361	- 3.2	R35	250	28.2
550	28	5,041	- 7.0	35	251	31.9
500	28	5,783	-11.7	38	252	36.5
450	28	6,575	-17.4	40	251	40.0
400	28	7,454	-23.9	38	253	46.0
350	28	8,414	-31.1	R35	254	52.3
300	28	9,488	-39.4	R28	257	58.9
250	28	10,712	-47.8		259	72.8
200	28	12,157	-55.5		262	83.9
175	28	13,001	-58.9		262	78.3
150	28	13,958	-63.5		262	74.2
125	27	15,067	-69.1		261	62.9
100	27	16,385	-73.0		260	53.4
80	26	17,686	-73.3		259	36.3
70	26	18,468	-70.7		261	23.7
60	26	19,395	-66.3		262	14.6
50	26	20,511	-61.7		269	7.2
40	26	21,909	-57.3		287	8.7
30	26	23,743	-53.7		267	14.0
25	26	24,918	-52.2		271	16.7
20	25	26,364	-50.0		269	21.4
15	15	28,247	-47.8		267	25.4
10						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

FEBRUARY 1965

*** TATOOSH IS., WASH**
1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	31	5.9	85	216	4.3
1000	28	144	4.9	82	207	5.1
950	28	555	2.4	85	233	11.5
900	28	997	.2	81	246	13.4
850	28	1,454	- 1.6	73	255	16.5
800	28	1,936	- 3.5	74	267	20.2
750	28	2,441	- 5.6	71	277	23.5
700	28	2,983	- 8.5	71	281	27.2
650	28	3,552	-11.3	69	282	30.7
600	28	4,166	-14.7	69	281	36.3
550	28	4,818	-18.6	67	284	35.9
500	28	5,525	-23.2	60	287	37.9
450	28	6,282	-28.5	57	287	41.6
400	28	7,124	-34.4	54	287	45.6
350	28	8,044	-41.1	54	292	47.0
300	28	9,073	-49.3		290	49.9
250	28	10,245	-57.8		287	48.6
200	28	11,637	-60.4		286	46.8
175	28	12,476	-57.0		286	50.3
150	28	13,454	-56.3		291	47.4
125	28	14,610	-57.5		291	41.6
100	28	16,014	-58.4		296	41.0
80	27	17,419	-58.4		299	34.2
70	26	18,253	-58.0		305	30.7
60	25	19,226	-57.7		307	27.0
50	24	20,375	-56.7		315	22.7
40	23	21,793	-56.1		322	22.1
30	23	23,624	-55.4		332	23.7
25	23	24,788	-54.8		334	22.0
20	20	26,198	-54.3		338	22.9
15	14	28,045	-53.3		343	22.1
10	12	30,686	-51.2			
7						

TOPEKA, KANS.
986 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	269	- 4.4	80	327	1.4
1000	28	156				
950	28	561	- 2.9	66	287	3.9
900	28	990	- 2.6	63	277	9.1
850	28	1,445	- 2.1	58	276	14.2
800	28	1,926	- 2.9	52	280	15.9
750	28	2,433	- 4.8	47	272	19.0
700	28	2,976	- 7.5	40	274	22.9
650	28	3,544	-10.7	37	277	26.4
600	28	4,162	-14.3	36	276	30.3
550	28	4,811	-18.3	31	273	32.6
500	28	5,522	-23.2	R30	271	37.1
450	28	6,284	-28.7	R31	269	42.5
400	28	7,121	-34.4	R31	266	48.4
350	28	8,041	-40.9	R32	264	49.3
300	28	9,073	-48.0		263	52.8
250	28	10,257	-54.5		263	57.5
200	28	11,676	-56.5		265	55.0
175	28	12,525	-55.5		265	55.0
150	28	13,505	-56.7		268	50.9
125	28	14,655	-58.7		267	45.3
100	27	16,047	-60.1		270	39.8
80	27	17,433	-61.3		274	33.0
70	27	18,262	-60.7		276	28.2
60	27	19,223	-60.3		277	23.7
50	27	20,362	-59.7		279	19.8
40	27	21,758	-59.2		266	19.6
30	25	23,581	-57.4		290	15.9
25	25	24,737	-56.1		291	14.8
20	21	26,163	-54.4		294	20.4
15	12	28,042	-53.0		283	19.2
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+ TRUK, CAROLINE IS.
1009 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	2	27.5	77	53	10.5
1000	28	78	26.9	78	58	12.0
950	28	520	23.2	82	79	19.2
900	28	1,002	19.9	82	81	20.4
850	28	1,494	17.2	80	83	18.1
800	28	2,011	15.3	68	91	15.7
750	28	2,557	13.3	51	94	14.4
700	28	3,135	10.2	45	93	14.4
650	28	3,748	6.8	43	95	16.3
600	28	4,403	2.7	43	97	16.3
550	28	5,097	- 1.0	45	103	16.5
500	28	5,859	- 5.2	40	103	16.5
450	28	6,677	- 9.5	R33	96	18.8
400	28	7,582	-15.1	R29	95	18.3
350	28	8,579	-21.9	R27	97	16.9
300	28	9,696	-30.1	R26	101	15.0
250	28	10,966	-40.4	R23	119	15.9
200	28	12,447	-53.1		121	20.8
175	28	13,294	-60.1		118	22.7
150	28	14,239	-67.7		109	22.9
125	28	15,314	-76.1		101	27.2
100	28	16,579	-82.3		102	26.4
80	28	17,844	-75.4		111	6.6
70	28	18,624	-71.8		271	4.9
60	27	19,544	-67.6		277	12.8
50	27	20,654	-63.5		274	13.2
40	26	22,033	-60.7		276	10.5
30	24	23,838	-57.3		84	13.8
25	22	24,996	-55.3		96	32.4
20	18	26,425	-51.9		98	49.5
15	10	28,298	-46.8			
10						
7						

TUCSON, ARIZ.
924 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	789	5.2	60	159	5.6
1000	28	140				
950	28	564				
900	28	1,010	9.4	42	172	3.3
850	28	1,482	7.2	38	281	1.9
800	28	1,978	3.9	38	[illegible]	4.7
750	28	2,496	.3	38	304	6.0
700	28	3,050	- 2.8	35	296	8.9
650	28	3,629	- 6.3	33	301	10.9
600	28	4,255	-10.4	32	293	15.2
550	28	4,915	-14.8	29	296	19.0
500	28	5,634	-19.7	R29	293	22.3
450	28	6,401	-25.1	R27	299	24.7
400	28	7,254	-31.6	R28	297	29.7
350	28	8,184	-38.6	35	293	33.4
300	28	9,226	-45.9		296	33.8
250	28	10,420	-52.5		295	39.0
200	28	11,849	-55.7		284	46.0
175	28	12,697	-56.7		282	43.3
150	28	13,672	-57.7		280	38.5
125	27	14,816	-61.1		274	35.9
100	27	16,189	-64.3		270	30.5
80	26	17,552	-64.6		280	24.7
70	26	18,367	-64.3		277	17.3
60	26	19,314	-62.0		279	10.1
50	26	20,447	-60.1		[illegible]	8.0
40	26	21,846	-58.0		274	7.6
30	25	23,662	-56.2		289	7.4
25	25	24,824	-55.1		287	7.4
20	23	26,253	-53.1		286	9.5
15	18	28,117	-50.2		277	11.1
10						
7						

‡* VANDENBERG AFB, CALIF.
1[illegible] MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	113	6.9	90	60	2.5
1000	28	154	9.2	76	43	2.9
950	28	584	10.4	51	353	7.8
900	28	1,031	10.0	[illegible]	354	8.5
850	28	1,504	7.9	29	348	8.7
800	28	2,002	6.0	27	335	10.3
750	28	2,529	3.9	27	[illegible]	13.0
700	28	3,086	.6	26	[illegible]	15.2
650	28	3,674	- 3.4	26	315	14.2
600	28	4,304	- 8.0	26	316	17.5
550	28	4,970	-13.0	27	317	18.5
500	28	5,694	-18.3	30	314	20.8
450	28	6,464	-24.1	33	[illegible]	22.5
400	28	7,320	-30.8	33	305	25.3
350	28	8,254	-38.0	32	305	27.7
300	28	9,299	-45.7		308	34.4
250	28	10,491	-53.8		304	44.7
200	28	11,903	-58.9		302	55.4
175	28	12,741	-58.9		[illegible]	50.7
150	28	13,708	-59.6		297	43.9
125	28	14,843	-62.1		298	34.0
100	28	16,215	-64.6		298	28.2
80	28	17,575	-65.1		305	[illegible]
70	28	18,389	-64.5		312	18.3
60	28	19,334	-62.9		315	12.2
50	28	20,453	-60.4		333	7.6
40	27	21,862	-58.3		10	[illegible]
30	27	23,677	-57.0		12	6.6
25	27	24,834	-55.8		11	5.8
20	26	26,255	-53.9		7	6.8
15	24	28,118	-51.3		13	5.6
10	22	30,773	-47.6		331	7.4
7	14	33,175	-42.4		291	6.5

*** WAKE IS., PACIFIC AREA**
1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	5	23.7	79	77	9.1
1000	28	126	22.8	79	81	11.5
950	28	573	19.4	84	89	13.4
900	28	1,038	16.6	76	92	12.6
850	28	1,523	13.8	75	90	12.0
800	28	2,033	11.6	66	92	10.3
750	28	2,578	10.9	35	105	6.0
700	28	3,146	8.7	27	105	1.6
650	28	3,757	5.4	21	290	4.3
600	28	4,406	1.6	19	292	7.2
550	28	5,097	- 2.5	17	287	9.9
500	28	5,852	- 6.9	17	289	14.0
450	28	6,665	-12.1	17	281	19.0
400	28	7,560	-17.5	14	281	25.1
350	28	8,548	-23.9	14	282	30.7
300	28	9,656	-31.8	15	281	32.2
250	28	10,920	-41.4		279	34.8
200	28	12,396	-53.3		283	35.7
175	28	13,243	-60.0		280	35.4
150	28	14,189	-67.4		280	33.2
125	28	15,266	-75.1		276	29.3
100	27	16,539	-81.2		271	22.0
80	27	17,792	-80.3		258	10.1
70	24	18,550	-76.0		233	5.2
60	24	19,453	-69.8		192	3.7
50	23	20,558	-63.9		188	2.7
40	21	21,939	-58.6		85	1.6
30	20	23,763	-54.6		74	5.1
25	20	24,935	-52.7		80	9.3
20	20	26,385	-50.0		77	12.6
15	16	28,278	-48.0		78	15.0
10	14	30,979	-42.1		90	9.3
7	7	33,376	-41.7			

*** WALLOPS IS. VA. NASA**
1020 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	19	3	.3	81	13	1.7
1000	19	160	1.1	68	332	2.7
950	19	575	1.3	60	272	6.6
900	19	1,007	.2	55	265	11.8
850	19	1,464	- 1.2	51	262	16.9
800	19	1,947	- 2.6	53	264	23.1
750	19	2,460	- 4.1	46	264	28.2
700	19	3,001	- 6.0	45	267	34.6
650	19	3,578	- 8.7	46	267	42.0
600	19	4,196	-12.0	48	267	49.1
550	19	4,856	-15.5	44	267	56.3
500	19	5,573	-19.9	45	269	64.5
450	19	6,343	-24.8	47	268	72.5
400	19	7,196	-30.8	47	266	78.5
350	19	8,130	-37.7	49	265	87.8
300	19	9,177	-44.9		265	96.7
250	19	10,375	-52.1		267	91.9
200	19	11,804	-55.7		273	88.8
175	19	12,652	-56.4		273	84.9
150	19	13,628	-57.3		270	82.6
125	19	14,774	-59.8		274	72.3
100	19	16,157	-63.2		275	52.6
80	18	17,522	-62.3		270	47.2
70	18	18,346	-61.8		268	37.3
60	17	19,298	-60.5		262	30.7
50	17	20,437	-59.1		268	25.4
40	17	21,839	-57.8		268	21.4
30	16	23,665	-55.8		278	24.3
25	16	24,829	-54.4		276	25.3
20	16	26,260	-54.2		281	26.6
15	13	28,109	-53.1			
10						
7						

WASHINGTON, D. C.
1009 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	84	- 3.3	73	301	3.5
1000	28	151	- 1.9	67	282	3.9
950	28	562	- 1.0	58	276	9.5
900	28	990	- 3.0	56	272	14.8
850	27	1,442	- 3.6	50	274	19.6
800	27	1,920	- 4.7	45	270	23.7
750	27	2,428	- 6.2	42	271	27.4
700	27	2,965	- 8.1	42	267	31.9
650	27	3,536	-10.9	40	264	35.7
600	27	4,150	-13.7	R36	268	41.6
550	27	4,802	-17.2	37	267	48.6
500	27	5,516	-21.9	38	268	55.8
450	27	6,277	-27.2	39	267	60.2
400	27	7,123	-32.7	44	265	67.8
350	27	8,050	-39.2	46	262	74.2
300	26	9,080	-46.1		254	81.2
250	26	10,273	-53.2		270	81.6
200	26	11,697	-55.8		270	88.2
175	26	12,546	-55.9		272	83.9
150	26	13,525	-56.7		270	76.3
125	26	14,674	-59.4		269	63.1
100	26	16,059	-62.5		270	52.1
80	25	17,439	-62.4		264	41.6
70	25	18,263	-62.0		266	34.8
60	25	19,220	-60.6		268	28.2
50	24	20,361	-60.0		267	24.7
40	24	21,759	-58.3		265	23.9
30	24	23,574	-57.2		270	24.1
25	24	24,730	-56.1		271	24.7
20	22	26,152	-56.0		270	32.2
15	20	27,996	-54.7		276	33.6
10	12	30,615	-51.8		272	44.5
7	7	32,970	-46.7			

WINNEMUCCA, NEV.
871 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	1,310	[illegible]	74	199	1.7
1000	28	202				
950	28	616				
900	28	1,054				
850	28	1,506	1.2	51	237	3.3
800	28	1,993	- .5	46	283	7.0
750	28	2,505	- 3.3	47	292	8.9
700	28	3,050	- 6.1	42	302	13.0
650	28	3,624	- 9.3	41	316	17.3
600	28	4,242	-12.7	37	[illegible]	21.0
550	28	4,899	-16.4	34	317	24.7
500	28	5,613	-21.2	R32	316	28.0
450	28	6,376	-26.8	[illegible]	[illegible]	30.9
400	28	7,222	-33.1	R33	[illegible]	31.7
350	28	8,146	-40.6	34	310	35.2
300	28	9,179	-48.4		311	40.2
250	28	10,360	-55.2		310	42.2
200	28	11,767	[illegible]		[illegible]	43.1
175	28	12,609	-57.0		[illegible]	42.7
150	27	13,589	-57.3		[illegible]	[illegible]
125	27	14,737	-59.0		303	33.6
100	27	16,129	-60.8		299	29.3
80	26	17,517	-60.8		315	20.2
70	26	18,346	-60.9		314	17.3
60	25	19,307	-59.2		328	12.8
50	25	20,452	-58.0		336	9.3
40	25	21,861	-56.9		357	7.6
30	23	23,690	-55.6		[illegible]	8.2
25	22	24,855	-54.3		[illegible]	[illegible]
20	18	26,287	-53.3		30	10.1
15	15	28,154	-51.4		28	8.2
10	6	30,794	-48.2			
7						

WINSLOW, ARIZ.
85[illegible] MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	1,492	- 2.3	77	231	2.5
1000	28	182				
950	28	599				
900	28	1,032				
850	28	1,492			237	1.7
800	28	1,980	1.4	49	288	6.8
750	28	2,496	- 1.6	46	306	7.6
700	28	3,044	- 4.3	40	308	9.5
650	28	3,622	- 7.4	36	304	11.3
600	28	4,244	-11.3	37	[illegible]	12.4
550	28	4,901	-16.0	37	304	15.3
500	28	5,617	-21.1	R32	308	17.5
450	28	6,380	-26.8	R34	314	[illegible]
400	28	7,227	-32.9	[illegible]	[illegible]	22.9
350	28	8,153	-39.7	[illegible]	[illegible]	[illegible]
300	28	9,191	-46.7		[illegible]	29.5
250	28	10,382	-53.4		301	[illegible]
200	28	11,802	-56.5		297	37.5
175	28	12,649	-56.7		294	37.7
150	28	13,626	-57.0		[illegible]	[illegible]
125	28	14,772	[illegible]		[illegible]	30.1
100	28	16,155	[illegible]		[illegible]	27.2
80	28	17,527	-63.7		[illegible]	[illegible]
70	28	18,346	-63.0		[illegible]	16.3
60	28	19,299	-61.9		288	13.4
50	28	20,433	-59.9		291	8.7
40	28	21,833	-58.1		[illegible]	7.4
30	27	23,648	-56.9		[illegible]	[illegible]
25	25	24,809	-55.7		316	7.6
20	22	26,244	-54.3		308	8.5
15	17	28,084	-52.1		299	14.8
10	8	30,722	-49.3			
7						

YAKUTAT, ALASKA
1005 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	12	- 6.1	88	96	3.3
1000	28	52			91	5.4
950	28	456	- 3.9	73	126	8.7
900	28	883	- 6.6	71	157	7.4
850	28	1,328	- 9.3	73	194	5.6
800	28	1,794	-12.2	69	215	6.4
750	28	2,283	-15.2	65	225	9.3
700	28	2,804	-18.3	63	235	11.1
650	28	3,352	-21.5	60	246	13.8
600	28	3,940	-25.2	58	243	18.1
550	28	4,564	-29.4	56	253	21.2
500	28	5,242	-33.7	53	257	27.2
450	28	5,970	-38.3	52	261	31.9
400	28	6,778	-43.0	46	265	38.5
350	28	7,670	-47.0		268	48.6
300	28	8,684	-50.1		272	52.8
250	28	9,871	-51.5		276	54.0
200	28	11,323	-49.9		279	46.6
175	28	12,196	-50.3		279	47.4
150	28	13,202	-50.3		285	46.2
125	28	14,391	-50.8		289	42.3
100	28	15,841	-51.4		290	42.0
80	28	17,289	-52.0		296	38.5
70	27	18,158	-51.9		298	37.5
60	27	19,156	-52.2		300	37.9
50	27	20,336	-52.3		306	37.5
40	27	21,779	-52.0		310	38.3
30	26	23,647	-51.4		317	42.0
25	25	24,840	-51.1		323	41.6
20	24	26,295	-50.0		329	42.5
15	16	28,176	-48.0		333	42.5
10	5	31,056	-40.8			

+ YAP, CAROLINE IS.
1007 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	17	27.4	78	55	11.8
1000	28	81	26.7	80	57	14.6
950	28	522	22.7	81	67	22.0
900	28	1,003	19.5	78	70	23.5
850	28	1,494	16.9	75	70	23.1
800	28	2,011	14.7	67	71	18.8
750	28	2,550	12.2	56	73	17.9
700	28	3,131	9.3	50	78	17.1
650	28	3,739	6.0	47	76	17.3
600	28	4,395	2.6	41	83	16.5
550	28	5,089	- 1.3	38	86	16.7
500	28	5,849	- 5.6	33	90	17.9
450	28	6,668	-10.4	29	92	16.7
400	28	7,568	-15.8	R26	94	15.2
350	28	8,561	-22.5	R23	91	16.1
300	28	9,674	-31.0	R23	94	16.3
250	28	10,939	-41.6		106	17.7
200	28	12,412	-54.2		113	22.3
175	28	13,255	-61.5		110	23.7
150	28	14,193	-69.1		102	26.0
125	28	15,261	-76.8		93	21.8
100	28	16,523	-82.8		96	14.4
80	28	17,781	-77.3		244	.6
70	28	18,554	-73.4		278	5.6
60	28	19,465	-68.7		267	12.0
50	28	20,568	-64.6		268	10.3
40	28	21,943	-60.6		262	1.2
30	26	23,754	-56.8		80	19.2
25	24	24,914	-54.2		86	32.1
20	17	26,363	-50.7		83	48.4
15	7	28,255	-48.0			
10						

YUCCA FLAT, NEV.
882 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	27	1,196	[illegible]	44	322	4.1
1000	27	[illegible]				
950	27	593				
900	27	1,033				
850	27	1,494	4.3	36	349	6.6
800	27	1,985	1.7	35	356	7.0
750	27	2,499	- 1.2	38	338	8.2
700	27	3,049	- 3.9	34	331	9.3
650	27	3,624	- 7.3	30	318	11.7
600	27	4,250	-11.0	R28	319	16.5
550	27	4,905	-15.0	R27	323	21.0
500	27	5,627	-20.0	R26	329	26.0
450	27	6,388	-25.8	R27	318	25.3
400	27	7,241	-32.5	R27	311	25.3
350	27	8,168	-39.9	R28	309	26.4
300	27	9,203	-47.9		307	28.9
250	26	10,393	-54.7		308	30.5
200	26	11,803	-58.8		313	36.3
175	26	12,643	-57.6		307	36.7
150	26	13,617	-57.6		303	33.0
125	26	14,760	-60.3		301	29.3
100	26	16,143	-62.8		301	25.8
80	26	17,516	-63.0		303	21.6
70	26	18,339	-62.2		307	14.6
60	26	19,295	-60.5		312	9.5
50	25	20,437	-59.2		325	7.6
40	25	21,838	-57.9		338	5.4
30	23	23,655	-56.1		355	5.6
25	22	24,817	-55.2		348	6.6
20	22	26,243	-54.4		344	6.8
15	19	28,103	-51.5		340	7.2
10	9	30,718	-50.7			

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Relative humidity averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.
The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Relative humidity data are not published for standard pressure surfaces for which less than 5 observations are available.
Relative humidity data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from lithium chloride hygristors.
These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature in degrees Celsius, relative humidity in percent, and resultant winds in degrees and knots.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. They were also equipped with [illegible] hygristors. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.C.T.

R More than half of the observations are from statistical values

1/ began February 2, 1965
2/ began February 10, 1965
Transferred to Boothville, Feb. 13.
‡ Transferred from Point Arguello, Jan. 2.

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun. FEBRUARY 1965

Date	Sun's zenith distance								
	A. M.				*	P. M			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
ALBUQUERQUE, N. MEX.									
	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Feb.									
1	0.89	1.00	1.13	1.30	1.35	1.28	1.11	(0.99)	(0.89)
3	.95	1.09	1.21	1.36	1.42	1.33	1.21	1.05	.91
4	.99	1.09	1.21	1.35	1.42	1.33	1.16	1.06	.94
5	----	(.87)	(1.09)	(1.14)	----	1.32	----	----	----
10	----	----	----	----	1.39	----	E(1.03)	.88	----
11	----	----	----	----	----	----	1.07	----	----
12	.93	1.05	1.17	1.32	1.43	----	----	----	----
13	.83	.96	1.12	1.33	(1.42)	1.38	1.23	1.13	1.04
14	.95	(1.01)	----	----	----	----	----	----	----
15	----	----	----	----	----	(1.23)	----	.89	.79
16	.84	.96	1.10	1.27	1.39	1.34	1.15	1.04	.94
17	.94	1.06	1.17	1.31	1.43	----	1.16	1.04	.93
18	.95	1.07	1.19	1.34	1.43	1.33	1.16	1.03	.92
19	.97	1.07	1.18	1.35	1.46	1.30	1.16	1.09	.98
20	1.02	1.11	1.23	1.37	1.40	1.36	1.20	1.12	1.01
21	----	----	----	----	----	1.34	1.16	1.06	.97
22	.75	.86	.99	(1.22)	----	----	----	----	----
24	Instrument failure			1.28	1.25	1.30	1.12	.98	.86
25	.91	1.01	1.14	1.29	1.36	1.23	1.09	.94	.88
26	.86	.93	1.06	1.28	1.40	1.29	1.14	1.01	.92
Averages	0.91	1.02	1.15	1.32	1.29	1.32	1.15	1.02	0.93
TUCSON, ARIZ.									
	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Feb.									
3	0.81	----	----	----	----	----	----	0.87	----
4	.80	0.91	----	----	----	----	----	----	----
10	.66	----	----	----	----	----	----	.88	----
12	----	----	----	----	----	----	----	----	0.88
13	.95	----	----	----	----	----	----	----	.95
14	.96	----	----	----	----	----	----	----	----
16	----	.79	----	----	----	----	----	----	----
18	----	----	----	----	----	----	----	1.07	.87
20	----	----	1.17	----	----	----	----	----	----
21	.95	1.04	----	----	----	----	----	----	----
23	----	----	----	----	----	----	----	.90	.78
24	----	.97	----	----	----	----	----	----	----
27	----	.87	----	----	----	----	----	----	----
28	.65	.73	----	----	----	----	----	----	----
Averages	0.83	0.89	1.17	----	----	----	----	0.93	0.87
GUAM, M. I.									
	Air mass								
	4.92	3.93	2.95	1.97	*	1.97	2.95	3.93	4.92
			No observations due to cloudiness						

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
MADISON, WIS.									
	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Feb.									
1	----	----	----	----	1.18	----	1.06	0.94	0.84
2	S 0.84	S 0.96	S 1.10	S 1.28	S 1.29	S 1.21	S 1.08	S .96	S .83
3	S .85	S .96	S 1.11	S 1.29	S 1.29	S 1.29	S 1.11	S .97	S .87
8	S .86	S .98	S 1.10	S 1.29	----	----	----	----	----
Averages	0.85	0.97	1.10	1.29	1.25	1.25	1.08	0.96	0.85
BLUE HILL OBS., MASS.									
	Air mass								
	4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
Feb.									
3	0.79	0.90	1.05	1.22	1.23	1.21	0.95	0.79	0.67
4	.78	.89	1.04	1.22	1.25	----	----	----	----
9	.94	1.04	1.13	1.30	1.30	1.21	1.01	.94	.82
13	----	----	----	1.28	1.33	1.30	1.10	.96	.86
15	----	----	----	----	1.34	1.29	1.11	.95	.86
17	.90	.99	1.12	1.29	1.36	1.30	1.12	.96	.83
20	----	----	1.00	1.17	1.33	1.32	1.13	1.00	.93
23	.84	.96	1.08	1.23	1.34	1.25	1.06	.91	.82
27	.77	.89	.99	1.21	1.35	1.25	1.04	.89	.77
28	----	----	----	----	1.23	1.13	.91	.77	.65
Averages	0.84	0.95	1.06	1.24	1.31	1.25	1.05	0.91	0.80
MAUNA LOA OBS., HAWAII									
	Air mass								
	3.36	2.69	2.01	1.34	*	1.34	2.01	2.69	3.36
Feb.									
1	1.16	1.26	1.38	1.52	1.64	1.47	1.36	1.23	1.15
2	1.17	1.27	1.39	1.52	1.63	----	(1.28)	(1.20)	(1.09)
3	1.15	1.25	1.36	1.50	----	----	----	----	----
5	----	----	----	----	----	1.42	1.29	1.19	1.10
6	1.11	1.21	1.31	1.43	1.53	1.40	----	(1.17)	1.10
7	(1.11)	(1.19)	(1.29)	----	----	----	----	----	----
9	1.15	1.25	1.35	1.49	1.61	1.43	----	(1.18)	1.10
10	1.16	1.25	1.33	1.46	1.59	----	----	----	----
11	1.17	1.26	1.35	1.47	(1.58)	(1.45)	(1.32)	1.26	----
12	1.22	1.29	1.40	1.51	(1.60)	----	----	----	----
17	1.15	1.25	1.38	1.50	1.63	1.48	1.37	1.24	1.14
18	1.11	1.22	1.33	1.45	1.58	1.45	1.32	1.20	1.10
19	1.08	1.19	1.30	1.44	(1.56)	----	----	----	----
20	----	----	H 1.29	H 1.42	1.57	1.43	1.30	1.18	1.09
21	1.09	1.21	1.34	1.47	1.61	----	----	----	----
22	1.14	1.24	1.35	1.47	1.60	1.45	1.34	1.23	1.13
23	----	----	----	----	1.63	1.48	1.36	1.27	1.18
24	1.16	1.26	1.37	1.50	1.62	1.46	1.33	1.22	1.13
26	1.11	1.21	1.33	1.47	1.59	H 1.42	H 1.29	H 1.17	H 1.07
27	H 1.03	H 1.14	H 1.27	HS1.43	----	----	----	----	----
28	1.15	1.23	1.34	1.47	----	----	----	----	----
Averages	1.14	1.23	1.34	1.47	1.60	1.45	1.33	1.22	1.12

( )	Clouds present	H	Haze
HS	Slight haze	S	Slight haze - indeterminable
E	Interpolated	*	Values corresponding to true solar noon

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	---	---	389	391	384	253	246	244	141	330	---	412	455	299	392	449	442	450	452	459	463	432	201	---	478	488	417	295				373
AMES IOWA	266	297	303	288	---	---	---	---	---	---	37	343	345	322	190	290	344	296	299	298	304	149	106	389	395	346	368	113				277
ANNETTE ALASKA	144	59	8	85	118	8	43	134	112	36	65	55	128	---	---	55	14	17	191	34	108	53	87	41	174	228	278	66				97
APALACHICOLA FLORIDA	279	385	203	335	176	106	389	195	295	438	393	368	147	75	509	78	194	359	411	349	473	466	66	88	519	549	527	509				317
ASTORIA OREGON	---	78	58	20	35	117	67	---	216	208	77	73	127	143	133	117	81	264	---	310	---	---	100	---	206	42	---	235				129
ATLANTA GEORGIA	259	416	385	412	338	31	94	---	174	220	302	93	259	76	163	101	58	463	461	424	319	499	348	64	294	513	496	434				285
BARROW ALASKA	8	8	8	14	18	17	18	22	29	29	36	27	24	29	29	27	41	53	58	54	67	68	82	81	88	85	95	98				43
BETHEL ALASKA	57	112	72	134	58	66	73	58	72	93	69	104	187	208	218	219	231	230	263	161	158	120	161	148	255	248	154	158				146
BISMARCK N.DAK.	279	291	294	233	238	237	296	303	258	307	260*	289	---	---	342	313*	328*	195	336*	318	353	202	386	324	367*	295	256	339				294*
BLUE HILL MASS.	174	232	302	296	218	130	210	179	320	38	261	35	317	160	346	321	372	143	273	392	311	251	417	389	20	258	413	349				254
BOISE IDAHO	293	218	159	273	189	198	265	76	290	289	292	320	55	213	193	151	303	347	313	364	218	256	383	338	377	289	239	331				258
BOSTON MASSACHUSETTS	151	227	282	285	190	160	183	125	320	37	268	22	318	155	356	293	350	124	312	388	275	229	417	358	12	294	404	328				245
BROWNSVILLE TEXAS	451	289	172	86	42	183	269	173	129	226	481	100	68	536	124	89	73	222	540	434	360	461	531	562	584	573	517	416				310
BURLINGTON VERMONT	---	125	145	198	112	120	99	42	267	26	263	30	238	247	295	136	331	116	250	340	53	394	341	246	50	194	287	290				194
CAPE HATTERAS N.C.	353	244	396	349	393	345	102	260	337	197	240	338	75	33	89	313	121	340	347	460	88	475	313	83	420	382	467	455				286
CARIBOU MAINE	230	236	298	262	287	289	78	52	316	169	167	98	233	319	320	192	331	99	212	350	364	111	330	346	183	108	357	347				239
CHARLESTON S.C.	408	364	400	315	363	103	85	361	195	367	376	351	163	47	109	143	36	391	476	457	425	506	205	146	371	528	515	427				308
CLEVELAND OHIO	81	205	272	248	254	258	20	28	---	230	143	189	186	296	339	178	181	88	152	107	16	229	181	7	18	303	257	87				169
COLUMBIA MISSOURI	337	341	294	336	192	68	66	173	59	228	51	211	380	362	337	236	374	368	365	366	462	384	21	347	449	436	415	402				288
DODGE CITY KANSAS	274	281	300	316	289	215	51	122	151	174	330	347	392	335	152	380	370	348	356	365	373	298	180	394	388	388	381	240				293
E. LANSING MICHIGAN	164	238	290	317	272	175	71	228	66	116	126	126	247	304	304	258	230	95	383	303	211	267	283	170	152	406	377	322				232
EL CENTRO CALIF. NPF	214	333	321	291	293	257	235	367	276	384	375	398	393	367	406	410	402	---	---	---	---	---	---	---	---	---	---	---				---
EL PASO TEXAS	363	354	330	423	410	345*	207	88	329	235	447	496	493	508	485	338	505	507	498	526	508	464	308	541	509	465	459	541				417*
ELY NEVADA	328	329	338	311	284	205	404	389	286	295	427	420	370	397	435	425	424	424	437	429	415	254	432	443	460	413	282	470				376
EPPLEY,NEWPORT R.I.	198	178	290	294	224	67	186	185	314	46	233	46	278	125	313	304	346	182	323	368	294	260	391	362	37	268	379	336				244
FAIRBANKS ALASKA	34	---	56	74	68	33	---	39	71	39	50	27	62	56	121	118	125	136	128	131	134	95	89	93	115	115	178	176				91
FORT WORTH TEXAS	410	403	281	138	147	110	151	50	389	399	396	440	404	484	260	42	230	479	475	467	490	488	29	499	---	521*	492	240				330*
FRESNO CALIFORNIA	95	70	74	149	175	264	343	345	304	374	356	375	331	191	346	393	401	405	400	327	359	426	437	429	423	400	221	367				314
GLASGOW MONTANA	252	289	266	152	209	227	289	236	142	279	307	253	216	283	290	265	341	310	320	259	337	234	360	325	327	309	168	373				272
GRAND JUNCTION COLO.	342	353	354	332	319	134	231	135	127	141	426	328	451	124	---	---	---	---	---	---	---	---	---	483	456	458	285	376				308
GREAT FALLS MONTANA	162	151	179	145	121	138	229	148	157	224	236	238	152	182	246	216	167	232	209	216	169	251	292	299	154	285	257	222				203
GREENSBORO N.C.	217	402	401	398	405	186	48	272	263	89	313	113	229	42	334	248	150	436	445	451	307	477	375	64	173	335	488	450				290
GRIFFIN EXP.STA.GA.	334	490	491	482	400	61	138	353	292	412	417	97	299	82	208	104	83	545	540	501	355	587	353	96	390	591	569	539				350
INDIANAPOLIS INDIANA	247	388	389	406	231	205	88	108	31	311	67	151	346	403	400	284	---	385	401	359	220	459	121	---	---	---	489	340				273
LAKE CHARLES LA.	294	357	144	77	118	84	158	107	236	102	192	157	134	483	316	81	71	462	465	331	461	413	475	197	532	515	476	163				271
LAKELAND FLORIDA	448	256	466	283	158	231	253	438	426	453	448	462	309	298	497	348	446	328	514	496	241	422	77	304	476	603*	602	593				388*
LANDER WYOMING	348	336	317	321	140	284	332	334	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	451	436	226	381	415				---
LARAMIE WYOMING	354	317	222	350	235	294	321	415	301	265	404	330	417	333	462	403	429	446	464	451	397	287	500	494	499	467	379	472				382
LAS VEGAS NEVADA	364	375	375	333	341	244	374	408	287	430	439	433	429	361	451	446	441	444	456	445	403	462	472	469	464	467	283	494				407
LITTLE ROCK ARKANSAS	300	395	356	370	324	168	103	40	46	368	47	422	406	436	415	125	312	431	437	427	322	479	376	60	508	465	448	275				317
LOS ANGELES CALIF.WB	304	218	229	275	83	226	361	389	283	416	404	425	417	371	409	423	434	431	444	390	298	165	452	441	442	394	337	464				354
MADISON WISCONSIN	335	347	348	356	302	196	53	353	56	164	112	298	384	348	272	267	370	146	276	346	391	333	169	255	428	401	389	217				283
MANHATTAN KANSAS	333	273	318	322	309	48	28	56	47	68	143	381	390	357	106	339	377	360	362	361	390	339	140	407	412	399	390	---				276
MATANUSKA ALASKA	39	59	59	87	54	54	60	48	22	44	22	33	74	74	95	116	143	160	160	164	128	84	111	89	116	124	216	139				92
MAUNA LOA OB.HAWAII	621	630	459	---	603	655	356	---	678	---	695	654	350	271	199	---	704	688	596	695	702	707	716	724	465	732	547	466				580
MEDFORD OREGON	191	131	128	124	164	238	303	106	317	275	281	289	93	121	229	240	296	328	313	275	266	351	368	329	320	114	249	356				243
MIDLAND TEXAS	373	320	336	41	239	360	132	68	430	410	444	441	332*	---	---	125*	33	308	446	455	433	383	243	482	468	467	423	456				333*
NASHVILLE TENNESSEE	43	---	375	346	363	134	68	88	183	323	162	306	320	289	397	165	219	402	420	446	84	444	451	37	412	477	469	403				290
NEW YORK N.Y.U	120	285	297	295	147	94	60	253	301	25	212	14	337	92	339	290	262	306	298	391	301	398	394	334	37	277	316	401				245
NORTH OMAHA NEBRASKA	350	326	204	331	327	80	36	281	58	194	129	410	400	391	263	401	419	395	413	408	445	188	140	480	475	454	455	96				305
OAK RIDGE TENNESSEE	39	336	317	305	300	128	49	76	95	102	191	144	257	85	293	167	131	352	366	369	129	390	378	72	206	336	389	311				225
OKLAHOMA CITY OKLA.	301	344	327	325	304	77	51	32	223	323	---	377	367	379	363	172	386	385	378	389	411	404	19	443	430	425	416	255				308
PHOENIX ARIZONA	315	---	355	349	358	46	321	373	223	407	415	417	434	313	402	413	424	425	426	431	431	417	440	450	448	438	349	418				379
PORTLAND MAINE	160	232	291	298	207	248	83	90	317	59	323	35	305	197	339	302	359	135	289	368	129	138	400	365	40	250	394	361				240

Note. --Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

FEBRUARY 1965

Station	Day of month																															Avg.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
RAPID CITY S.DAK.	247	220	221	245	252	226	261	303	256	115	270	245	251	152	326	253	279	287	319	106	343	128	378	335	324	340	207	229				254
RIVERSIDE CALIFORNIA	358	372	327	352	158	211	421	433	164	455	469	442	464	437	489	484	471	470	474	456	416	148	519	477	463	446	401	493				403
SAINT CLOUD MINN.	304	269	323	285	261	100	164	317	86	265	155	295	356	248	363	362	353	279	176	346	361	292	332	389	281	287	364	60				274
SALT LAKE CITY UTAH	---	---	---	---	---	---	---	295	216	334	398	234	198	220	419	339	---	359	395	418	417	301	438	423	427	401	90	428				337
SAN ANTONIO TEXAS	399	306	134	52	56	112	69	56	477	213	486	355	384	518	47	58	60	282	416	516	505	352	180	571	516	534	461	261				299
SANTA MARIA CALIF.	66	192	99	329	122	251	379	380	384	399	381	399	396	377	386	402	397	413	419	405	342	411	441	390	397	363	167	464				341
SAULT STE MARIE MICH	214	322	221	274	99	172	60	295	227	48	180	82	327	187	109	301	196	276	394	101	319	282	328	294	188	410	203	427				234
SEATTLE WASH. UNIV.	142	51	62	21	25	144	30	199	178	170	75	31	33	61	61	33	73	237	113	244	23	160	51	127	241	35	254	315				114
SEATTLE TACOMA WASH.	161	67	61	28	36	215	55	241	173	164	93	41	34	71	80	---	183	168	93	285	38	175	91	179	274	42	182	310				131
SHREVEPORT LOUISIANA	155	408	254	285	125	109	112	48	101	281	132	288	348	483	442	53	217	526	468	296	460	510	387	175	532	505	331	196				294
SPOKANE WASHINGTON	154	173	114	133	140	290	200	134	277	304	157	236	127	258	157	84	257	275	210	344	105	304	202	261	283	84	266	413				212
STATE COLLEGE PENN.	87	284	337	284	217	227	40	79	183	27	172	64	257	115	374	295	318	232	420	275	209	247	390	289	79	288	371	298				231
STERLING VIRGINA	100	331	367	359	247	334	20	307	67	44	107	74	324	50	386	304	284	385	315	324	326	425	402	238	168	411	371	410				267
STILLWATER OKLAHOMA	362	345	353	355	337	107	68	66	174	362	102	407	397	407	387	234	426	419	420	422	422	404	17	448	463	453	449	294				325
SWAN ISLAND W.I.	539	522	312	527	538	565	558	543	527	492	555	439	514	426	599	445	592	528	585	596	602	604	593	593	370	196	516	393				510
TAMPA FLORIDA	456	338	446	295	121	223	292	404	450	469	414	482	363	255	473	387	491	319	484	461	227	388	87	369	397	583	562	548				385
TUCSON ARIZONA	167	249	354	338	337	89	210	364	365	373	357	428	440	296	257	416	437	432	432	444	437	429	412	454	449	414	393	430				364
WAKE ISLAND,PACIFIC	441	455*	448	467	468	450	472	460	382	456	485	496	489	495*	375	473	407	504	493*	303*	390	---	108	454	467	460	361	420				432*

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (midnight to midnight) at Huntley, Mont.

FEBRUARY 1965

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	1	-11	-2	-20	5	-38	9	35	-22	-37	-61	-71	-11	2	15	69	92	80	83	-50	-57	-37	-51	-76	-74	-21	46	21				-6

The measurement is made with a Beckman and Whitley net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Huntley Exp. Station. The instrument with which they were measured has not been checked by the Weather Bureau.

TOTAL OZONE DATA

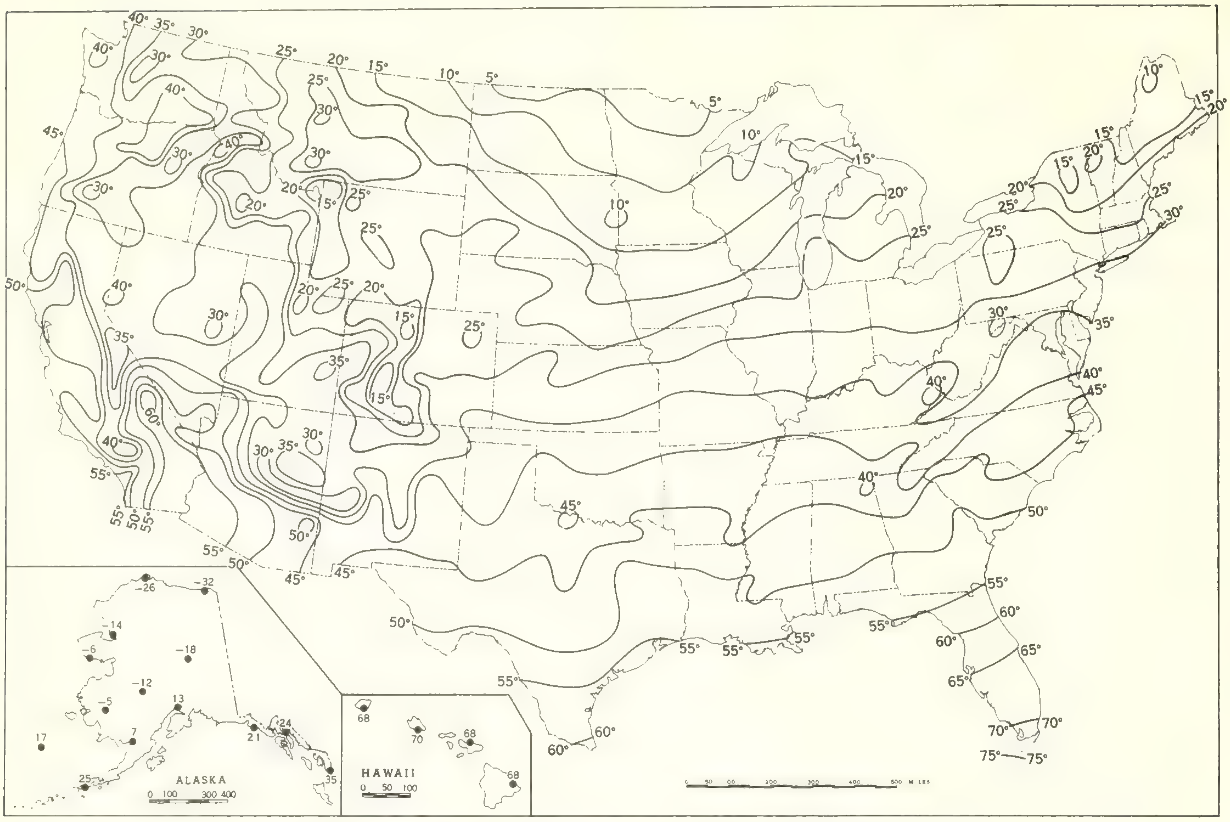
These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λ s Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

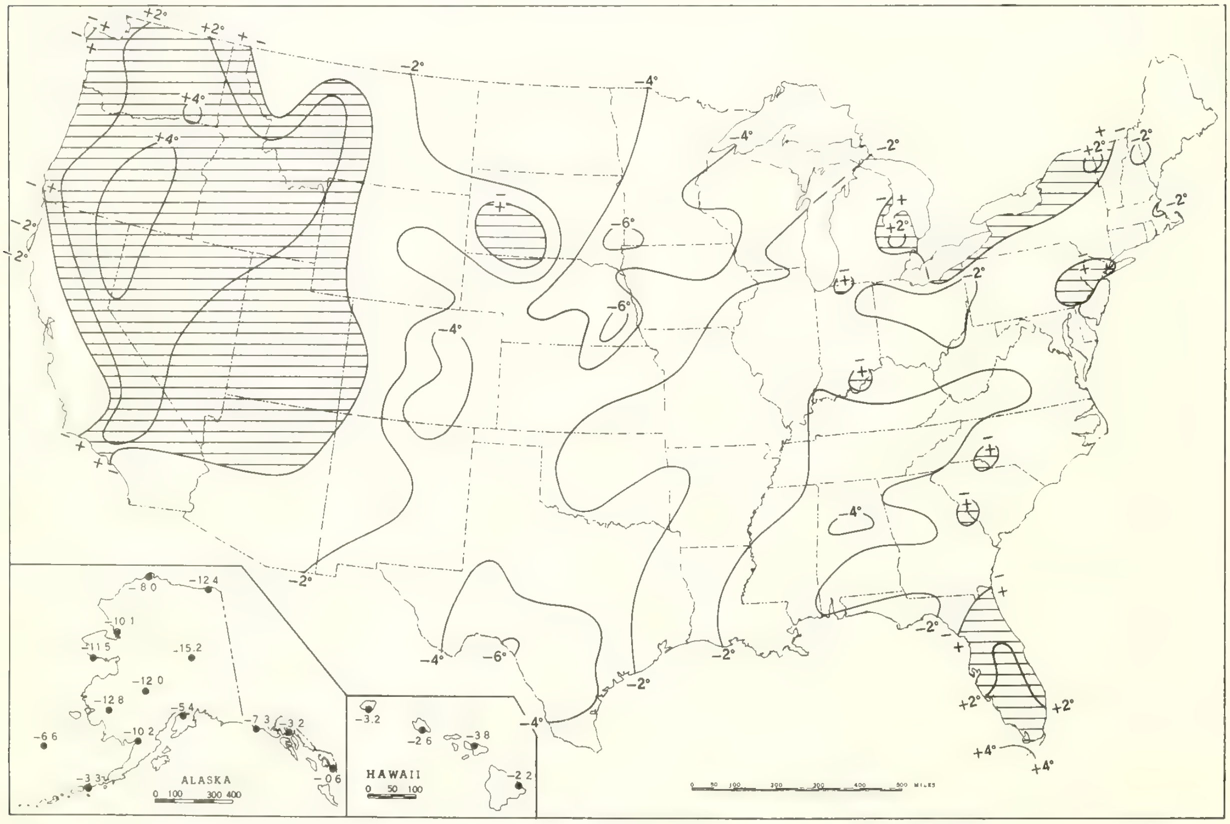
Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3
															Data will be delayed																

The spectrophotometer measures the total amount of ozone in the atmosphere, i e , the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e g , 350 milli-atmo-cm ozone implies an ozone layer 0.350 centimeter thick The code λ s designates the type of measurement made.

Chart I. A. Average Temperature (°F.) at Surface, February 1965.



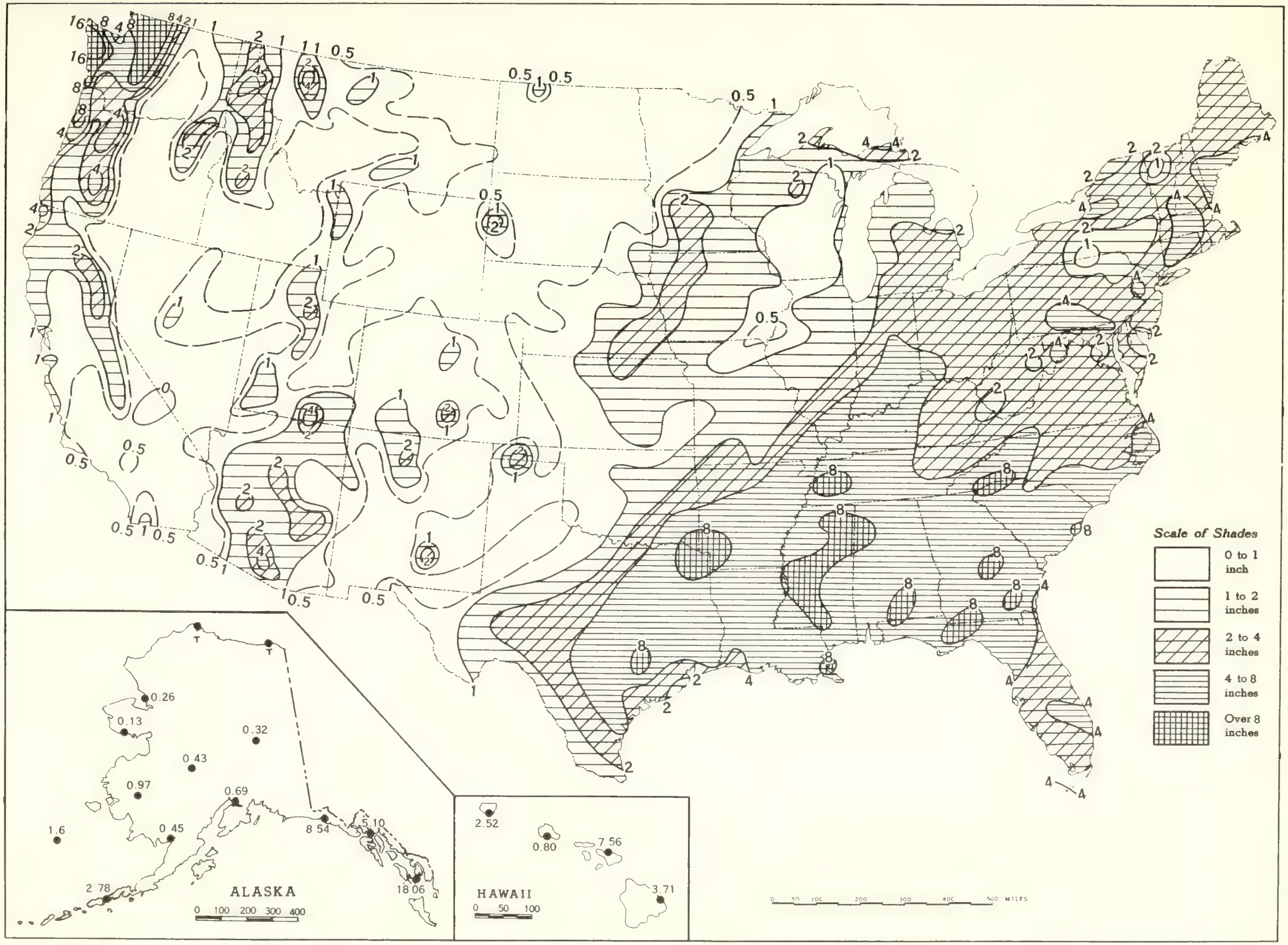
B. Departure of Average Temperature from Normal (°F.), February 1965.



A. Based on reports from over 870 Weather Bureau and cooperative stations. The monthly average is half the sum of the monthly average maximum and monthly average minimum, which are the average of the daily maxima and daily minima, respectively.

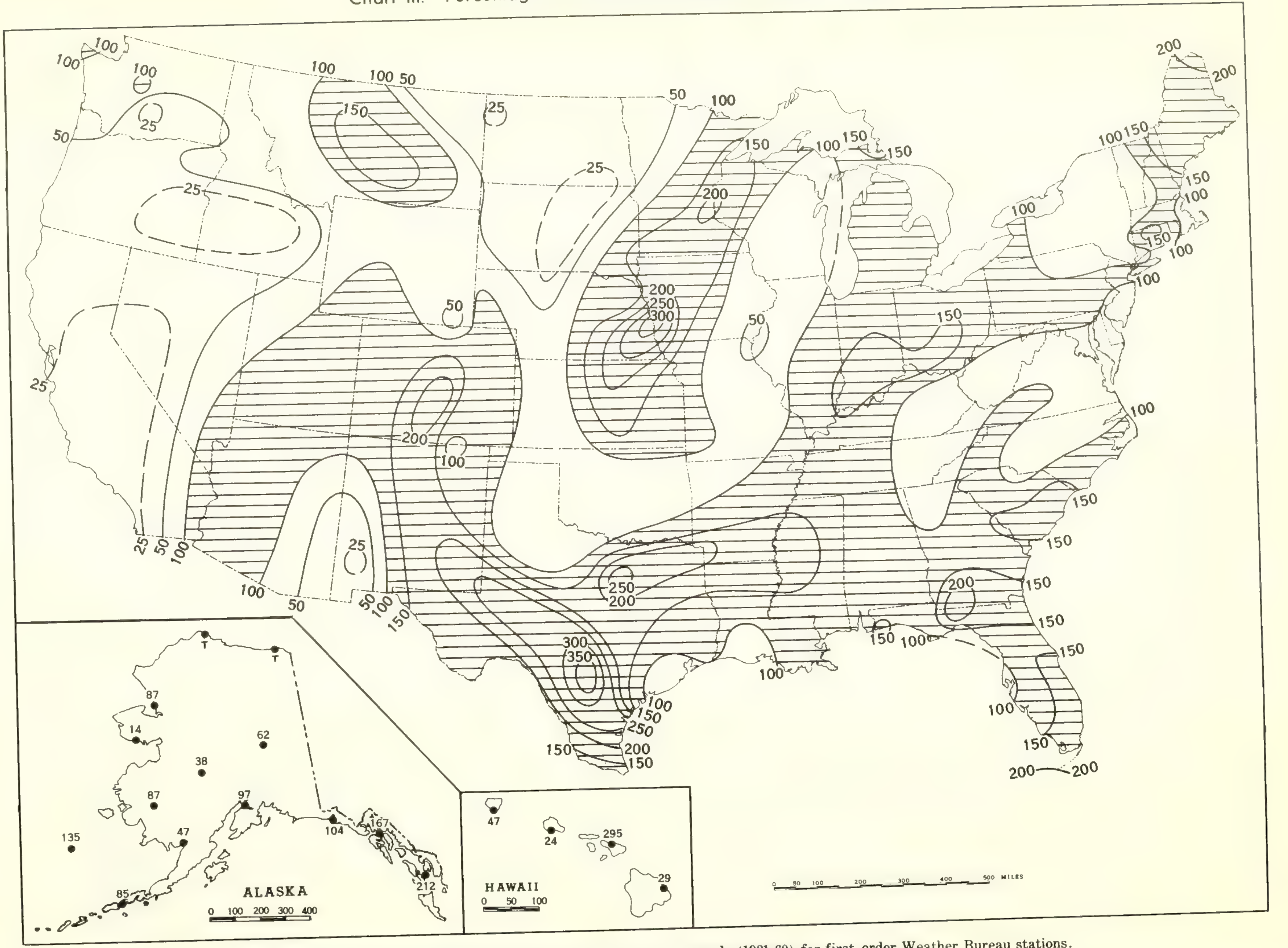
B. Departures from normal are based on the 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart II. Total Precipitation (Inches), February 1965.



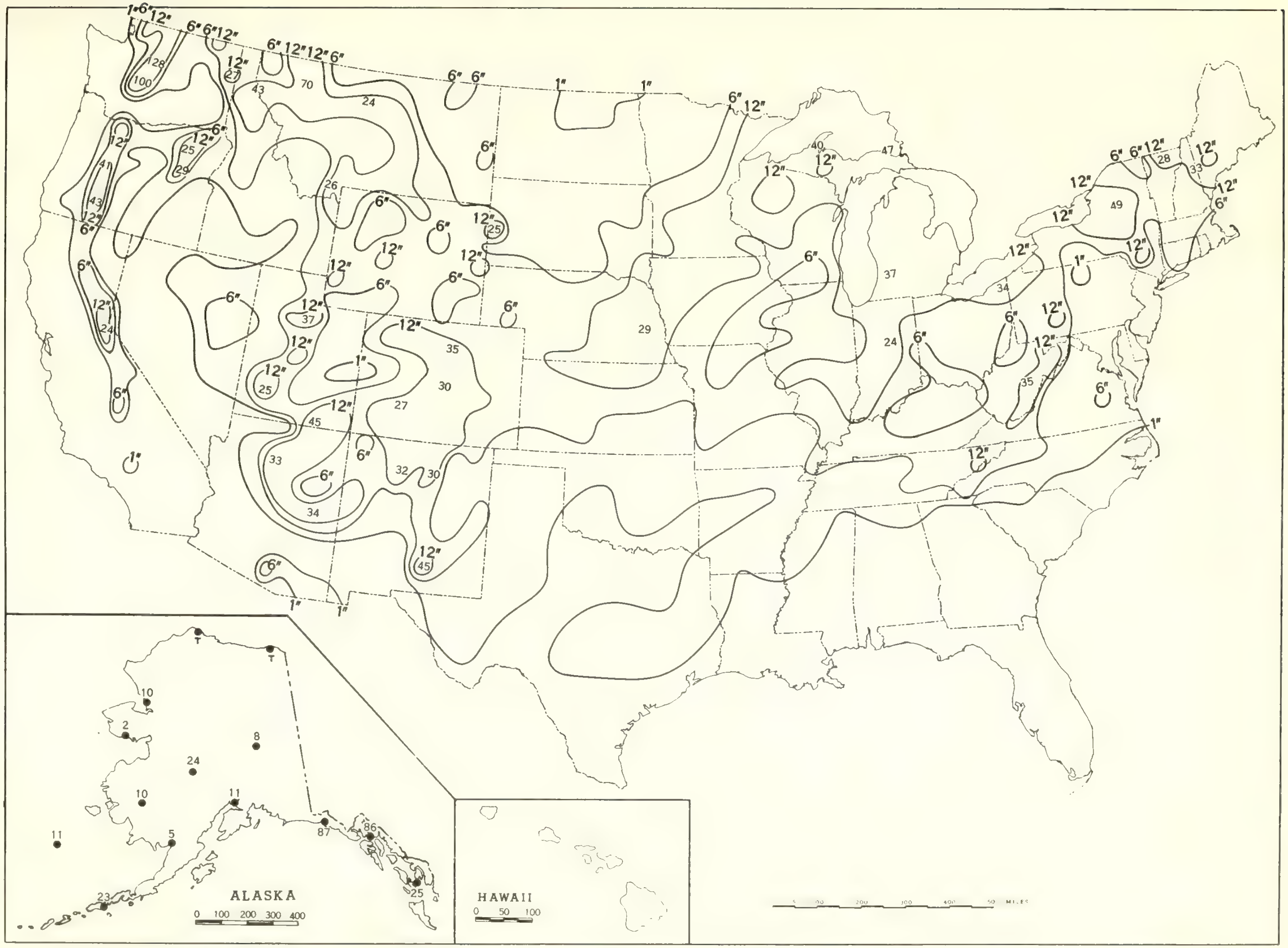
Based on daily precipitation records at about 870 Weather Bureau and cooperative stations.

Chart III. Percentage of Normal Precipitation, February 1965.



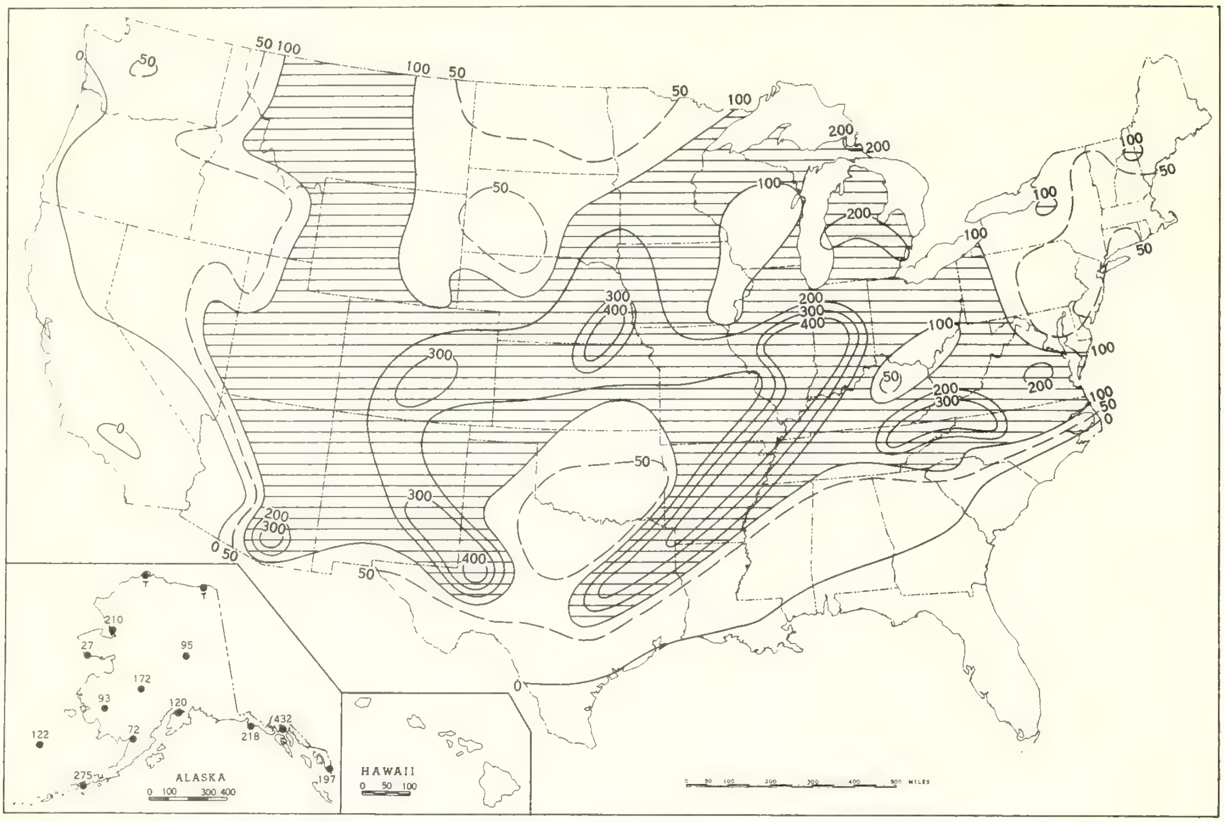
Normal monthly precipitation amounts are computed from 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart IV. Total Snowfall (Inches), February 1965.

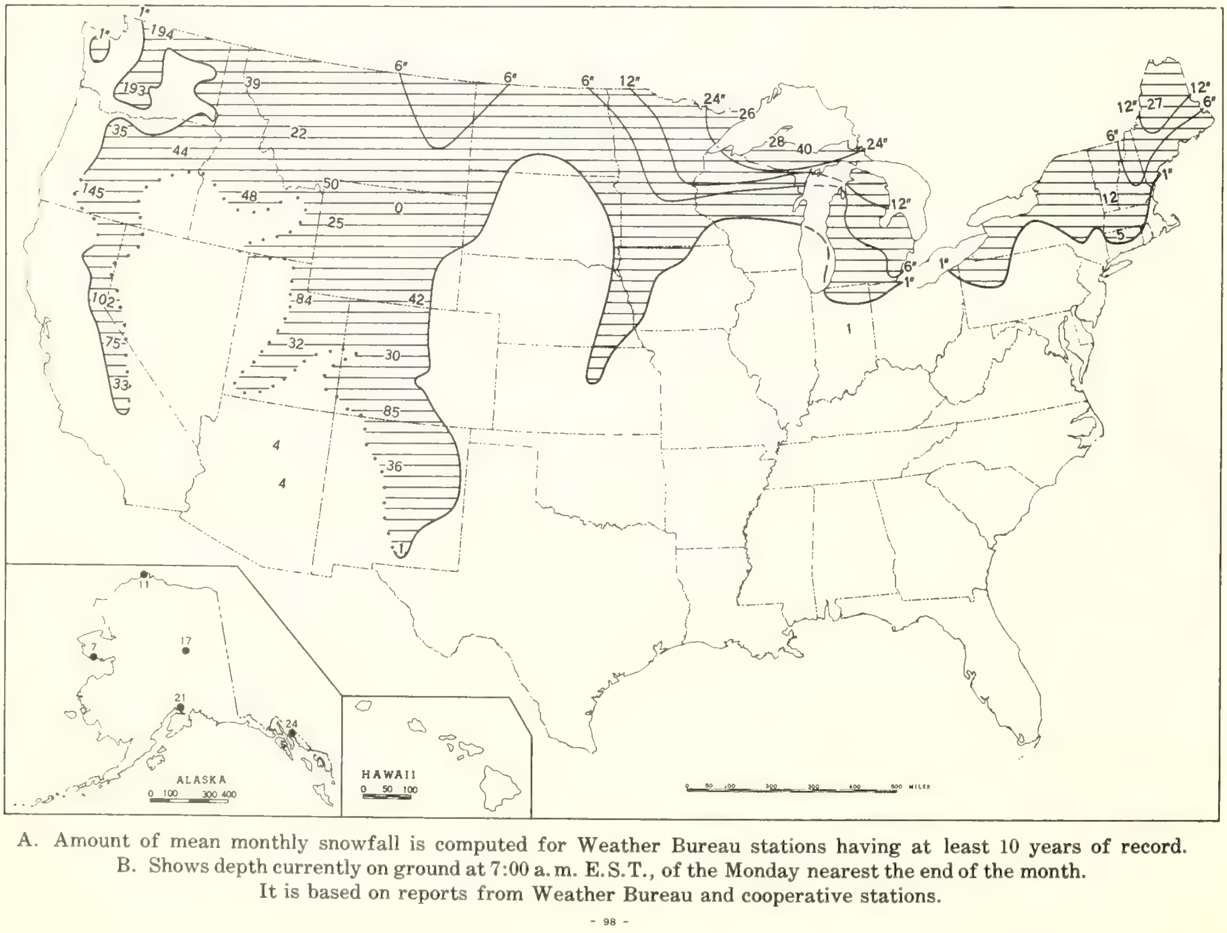


This is the total of unmelted snowfall recorded during the month at Weather Bureau and cooperative stations. This chart and Chart V are published only for the months of November through April although of course there is some snow at higher elevations, particularly in the far West, earlier and later in the year.

Chart V. A. Percentage of Mean Monthly Snowfall, February 1965.

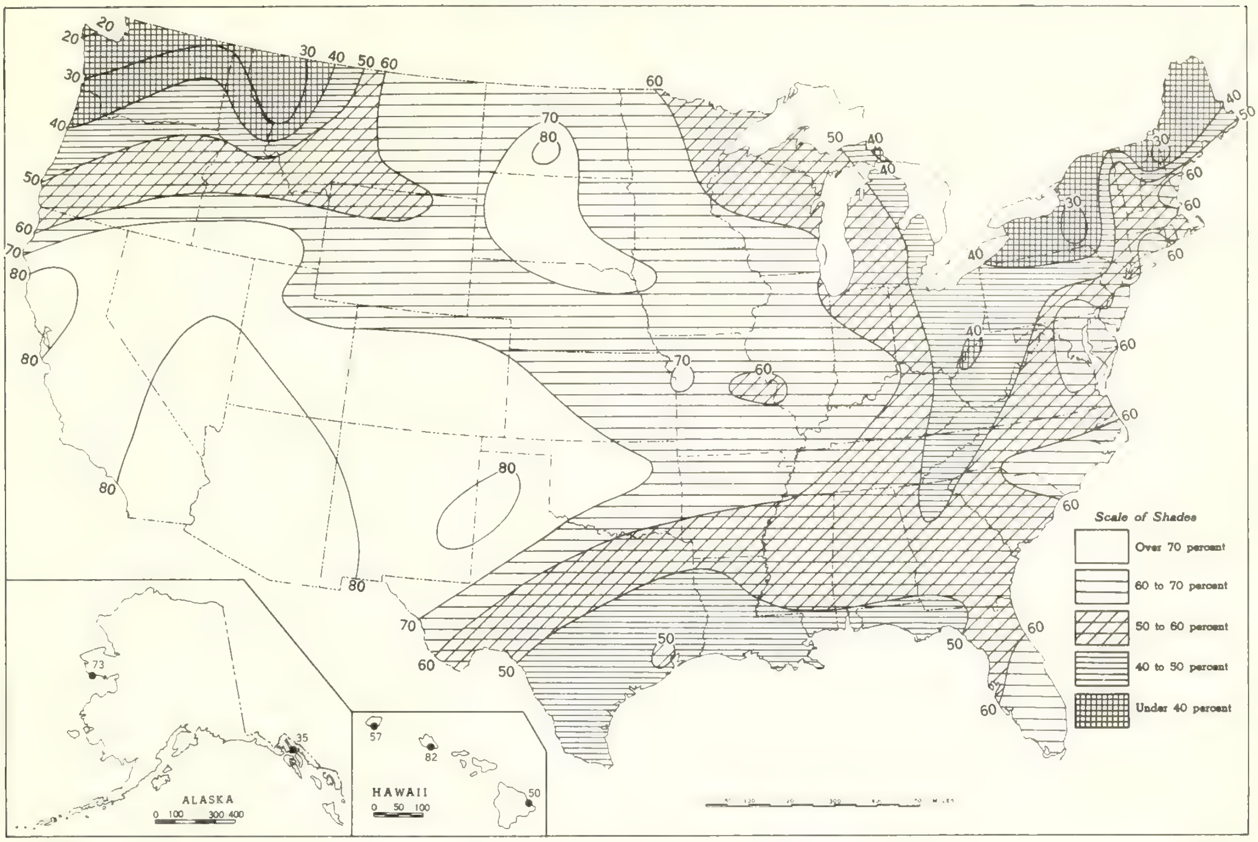


B. Depth of Snow on Ground (Inches), 7:00 a. m. E. S. T., March 1, 1965.

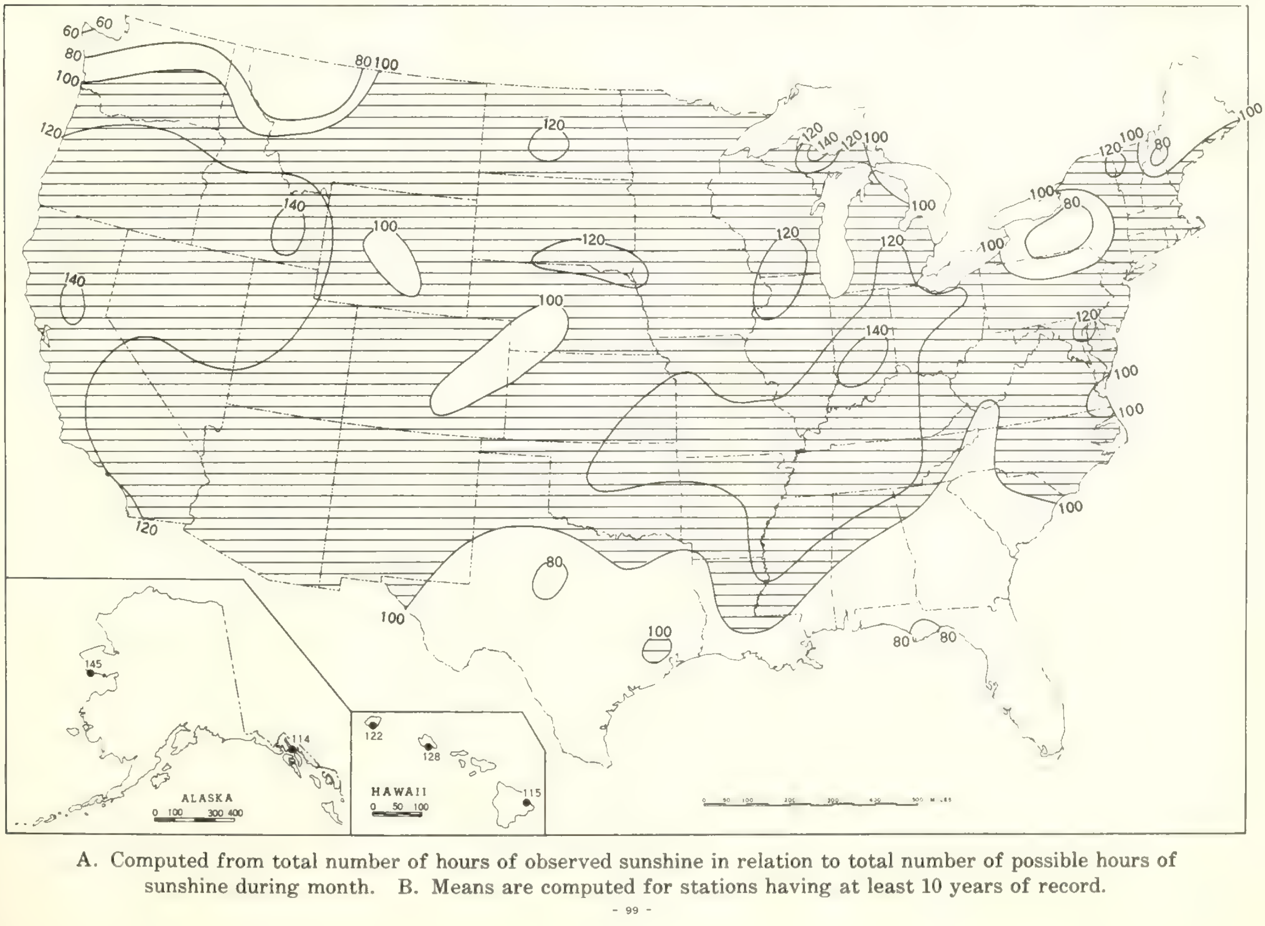


A. Amount of mean monthly snowfall is computed for Weather Bureau stations having at least 10 years of record.
B. Shows depth currently on ground at 7:00 a.m. E.S.T., of the Monday nearest the end of the month.
It is based on reports from Weather Bureau and cooperative stations.

Chart VI. A. Percentage of Possible Sunshine, February 1965.

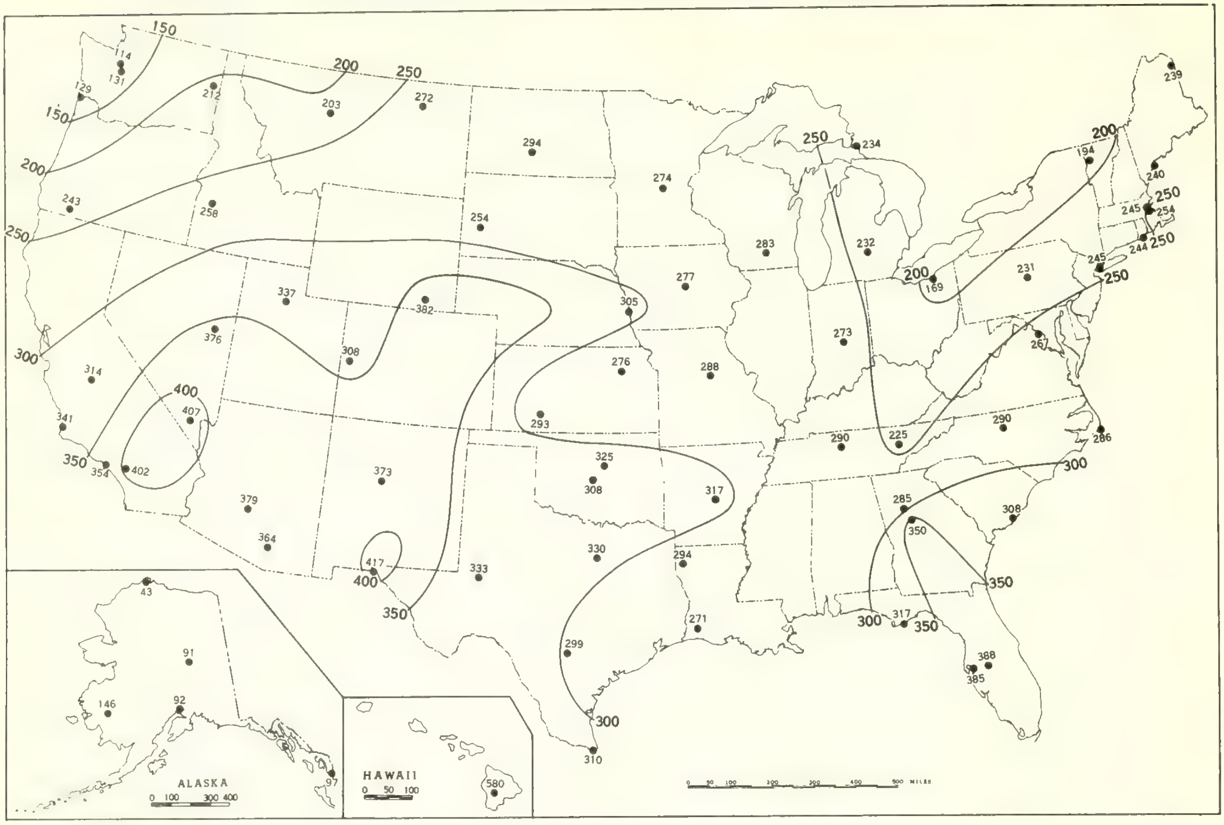


B. Percentage of Mean Monthly Sunshine, February 1965.

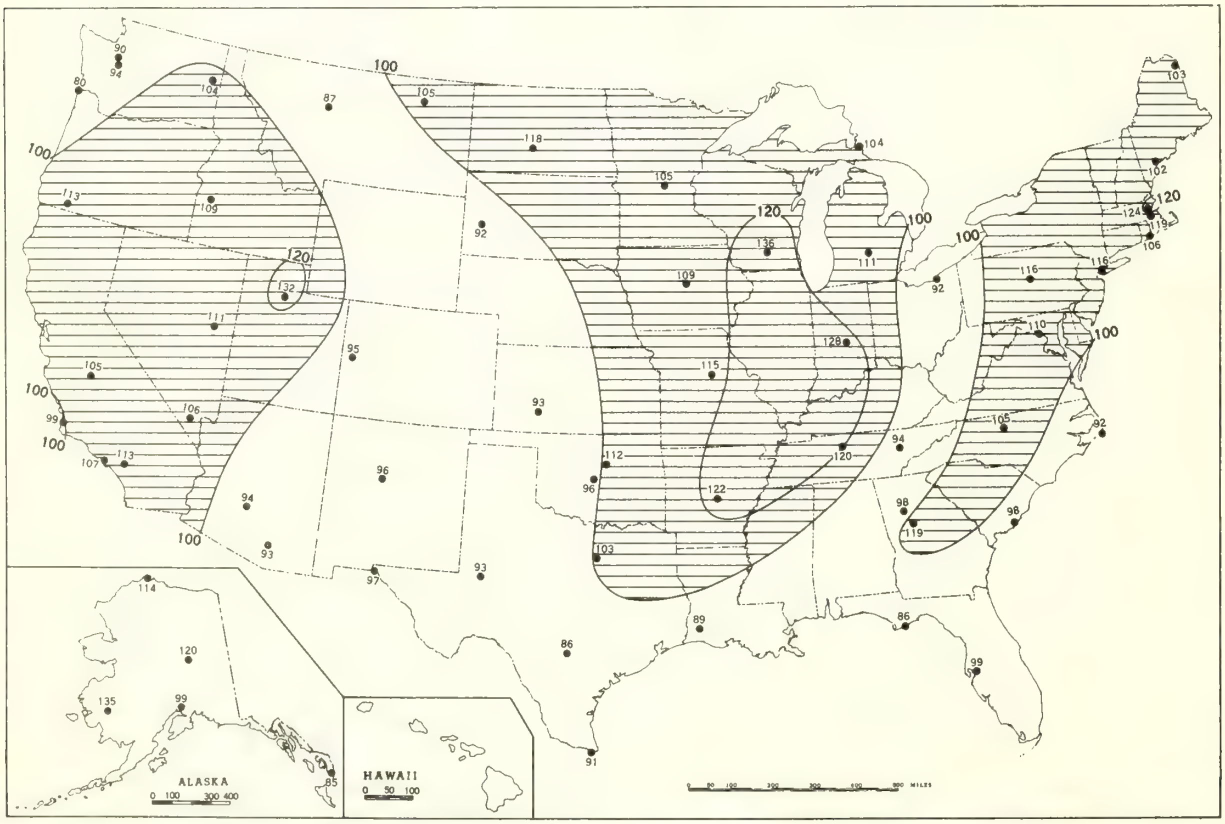


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, February 1965.

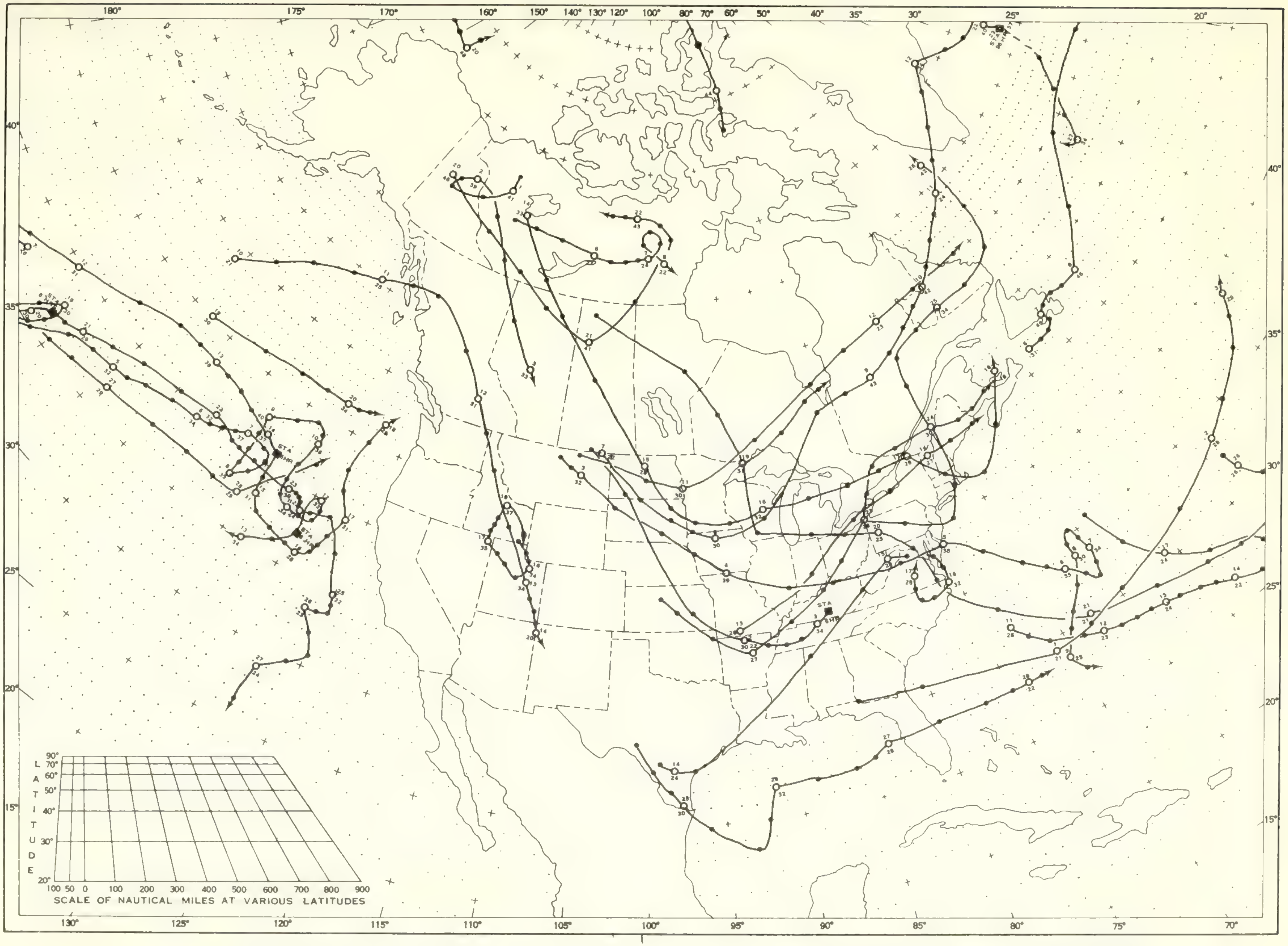


B. Percentage of Mean Daily Solar Radiation, February 1965.



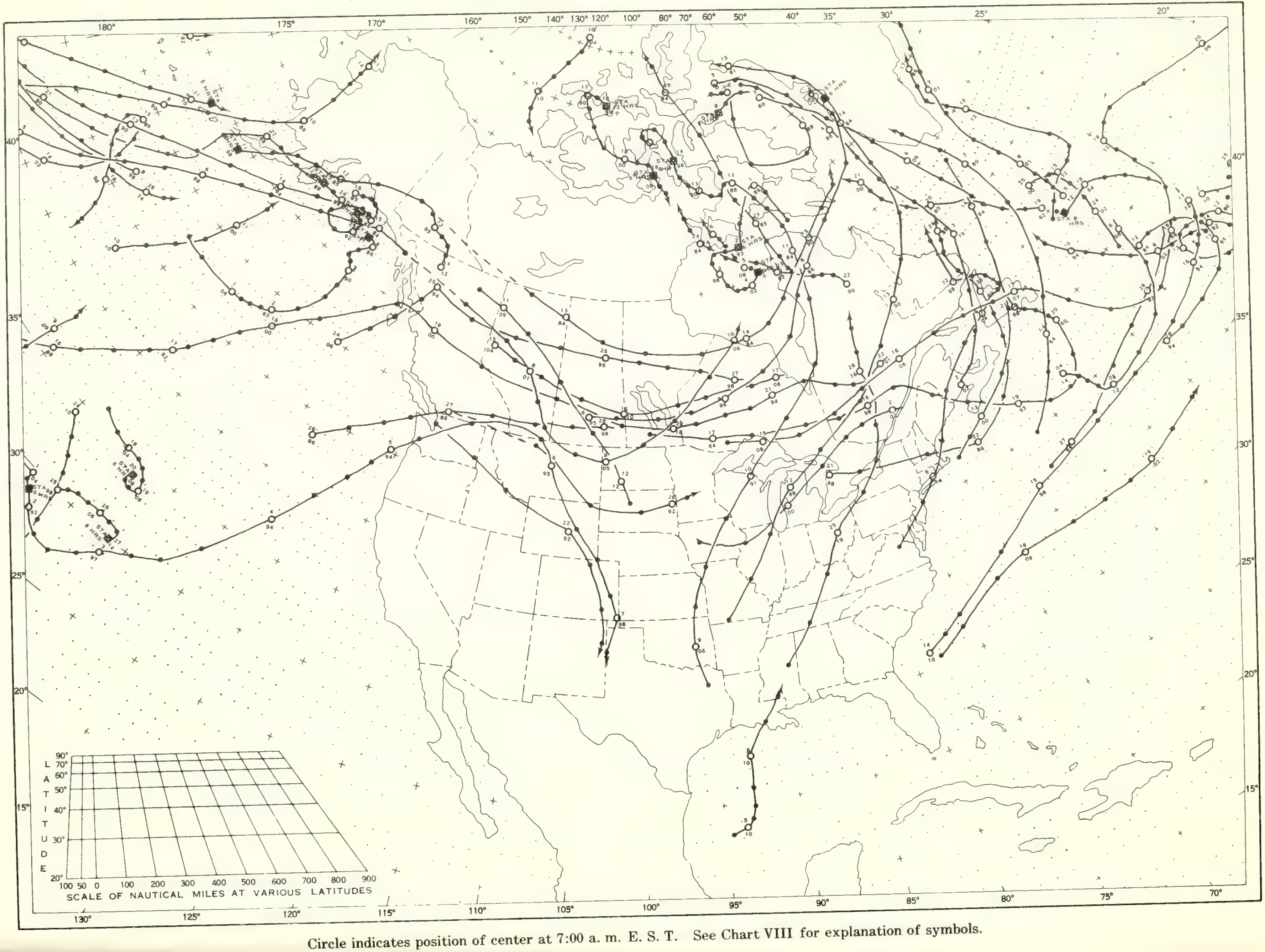
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm. $^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, February 1965.



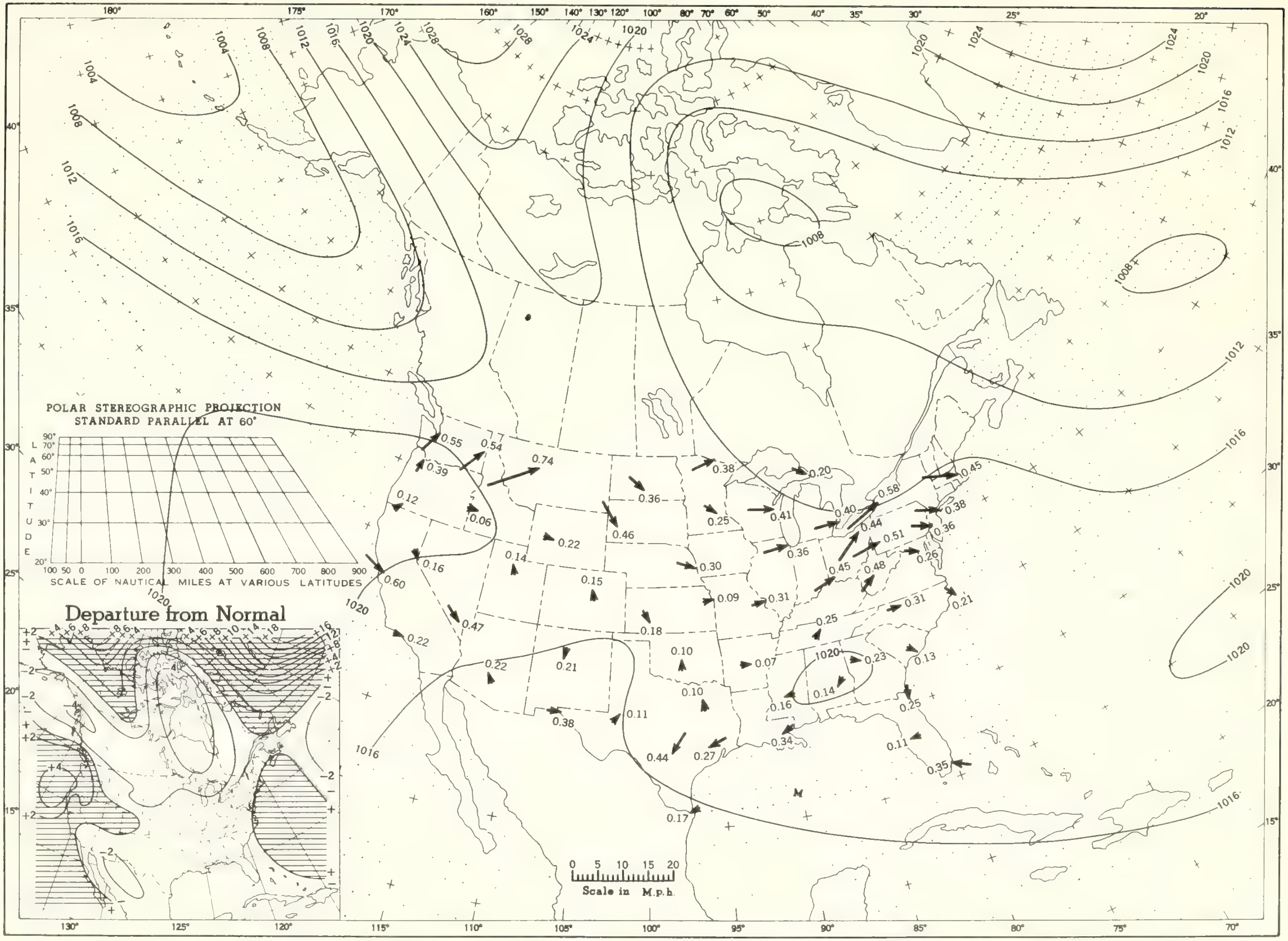
Circle indicates position of center at 7:00 a. m. E. S. T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, February 1965.



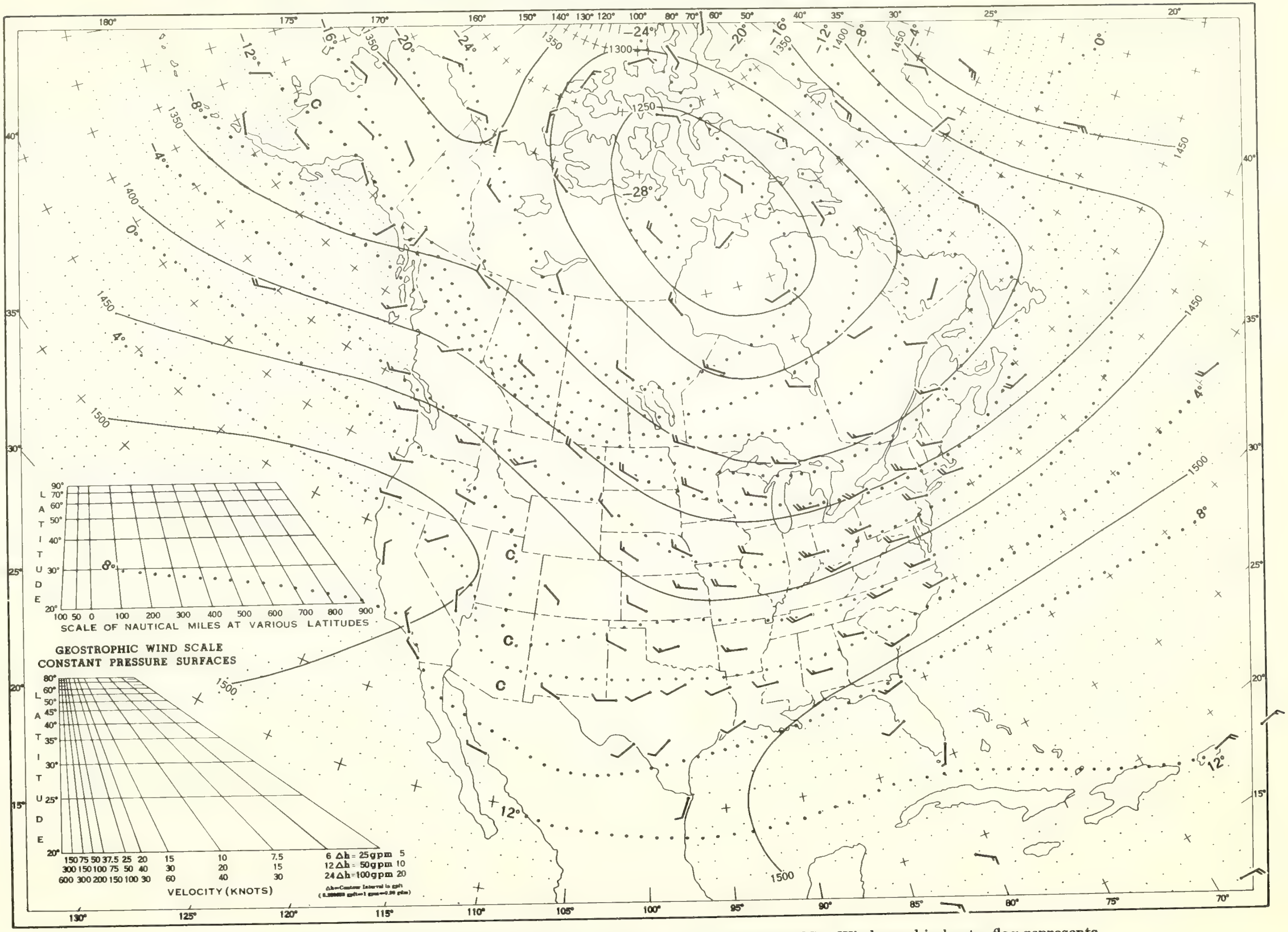
Circle indicates position of center at 7:00 a. m. E. S. T. See Chart VIII for explanation of symbols.

Chart X. Average Sea Level Pressure (mb.) and Resultant Surface Wind, February 1965. Inset: Departure of Average Pressure (mb.) from Normal, February 1965.



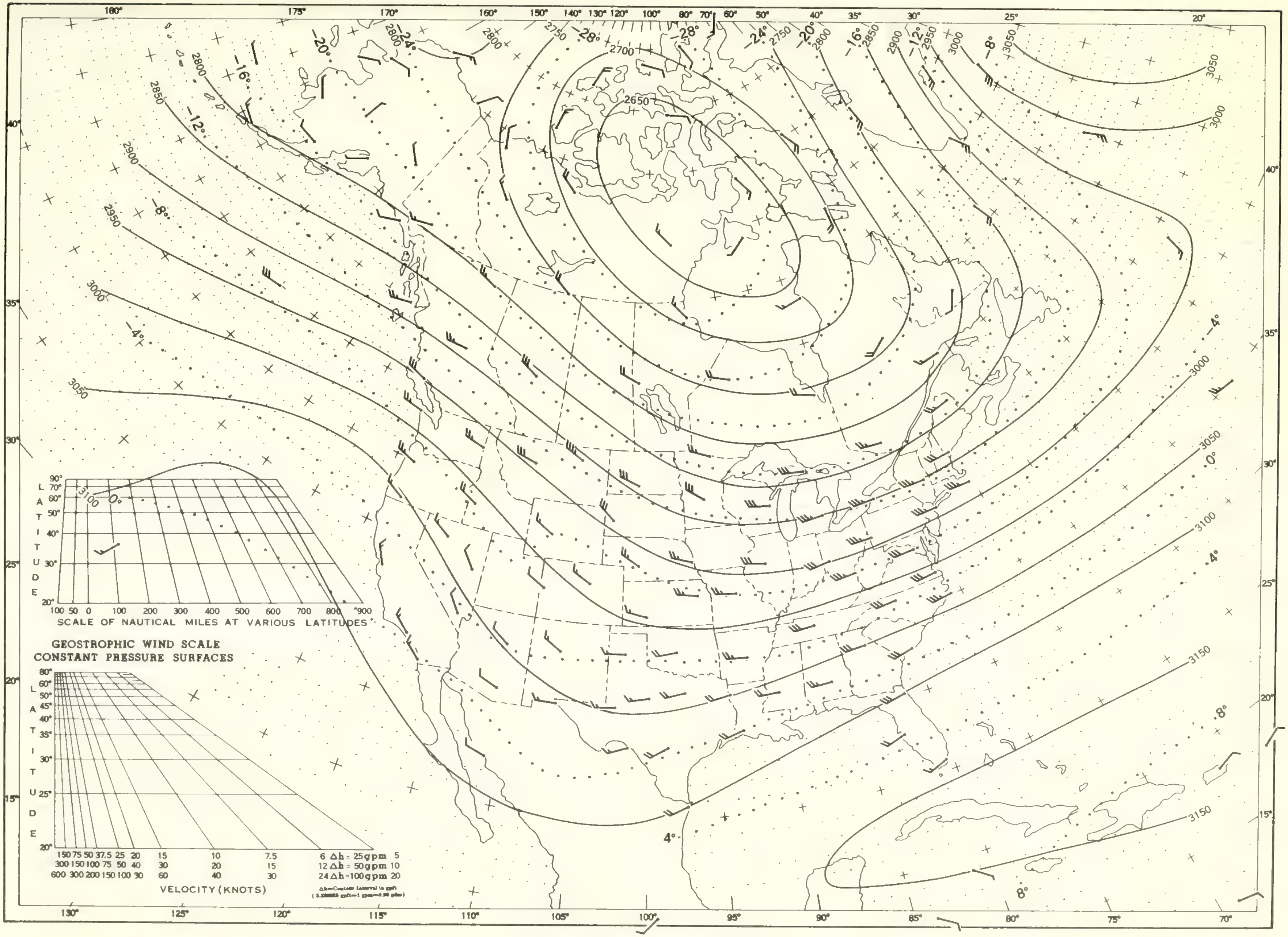
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb. Surface, 1200 GMT, February 1965. Average Height and Temperature, and Resultant Winds.



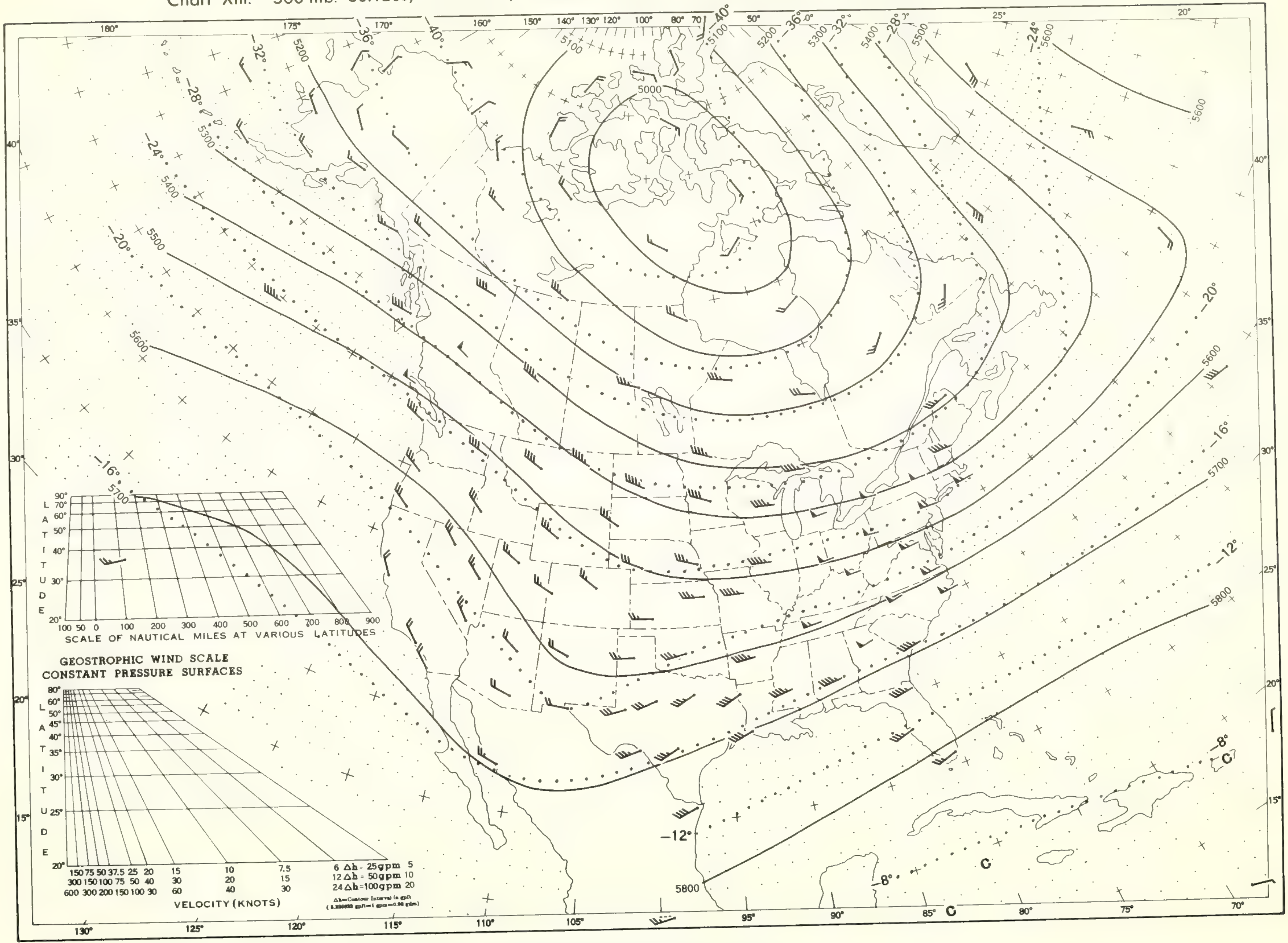
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in knots; flag represents 50 knots, full feather 10 knots, and half feather 5 knots. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, February 1965. Average Height and Temperature, and Resultant Winds.



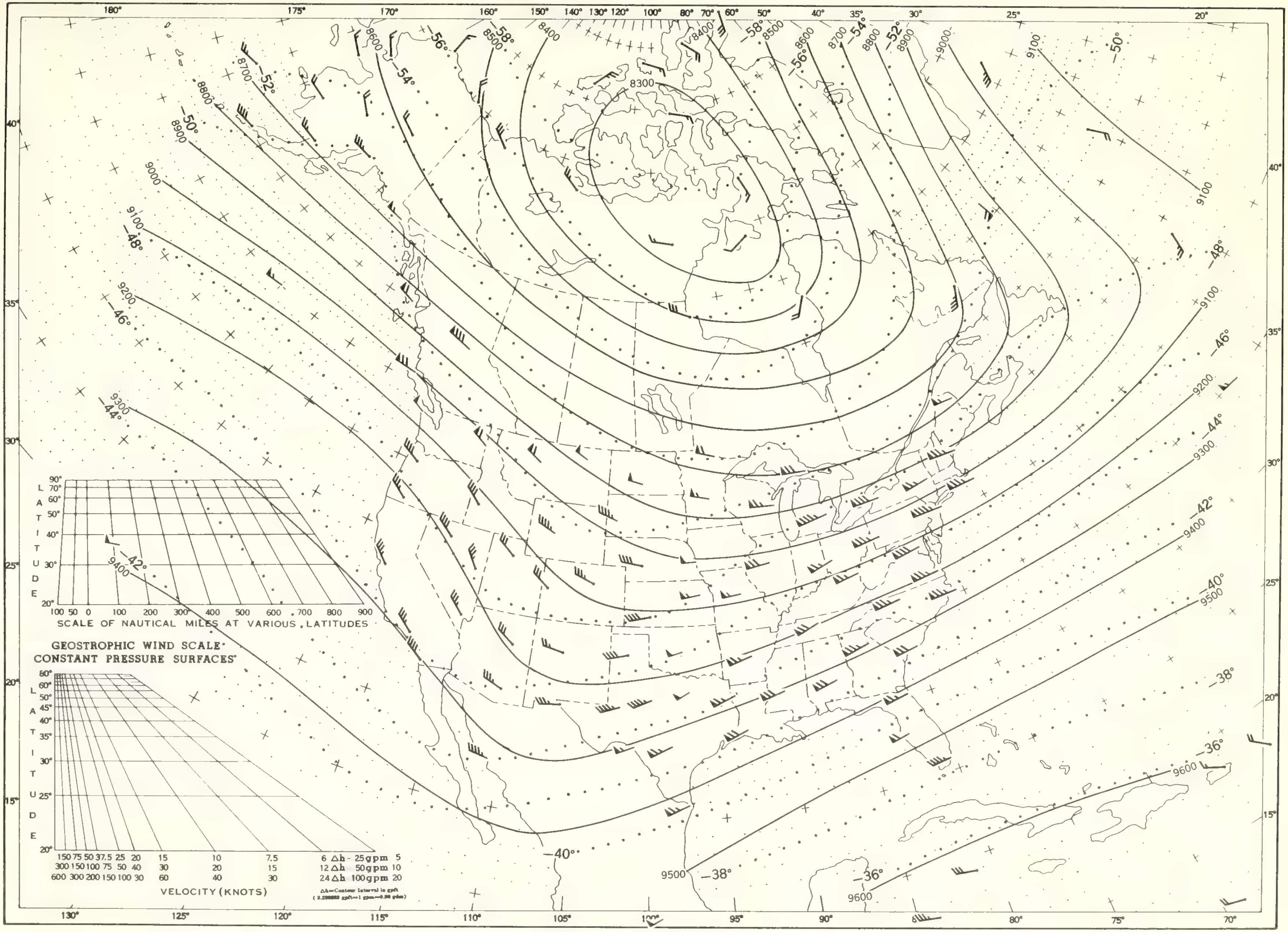
See Chart XI for explanation of map.

Chart XIII. 500-mb. Surface, 1200 GMT, February 1965. Average Height and Temperature, and Resultant Winds.



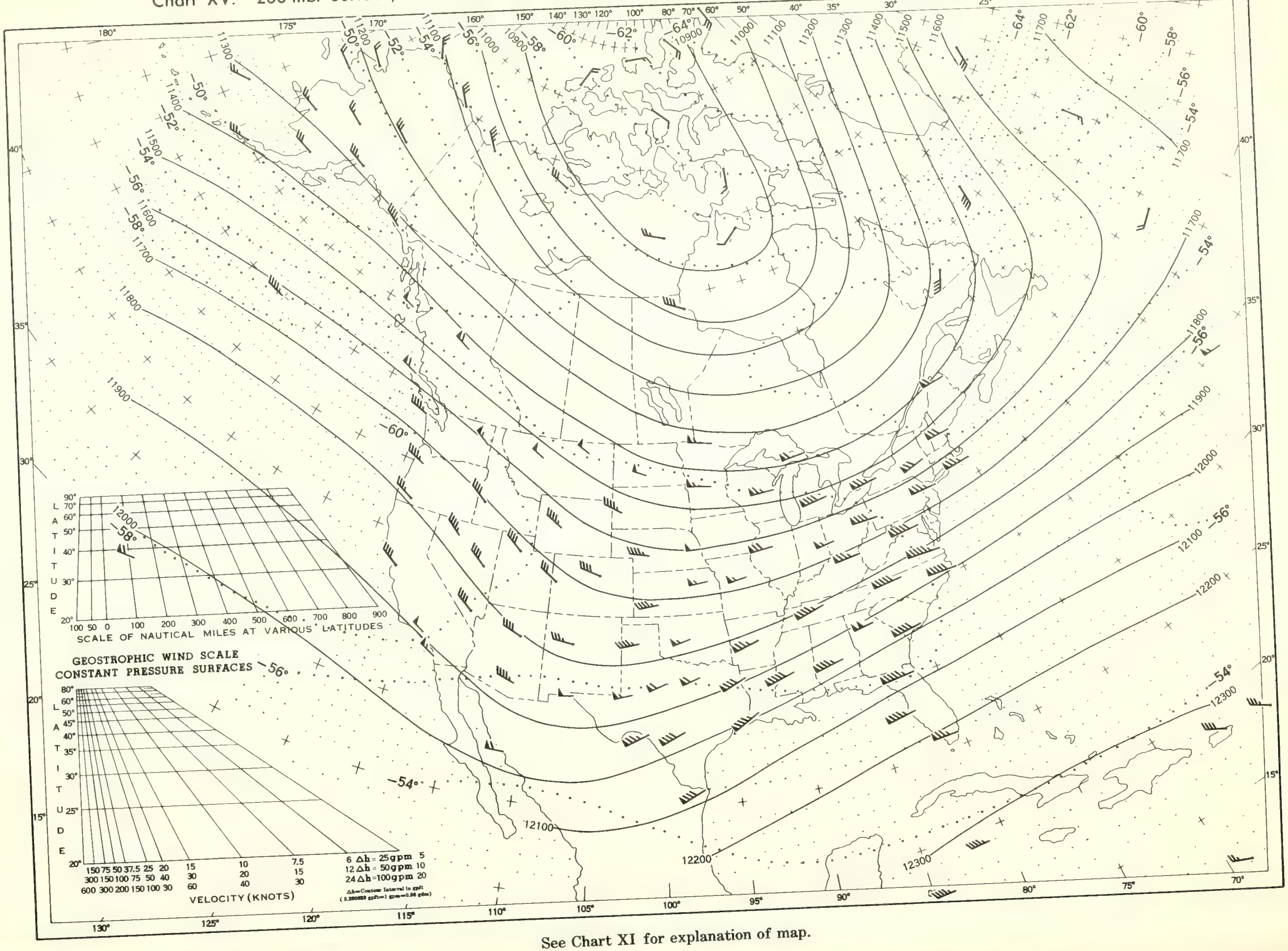
See Chart XI for explanation of map.

Chart XIV. 300-mb. Surface, 1200 GMT, February 1965. Average Height and Temperature, and Resultant Winds.



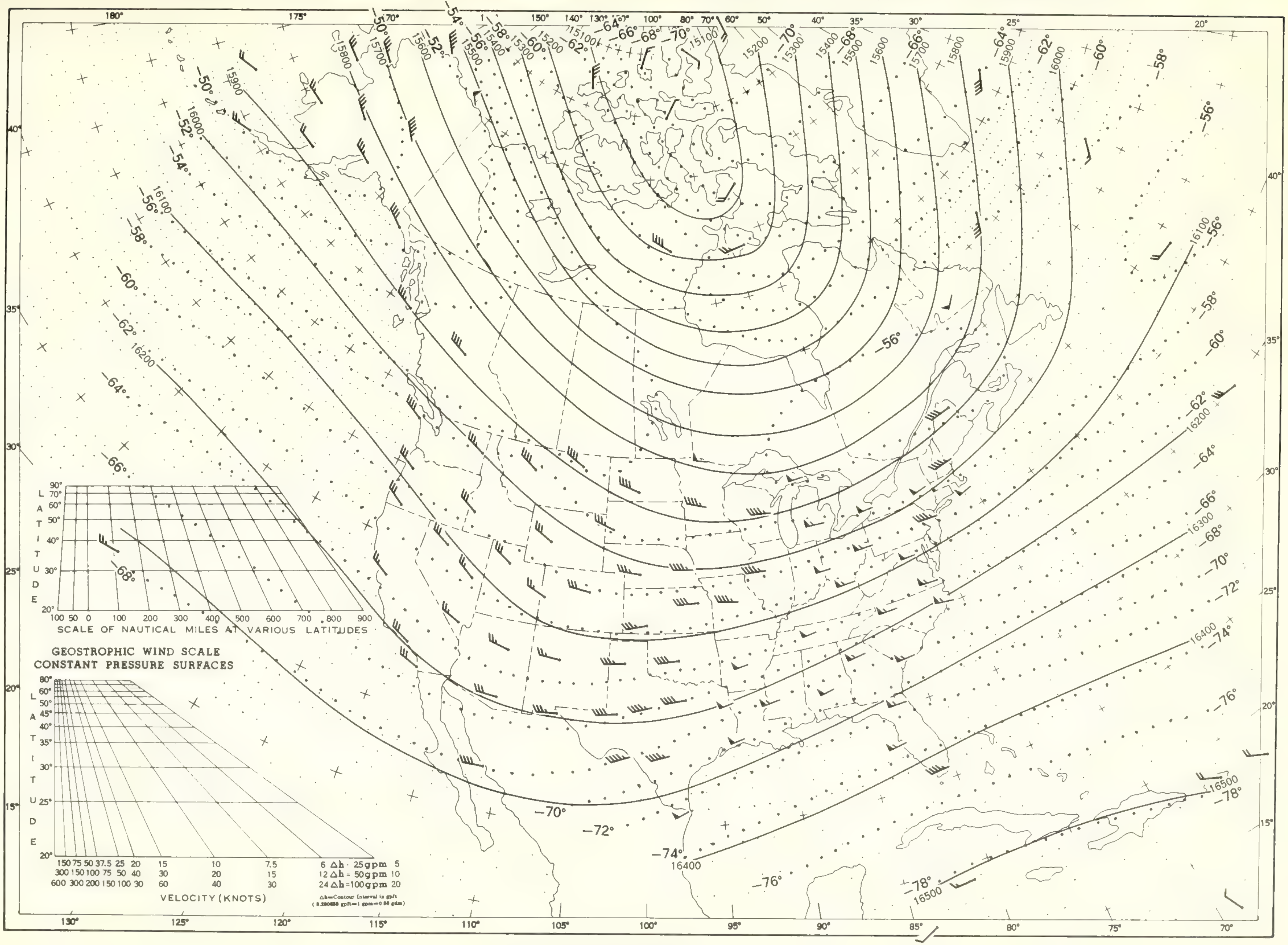
See Chart XI for explanation of map.

Chart XV. 200-mb. Surface, 1200 GMT, February 1965. Average Height and Temperature, and Resultant Winds.



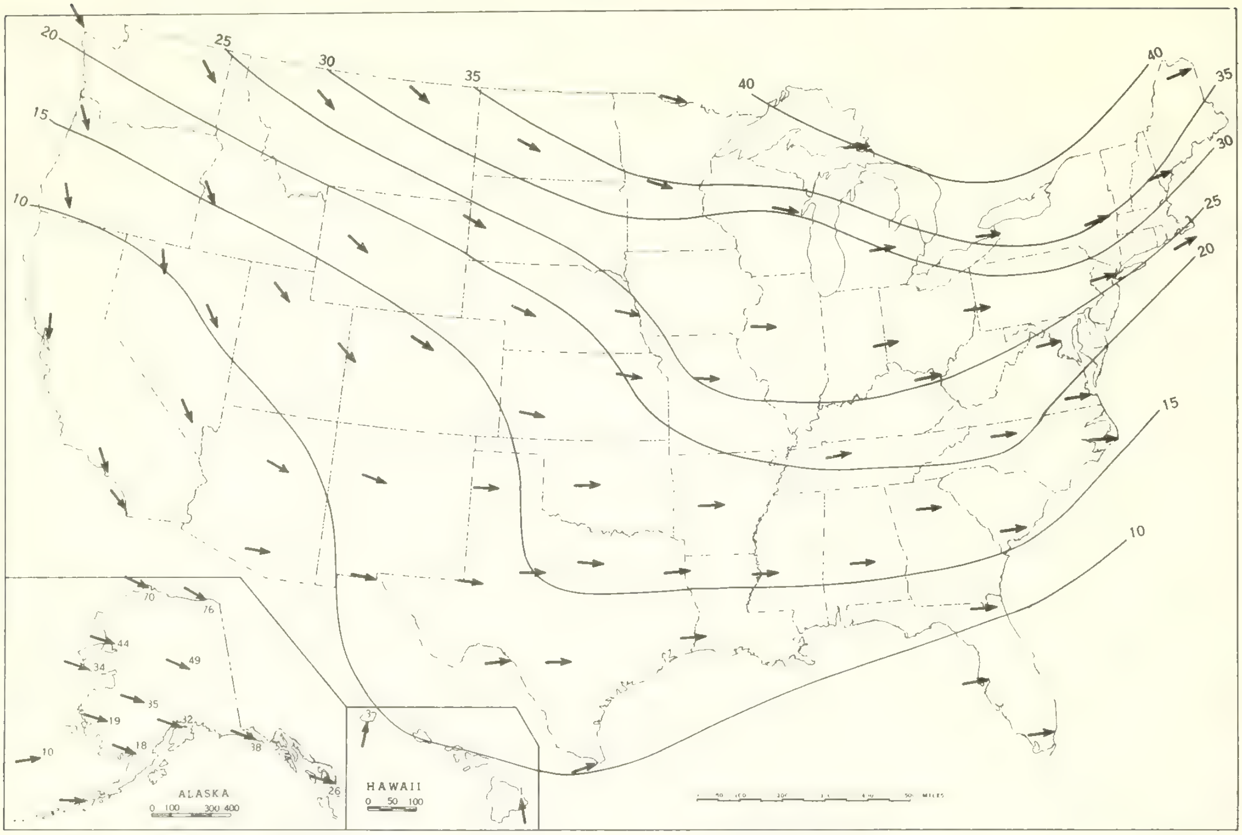
See Chart XI for explanation of map.

Chart XVI. 100-mb. Surface, 1200 GMT, February 1965. Average Height and Temperature, and Resultant Winds.

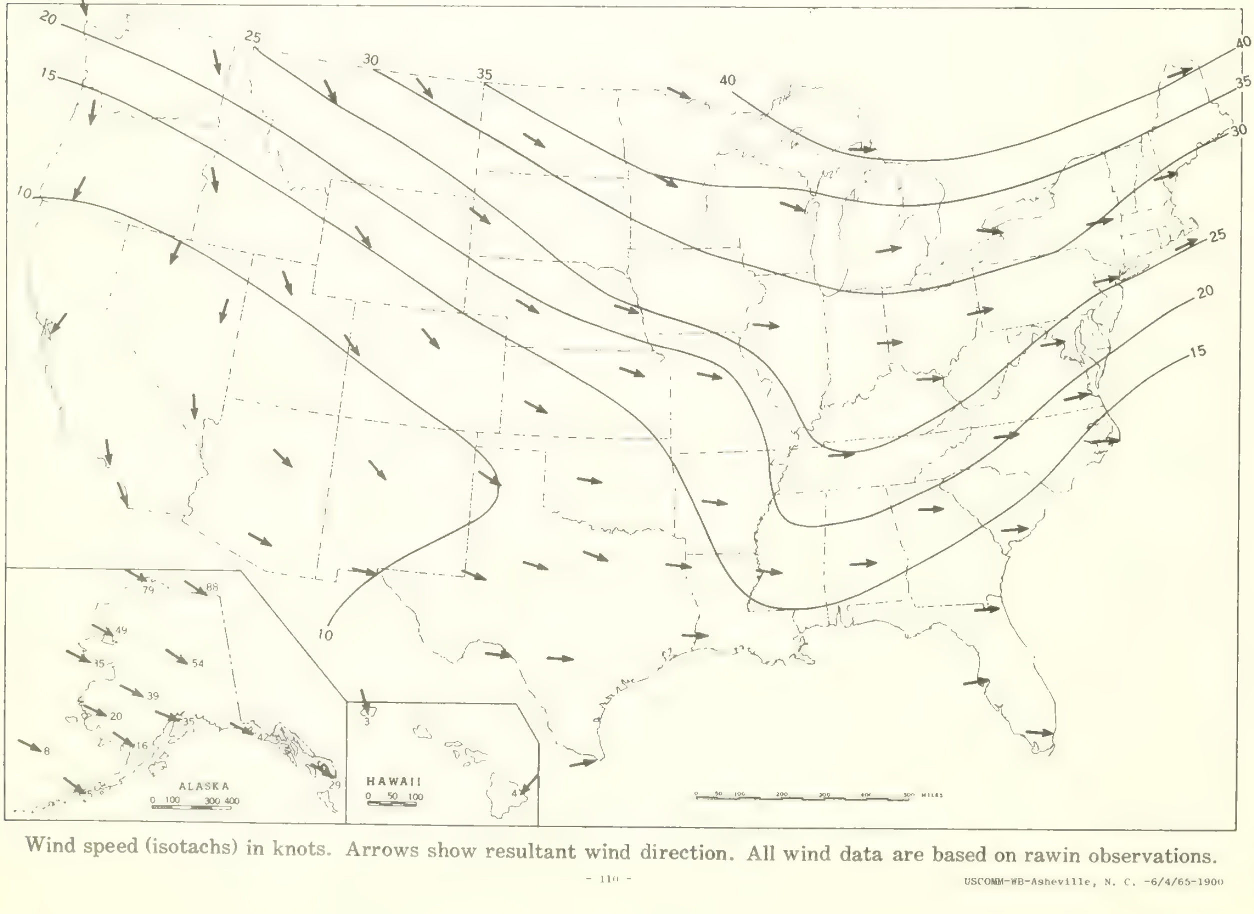


See Chart XI for explanation of map.

Chart XVII. A. 50-mb. Surface, 1200 GMT, February 1965. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, February 1965. Resultant Winds.



Wind speed (isotachs) in knots. Arrows show resultant wind direction. All wind data are based on rawin observations.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

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Volume 16 No. 3

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NOTE: Delayed data and corrections will be carried in the June and December issues of this publication.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 16 No. 3 MARCH 1965

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. Coldest March of record at some locations in the northern Great Plains and one of the coldest of record from the Rocky Mountains to the Atlantic Ocean.

2. Driest March of record portions of Washington, Oregon, northern California; one of the driest of record, northern Utah and the western portions of the Great Plains from the Nebraska Panhandle to the Trans-Pecos in Texas.

3. Record or near record March snowfall portions of Minnesota, Wisconsin, and Michigan produced record or near record seasonal totals.

TEMPERATURE.--Arctic air poured into the Great Plains at the beginning of March. Temperatures dropped to zero or lower over North Dakota and as far south as Cheyenne, Wyo. Freezing weather occurred over the Southland except along the lower Rio Grande and the Florida Peninsula. Frost occurred on several successive nights over northern Florida. Tallahassee, Fla., registered 26° on the morning of the 9th. A warming trend brought average temperatures over the northern Great Plains above normal in the second week of March. Cold arctic air poured across the Canadian border in the third week and brought subzero temperatures as far south as the southern Rocky Mountains and central Great Plains. Subfreezing temperatures reached the Gulf of Mexico. New Orleans, registered 30° on the 22d. Temperatures in the third week averaged below normal over the entire Nation except central California and the Florida Peninsula. Portions of the northern Great Plains averaged more than 20° below normal. The cold weather continued to the end of the month over the northern and eastern sections of the Country.

Monthly average temperatures were below normal except in three areas: coastal Washington, Oregon and northern California; northern New England; and the Florida Peninsula. Much of the northern and central Great Plains averaged more than 10° below normal. In much of this area it was the second or third coldest March in 75 years. For most of the northern central, and eastern portions of the Nation, it was especially cold during the latter half to two-thirds of the month.

PRECIPITATION.--A storm centered over the central Great Plains on March 1, produced precipitation from Minnesota to the Gulf of Mexico and eastward to Virginia and Florida. Lake Charles, La., received 2.26 inches on the 1st and some areas in Georgia and the Carolinas received more than an inch on the 2d. Snow fell over the Rocky Mountains and portions of the northern Plains. Sleet and freezing rain iced the roads from Minnesota and Wisconsin to Missouri, causing hazardous driving conditions. Many roads were blocked and hundreds of automobiles were stranded from Iowa to eastern Minnesota on the afternoon and evening of the 2d. At St. Cloud, Minn., the snow depth increased to 28 inches. The stormy weather persisted for several days from the Plains to the Atlantic coast. Winds gusted to about 50 m.p.h. over parts of Pennsylvania as the storm blanketed the State with up to a foot of snow. The storm weakened near the end of the first week but left a deep snow cover over the upper Mississippi River Valley which, it was feared, would cause severe flooding when it melted. The weather became less severe after the first week although light precipitation continued from the northern Great Plains to New England.

About the middle of the second week, rains began over a broad band from California to Georgia. Some of the desert locations in the far Southwest received more than an inch of rain from the 11th to 13th. Snow fell in the higher elevations; Flagstaff, Ariz., received more than 23 inches of snow from the 10th to 16th. Numerous stations in Alabama and Georgia received over an inch of rain on the 12th. While deep snow clogged the passes in the southern mountains, lighter snow fell in the northern Rockies and over the northern Plains as far south as northern Kansas where a few stations received an inch of snow on the 12th.

While generous precipitation fell over the central, eastern, and southern sections of the Country, the normally rainy coastal regions of Washington and Oregon received little or no rain during the first three weeks of February. No rain fell at Astoria, Ore., from February 1 to 19 except a few light sprinkles on the 16th and 17th. The February total at Astoria was 0.93 inch, almost 8 inches less than normal.

On March 16, a storm was centered in southwestern Kansas. Warm humid Gulf air battled with cold dry air from the north. A number of tornadoes occurred along the Kansas-Oklahoma border. The 50 m.p.h. winds stirred up duststorms in New Mexico and Texas. Gusts at Lubbock, Texas, reached 67 m.p.h. Kansas City, Mo., received 1.62 inches of rain on the 16th. Local blizzards occurred across the northern Plains. On the 17th, tornadoes struck in Alabama, Mississippi, and Tennessee. As the cold air pushed southward, snow flurries occurred at Jackson, Miss., and Birmingham, Ala. An inch of snow fell at Memphis, Tenn., on the 19th. As the storm moved eastward it produced 6 inches of snow for portions of West Virginia and several inches fell in some of the large eastern cities. Winter weather continued after the third week of March. Snow fell over the northern areas. A mixture of snow, sleet, and freezing rain occurred south of the snow area from Arizona to New England, and thundershowers occurred over the South and Southeast. Flagstaff, Ariz., received over 10 inches of snow on the 24th and 25th and over 3 inches of rain fell in the southern Appalachians on those dates.

The stormy weather prevailed to the end of March. The deep snow over the upper Mississippi River Valley continued the threat of floods along the streams. Helpful rains fell over California on the 31st and more heavy showers fell over the rain-soaked Southeast.

Monthly rainfall totals far exceeded the March normals over a few areas. A few of these are: north central Arizona, extreme southern Florida, coastal South Carolina, east central Minnesota and northwestern Wisconsin. A few stations in Minnesota, Wisconsin, and Michigan established new snowfall records in March 1965 and some stations in those States set new seasonal record totals.

Areas which received only a small fraction of their March normal precipitation include Washington, portions of Oregon, the western Great Plains from western Nebraska to western Texas, northern Vermont, and the coast of Maine.

CONDENSED CLIMATOLOGICAL SUMMARY

MARCH 1965

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	Evergreen	87	30	2 Stations	10	21	Valley Head	10.84	Fort Morgan	1.75
Alaska	2 Stations	59	12+	Kobuk	-45	15	Whittier	25.98	Dot Lake	.01
Arizona	do	91	31	Maverick	-6	3	Junipine	4.86	Alamo No 1	.00
Arkansas	5 Stations	80	23+	3 Stations	6	20	Pine Bluff	D 7.94	Bentonville	1.72
California	Death Valley	89	30	Bodie	-6	2	Strawberry Valley	5.49	Greenview	.00
Colorado	Eversoll Ranch	82	31	Sugar Loaf Reservoir	-44	3	Berthoud Pass	5.60	Doherty Ranch	T
Connecticut	Norwich Pub Util Plt	63	4	Wigwam Reservoir	0	21	Wolcott Reservoir	2.41	Salisbury	1.05
Delaware	Selbyville	69	29	2 Stations	12	21	Lewes 1SW	4.26	Newark University Farm	3.17
Florida	2 Stations	93	31+	3 Stations	26	22+	Madison	10.40	Pompano Beach	.38
Georgia	Folkston 9SW	88	26	Blue Ridge	8	21	Waycross 4NE	11.69	Montezuma	4.43
Hawaii	Keaau 92	88	21	Mauna Loa Slope Obs	21	25	Puohokamoa 2 343	31.80	Twin Gates 261.3	.00
Idaho	Glenns Ferry	80	31	2 Stations	-31	18	Powell	2.24	4 Stations	.00
Illinois	2 Stations	72	17+	Barrington 1NW	-3	27+	Brookport Dam 52	6.14	Hutsonville Power Pl	1.40
Indiana	6 Stations	70	18+	La Grange Sewage Plant	-2	24	Vevay	4.36	2 Stations	.97
Iowa	Shenandoah	64	31	Colo	-15	22	Hampton 3NNE	5.72	Sioux City 4N	.90
Kansas	Aetna 2S	83	28	Goodland WBAP	-17	20	Atchison	3.70	Geneseo	T
Kentucky	Barbourville	78	28	2 Stations	1	21	Dunmor	9.63	Covington WBAP	2.86
Louisiana	2 Stations	88	25+	do	17	20	Catfish Point	9.85	New Orleans WB Moisant	1.95
Maine	do	61	4	Clayton Lake 2	-12	24+	Sanford 2NNW	.89	Springfield	.10
Maryland	4 Stations	73	29	Sines Deep Creek 2	-6	21	US Soldiers Home DC	6.10	Conowingo Dam	2.75
Massachusetts	Framingham	65	5	Amherst	5	21	Springfield Armory	D 2.93	Amherst	1.10
Michigan	2 Stations	54	1	Kenton US Forest	-31	24	Bloomingdale	4.09	Alpena Sewage Plant	.52
Minnesota	Luverne	50	31	Bigfork	-39	24	Young America	6.61	2 Stations	.28
Mississippi	Wiggins 4SE	88	26	2 Stations	13	21	Holly Spring 4N	12.86	Tylertown 2N	2.70
Missouri	2 Stations	75	16	Maryville 2E	-2	24	Fisk	6.70	Mansfield	.95
Montana	Superior	72	31	Summit	-41	24	Kings Hill	2.33	Trout Creek Ranger Sta	.03
Nebraska	Big Springs	78	31	Nenzel 20S	-21	25	Table Rock 5N	3.86	2 Stations	.06
Nevada	Overton	85	31	Midas 4SE	-10	19	Mt Rose Highway Sta	2.35	do	.03
New Hampshire	2 Stations	62	4	First Conn Lake	-17	24	Dublin	3.29	Benton 5SW	.25
New Jersey	Atlantic City WBAP	67	23	Layton 2	4	22	Toms River	4.58	High Point Park	1.65
New Mexico	Roswell WBAP	85	22	Tres Piedras	-23	4	Palma	2.80	2 Stations	.00
New York	Bedford Hills	68	4	Speculator	-11	21	Sinclairville	4.53	Peru 2WSW	.34
North Carolina	Sloan 3S	84	29	Banner Elk	4	21	Topoco	11.65	New Holland	2.13
North Dakota	La Moure	49	7	Medora 22NNW	-30	24	Hankinson RR Station	1.40	2 Stations	T
Ohio	Ironton	73	28	Barnesville Water Wks	-2	21	Ironton	5.13	Elyria 3E	1.23
Oklahoma	Fort Supply Dam	83	28	Kenton	-10	20	Heavener 1SE	6.05	Goodwell	.10
Oregon	Brookings	78	20	Granite 4WSW	-7	18	Government Camp	3.43	3 Stations	.00
Pennsylvania	Donora	68	29	Du Bois 7E	-11	22	Johnstown	7.42	Covington 2WSW	1.12
Puerto Rico	Dorado 4W	95	8	Gurabo Substation	49	19	Lares	8.99	3 Stations	.00
Rhode Island	Providence WBAP	60	4	2 Stations	13	21+	Woonsocket	2.26	Block Island WBAP	1.57
South Carolina	Ridgeland 2SE	87	17	Caesars Head	12	21	Brookgreen Gardens	9.72	Lockhart	5.40
South Dakota	Wagner	69	31	Deepfield 5NW	-34	25	Watertown FAA AP	2.67	Mission 14SSE	.02
Tennessee	Newbern	78	28	Unicoi 2ESE	-1	21	Athens 2SE	11.85	Samburg Wildlife Ref	4.66
Texas	Zapata	103	24	Bravo	2	19	Kirbyville For Service	7.80	18 Stations	.00
Utah	Saint George Pwr House	82	31	Strawberry Hwy Station	-22	3	Blowhard Mtn Radar	3.68	Antelope Island	.00
Vermont	Vernon	61	5	Somerset	-6	25	Whitingham 2W	2.67	Gilman	.23
Virginia	Hopewell	76	1	Wise 1SE	-1	21	Pennington Gap	7.12	Mount Weather	1.51
Washington	Wawawai 2NW	77	31	Chesaw 4NNW	-11	26+	2 Stations	3.91	Hartline	.00
West Virginia	Williamson	77	29	Webster Springs 1E	-8	22	Rowlesburg 1	6.40	Wheeling Warwood DM 12	2.64
Wisconsin	3 Stations	52	1	2 Stations	-34	24	Bayfield 6N	8.00	Townsend	.88
Wyoming	Yoder	71	31	Lake Yellowstone	-42	18	Moose	2.06	Boysen Dam	.02

+ And also on an earlier date or dates

NOTE: Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

MARCH 1965

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	994.6	1017.2	60	40	49.8	-4.7	81	28	19	21	0	11	41	74	6.10	0.10	1.46	17	5	T	T	2.0	28	37	S	17	2	10	19	8.1	35
HUNTSVILLE	600	993.9	1017.4	56	38	47.0	-4.8	78	28	20	21	0	12	37	71	8.20	2.63	2.04	14	6	2.3	T	1.7	32	29	30	25	6	5	20	7.4	
MOBILE	211	1008.8	1016.8	68	49	58.2	-2.1	81	24	32	21+	0	2	49		4.97	-2.26	2.14	12	4	0.0	0	0.9	34	32	2	20	7	7	17	6.8	
MONTGOMERY	194	1010.2	1017.4	63	44	53.8	-2.2	82	24	25	21	0	5	44	72	8.08	1.92	1.92	13	5	T	0	1.4	27	32	N	29	2	9	20	7.9	33
ALASKA												B																				
ANCHORAGE PRK STRIP	85			40	30	35.0	11.7	52	8	12	16	0	18			0.84	0.33	0.39	11	0	1.2	16										
ANCHORAGE	143	1012.9	1017.8	42	31	36.5		49	8	14	16	0	11	26	68	0.83		0.36	13	0	3.0	23	1.1	18	32	16	9	2	2	27	8.9	24
ANNETTE	110	1019.3	1023.6	46	31	38.4	0.6	59	12+	20	18	0	22	25	64	3.00	-6.55	1.53	7	0	2.5	T	2.7	2	26	14	1	10	9	12	5.8	
BARROW	22	1021.3	1022.0	-2	-16	-8.7	5.9	31	9	-35	16	0	31	-15	72	0.29	0.18	0.13	8	0	4.5	13	5.0	11	31	27	10	13	5	13	5.7	
BARTER ISLAND	39	1020.3	1022.2	-1	-14	-7.4	7.5	28	10	-40	1	0	31	-11	82	0.27	0.07	0.08	7	0	2.7	18	0.7	8	37	27	10	5	6	20	7.5	
BETHEL	125	1005.4	1011.1	32	20	26.0	14.4	44	22	-15	14	0	26	24	89	1.03	0.00	0.24	20	0	7.8	32	4.0	11	33	13	6	3	4	24	8.5	
COLD BAY	94	1002.4	1006.0	39	32	35.6	6.8	47	26	25	2	0	15	32	87	3.05	1.30	0.69	22	0	1.6	3	10.9	16	55	17	6+	0	6	25	9.0	
FAIRBANKS	436	999.7	1017.3	35	14	24.5	15.6	48	24+	-22	1	0	30	19	78	0.27	-0.13	0.14	7	0	1.4	17	0.9	1	21	25	12+	2	3	26	8.6	
JUNEAU	12	1023.4	1024.2	42	28	35.0	4.6	55	24	14	17	0	25	28	80	1.66	-1.61	0.87	10	0	4.0	28	5.1	12	35	12	1	6	5	20	7.3	50
KING SALMON	43	1009.8	1011.7	40	27	33.8	14.3	54	22	11	5	0	20	30	86	2.25	1.29	0.54	19	0	4.3	6	8.7	11	69	9	18	0	2	29	9.2	
KOTZEBUE	10	1015.2	1015.7	19	4	11.4	13.5	37	24+	-27	15	0	30	7	80	0.86	0.58	0.29	16	0	10.5	22	5.7	12	39	11	21	4	3	24	8.6	
MC GRATH	334	1002.0	1015.0	36	19	27.2	18.9	49	23	-25	1	0	25	21	78	1.03	0.10	0.28	11	0	9.7	32	0.9	19	28	13	11	1	3	27	9.0	
NOME	13	1011.5	1012.3	27	13	19.6	11.7	42	24	-26	15	0	28	16	84	1.59	0.71	0.25	21	0	9.5	11	7.9	8	38	9	16	1	3	27	9.2	37
ST. PAUL ISLAND	22	1004.4	1005.3	29	20	24.4	0.2	37	21	-7	13	0	30	24	95	1.92	0.86	0.40	20	0	9.0	31	8.3	3	58	6	15	1	3	27	9.0	
SHEMYA	122	998.6	1002.5	35	30	32.8	0.4	39	27+	23	5	0	19	29	85	1.29	-1.28	0.38	16	0	6.8	3	5.1	4	56	22	29	0	3	28	9.2	
YAKUTAT	28	1022.0	1023.0	37	27	32.1	0.7	45	11	9	16	0	27	30	91	17.16	8.47	5.28	16	1	19.9	53	3.9	11	39	13	1	1	6	24	8.7	
ARIZONA																																
FLAGSTAFF	6993	784.3	1015.4	46	20	33.4	-2.2	63	31	5	14	0	31	19	63	3.33	1.88	0.86	10	3	34.4	12	2.8	19	29	19	15	10	10	11	5.5	
PHOENIX	1117	974.9	1014.2	69	43	56.1	-2.9	85	31	30	3	0	2	35	49	1.39	0.73	0.77	5	1	0.0	0	2.0	12	33Y	W	15	15	6	10	4.4	86
TUCSON	2584	924.8	1013.2	69	41	55.1	-2.9	86	31	20	4	0	3	24	35	0.27	-0.26	0.14	3	0	0.0	0	3.0	21	29	SW	15	17	7	7	4.0	81
WINSLOW	4895	849.6	1015.7	58	28	42.8	-2.8	77	31	9	3	0	19	19	48	0.97	0.58	0.61	5	0	4.4	3	5.0	23	44	22	24	13	11	7	4.5	
YUMA	194	1007.1	1014.3	74	48	61.2	-4.3	84	31	37	3	0	0	31	37	0.04	-0.20	0.04	2	0	0.0	0	1.6	28	29	N	1	17	9	5	3.3	94
ARKANSAS																																
FORT SMITH	449	1002.0	1019.0	52	31	41.7	-9.4	79	16	14	20	0	18	31	68	2.26	-1.21	1.02	7	5	T	0	3.3	35	32	W	17	6	7	18	7.2	46
LITTLE ROCK	257	1008.5	1018.2	54	35	44.5	-7.3	77	16	17	20	0	10	34		3.63	-1.18	1.13	13	5	4.3	3	2.6	36	31	NW	2	6	6	19	7.2	38
TEXARKANA	372	1005.1	1018.3	57	38	47.5	-7.4	78	23	18	20	0	8	36	66	3.23	-1.51	1.08	14	10	1.5	T	1.7	1				6	8	17	7.0	
CALIFORNIA																																
BAKERSFIELD	494	998.3	1016.0	68	47	57.1	0.2	84	30	40	2	0	0	40	58	1.17	0.11	0.76	6	1	0.0		1.9	3	26	18	30+	11	8	12	5.4	
BISHOP	4108			63	30	46.7	-0.9	74	22	19	3	0	21			0.05	-0.50	0.04	2	0	0.0	0						13	7	11	5.1	
BLUE CANYON	5280			47	34	40.4	0.9	60	21	27	28	0	12			4.75	-3.70	2.14	9	0	24.8	19			26	4	1	12	4	15	5.9	
BURBANK	724	990.2	1015.9	66	47	56.3	1.6	81	21	40	3	0	0	42	65	0.96	-1.20	0.85	7	3	0.0	0	3.6	17	29	12	31	10	11	10	5.3	
EUREKA U	43			54	43	48.5	-0.2	62	2	37	28+	0	0			1.23	-4.02	0.68	5	0	0.0	0			26	NW	18	6	7	18	7.3	60
FRESNO	328	1004.4	1016.3	68	43	55.5	0.5	80	22+	35	1	0	0	43	68	2.38	0.42	1.55	5	1	0.0	0	1.3	1	24	SW	4	12	8	11	5.0	80
LONG BEACH	34	1015.6	1016.9	66	49	57.3	0.6	78	21+	42	3	0	0	43	65	2.25	0.88	1.14	6	2	0.0	0	2.5	23	20	12	31	8	13	10	5.5	
LOS ANGELES	97	1012.9	1016.5	65	50	57.5	0.5	75	21	45	11+	0	0	44	65	1.63	-0.16	1.12	8	1	0.0	0	3.3	26	35Y	E	31	11	11	9	5.1	
LOS ANGELES U	270			67	51	59.0	-0.4	80	20	46	14+	0	0			2.49	0.23	1.04	7	0	0.0	0			21	SW	4	10	11	10	5.6	48
MT SHASTA R	3544			56	31	43.3	2.1	68	21	21	2	0	19			0.63	-3.83	0.14	6	0	0.0	0										
OAKLAND	6	1016.3	1016.6	60	48	54.1	0.5	72	21	43	19+	0	0	44	71	1.95	-0.47	0.64	8	0	0.0	0	4.2	28	23	30	11	8	10	13	6.0	
RED BLUFF	342	1003.1	1015.7	66	43	54.8	0.7	80	15	35	3	0	0	40	64	1.95	-0.75	1.18	6	1	0.0	0	0.6	23	30	S	26	9	11	11	5.7	67
SACRAMENTO	17	1015.2	1016.1	63	43	53.0	-0.4	76	21	35	2	0	0	42	70	1.47	-0.89	0.56	6	1	0.0	0	3.0	21	29	N	1	7	9	15	6.4	60
SANDBERG R	4517			50	34	41.9	-3.1	64	21	28	11	0	12			1.43	-0.01	0.91	8	0	0.7	T			38	17	30+	7	9	15	6.6	
SAN DIEGO	13	1015.6	1016.8	66	51	58.6	-0.4	80	20	44	5	0	0	46	67	1.79	0.22	0.73	8	0	0.0	0	2.8	26	22	S	31	8	12	11	5.6	69
SAN FRANCISCO	8	1016.6	1017.1	59	45	52.3	-1.0	74	21	39	19	0	0	42	72	1.76	-0.93	0.95	9	0	0.0	0	5.4	26	37	ESE	31	8	9	14	6.3	
SAN FRANCISCO U	52			60	49	54.4	-0.3	75	21	46	13	0	0			2.92	-0.01	0.93	10	0	0.0	0			28	SW	22					67
SANTA CATALINA	1568			56	47	51.9	-2.6	71	21+	43	11	0	0			2.17	0.22	1.14	8	1	0.0	0						6	11	14	6.2	
SANTA MARIA	236			63	42	52.7	-0.6	75	21	35	28	0	0			1.69	-0.37	0.57	8	0	0.0	0						12	5	14	5.5	
STOCKTON	22	1015.9	1016.8	66	43	54.5	0.8	77	22	37	1	0	0	44	72	2.17	0.12	1.42	7	1	0.0	0	2.8	27	24	15	31	8	9	14	5.8	
COLORADO																																
ALAMOSA	7536			41	15	28.1	-4.0	62	31	-13	4	0	30			0.52	0.26	0.24	7	0	9.1	4						13	10	8	4.5	
COLORADO SPRINGS	6145	808.0	1018.9	37	14	25.6	-10.6	66	31	-7	25+	0	30	12	61	1.12	0.51	0.46	12	0	14.4	6	3.7	3	37	28	22	8	6	17	6.6	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days			Average relative humidity	Precipitation			No. of days		Snow, Sleet		Wind		Fastest mile			No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
COLORADO																																
DENVER	5283	834.7	1017.6	40	18	29.0	-7.4	70	31	-3	24	0	29	18	68	1.20	-0.01	0.30	14	0	14.9	4	1.2	11	26	NE	22+	7	10	14	6.4	74
GRAND JUNCTION	4855	850.0	1014.8	51	30	40.4	-1.1	74	31	11	3	0	15	20	51	0.87	0.12	0.51	9	1	3.8	T	1.2	5	32	NW	22	11	6	14	5.6	66
PUEBLO	4684	855.4	1018.9	46	17	31.5	-8.6	76	31	-7	20	0	30	16	59	0.42	-0.10	0.18	9	0	9.8	5	3.1	5	48	NW	21+	8	9	14	5.7	70
CONNECTICUT																																
BRIDGEPORT	7	1015.6	1016.1	44	30	36.7	-0.8	55	4	17	21	0	19	26	69	1.16	-3.09	0.30	11	0	4.7	3	6.0	32	48	26	21	10	4	17	6.2	
HARTFORD	169	1008.1	1014.9	44	28	36.1	0.1	61	4	17	21	0	25	22	60	1.50	-2.30	0.43	13	0	7.8	4	5.2	32	38	NW	27	6	8	17	6.7	57
NEW HAVEN	6			44	29	36.3	-0.6	54	2	17	21	0	24			1.69	-2.93	0.58	12	0	7.2	3			39	NW	27	10	4	17	6.1	54
DELAWARE																																
WILMINGTON	78	1013.2	1016.3	47	30	38.4	-2.9	63	23	12	21	0	21	27	66	3.20	-0.82	1.20	9	1	5.8	2	4.6	29	32	27	16	7	8	16	6.5	
DIST.OF COLUMBIA																																
WASH NATL AP	14	1014.6	1016.9	50	33	41.4	-3.4	73	29	19	21	0	15	26	59	4.37	1.16	1.94	10	0	5.4	3	3.4	32	34	NW	27	6	8	17	6.9	57
FLORIDA																																
APALACHICOLA U	13			66	54	60.1	-0.9	76	30+	37	21	0	0			8.53	4.01	6.96	11	3	0.0	0			27	77	5+	7	11	13	6.6	46
DAYTONA BEACH	31	1016.6	1018.0	73	55	63.6	-0.2	87	26+	34	9+	0	0	55	79	3.05	-0.51	1.31	11	7	0.0	0	2.0	25	32	27	5	6	10	15	6.5	
FORT MYERS	15	1017.6	1017.8	79	61	70.1	1.9	87	26	45	9	0	0	61	77	2.91	0.29	2.24	6	1	0.0	0	2.8	21	29	18	2	9	16	6	5.2	
JACKSONVILLE	24	1016.3	1017.3	72	52	62.4	0.2	88	26+	37	9	0	0	51	71	3.91	0.42	1.34	11	4	0.0	0	2.4	28	41	SW	12	6	5	20	7.0	58
KEY WEST	4	1016.9	1017.6	81	72	76.6	4.1	85	31+	58	10	0	0	67	74	0.57	-1.20	0.50	3	1	0.0	0	4.3	12	27	SE	1	14	14	3	3.8	90
LAKELAND U	214			76	58	67.3	0.8	89	30	42	8	0	0			1.90	-2.35	0.68	8	5	0.0	0						8	6	17	6.6	58
MIAMI	7	1017.6	1017.9	81	66	73.1	2.6	89	20	46	9	0	0	63	73	3.97	1.70	2.00	5	3	0.0	0	3.6	16	29	27	6	10	17	4	5.1	
ORLANDO	108	1013.5	1017.8	77	57	67.0	1.1	90	30	39	9	1	0	57	75	3.02	-0.39	2.41	9	4	0.0	0	2.2	24	26	36	13	6	10	15	6.5	
PENSACOLA	112	1013.2	1017.4	66	49	57.4	3.6	79	30	32	21+	0	2	50	77	3.77	-2.27	1.40	14	0	0.0	0	0.6	29	41	SE	1					45
TALLAHASSEE	58	1015.2	1017.6	71	49	59.8	-0.8	86	17	26	9	0	3	50	75	7.86	2.68	4.20	13	5	0.0	0	1.7	25	46	36	18	4	12	15	6.7	
TAMPA	19	1017.3	1017.6	75	58	66.4	0.4	87	31	40	7	0	0	57	76	2.28	-1.47	1.18	6	4	0.0	0	2.2	23	29	27	6	8	7	16	6.6	57
WEST PALM BEACH	15	1016.9	1017.7	81	62	71.8	1.9	92	20	45	9	1	0	60	71	1.15	-2.29	0.55	6	2	0.0	0	3.7	17	26	28	6	8	15	8	5.5	
GEORGIA																																
ATHENS	802	987.1	1016.6	60	40	49.8	-1.8	78	25	21	21	0	9	40	75	7.00	1.90	2.08	14	5	T	T	2.9	26	28	29	17	4	6	21	7.4	
ATLANTA	1010	979.7	1016.9	58	40	48.8	-2.6	75	25+	21	21	0	11	38	73	5.94	0.57	1.41	15	5	0.5	T	2.2	26	32	SW	17	4	6	21	7.7	41
AUGUSTA	143	1011.2	1016.5	65	41	53.3	-1.6	80	29+	25	22	0	6	42	73	7.29	3.12	1.37	17	4	T	0	2.0	25	25	30	17	4	9	18	7.6	
COLUMBUS	385			66	44	54.8	-0.5	83	28+	26	22+	0	7	43	70	6.06	0.05	1.64	13	0	T	0	1.7	29	32	30	17	3	5	23	7.9	
MACON	354	1004.4	1017.6	65	43	53.7	-3.2	82	29	24	22	0	7	44	75	6.95	2.01	1.49	19	7	T	0	2.1	28	32	SW	17	4	8	19	7.5	45
ROME	637			59	37	48.1	-2.3	78	17	13	21	0	14			7.33	1.46	2.65	14	0	T	T										
SAVANNAH	46	1015.2	1017.0	68	46	56.8	-1.5	85	26	29	22	0	4	47	73	7.75	3.78	1.76	18	9	T		1.7	26	28	NW	6+	6	8	17	6.8	57
HAWAII																																
HILO	31	1014.9	1015.9	77	62	69.7	-0.9	83	20	57	17	0	0	62	78	8.33	-6.37	2.25	17	1	0.0	0	0.6	28	25	5	3	4	9	18	7.4	26
HONOLULU	7	1015.6	1015.9	80	64	72.1	0.7	83	30	58	27	0	0	60	68	0.99	-1.90	0.68	3	2	0.0	0	3.5	4	34	NE	23	18	9	4	4.0	90
KAHULUI	48	1013.5	1015.7	78	60	69.1	-3.1	82	21	55	16	0	0			3.75	1.53	1.88	8	0	0.0	0	4.2	6	29	NE	4	9	15	7	5.3	73
LIHUE	115	1011.5	1016.6	76	61	68.6	-2.4	82	18	55	1	0	0	61	77	0.90	-3.66	0.30	12	2	0.0	0	3.5	4	20	NE	2	6	20	5	5.4	55
IDAHO																																
BOISE	2838	916.4	1018.1	52	26	39.2	-2.5	72	31	8	18	0	25	19	48	0.43	-0.89	0.41	3	0	0.4	T	0.8	21	36	NW	16	14	8	9	4.4	88
IDAHO FALLS 42NW R	4790			42	15	28.1	-1.2	66	31	-10	18	0	31			0.06	-0.40	0.04	2	0					32	SW	26					
IDAHO FALLS 46W R	4933			42	16	28.9	-1.1	65	31+	-2	18	0	31			0.07	-0.55	0.04	2	0	0.6	T	1.5	31	48	W	26					
LEWISTON	1413			52	28	40.1	-2.5	73	31	12	24	0	24			0.54	-0.64	0.22	5	0	1.8	1						14	6	11	4.9	
POCATELLO	4454	862.2	1017.8	46	19	32.5	-3.3	68	31	3	18	0	31	15	52	0.10	-0.92	0.07	2	1	0.9	1	3.1	25	38	W	16	12	8	11	5.2	83
ILLINOIS																																
CAIRO U	314			48	32	39.8	-8.4	70	17+	17	19	0	16			4.79	0.00	1.95	14	0	3.7	4			42	SW	17	6	9	16	7.0	44
CHICAGO O HARE	658	992.6	1017.7	34	20	26.6	-8.1	58	1	-1	27	0	29	21	77	3.06	0.38	0.99	20	1	24.7	11	2.0	32	40	25	17	1	12	18	8.0	
CHICAGO MIDWAY	607	994.2	1017.8	36	25	30.2	-6.1	60	1	8	20	0	28	21		3.44	0.70	1.42	15	1	22.3	8	2.8	32	41	SW	18	0	15	16	7.9	36
MOLINE	582	995.6	1018.1	35	19	26.9	-8.5	58	1	7	21	0	31	22	79	2.52	0.13	0.78	19	0	16.2	5	4.1	30	44	W	18	3	10	18	7.5	42
PEORIA	652	993.6	1018.3	36	20	28.0	-9.6	56	1	7	20	0	30	23	80	3.40	0.55	1.10	14	2	13.5	6	2.9	32	42	W	18	5	9	17	7.2	45
ROCKFORD	724	989.5	1017.6	33	19	25.9	-8.1	52	1	2	27	0	29	19	74	2.30	-0.16	0.75	14	1	19.2	5	3.0	32	36	11	17	4	9	18	7.4	
SPRINGFIELD	588	994.9	1018.0	39	23	31.1	-9.1	62	1	10	20+	0	30	25	79	2.62	-0.26	0.79	14	2	11.1	4	4.3	30	45	W	17	5	7	19	7.4	46

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
INDIANA																																
EVANSVILLE	381	1003.4	1018.0	46	28	36.8	- 8.5	69	17	12	20	0	28	28	74	2.99	- 1.32	0.68	14	2	2.6	2	2.9	31	37	SW	17	5	7	19	7.3	44
FORT WAYNE	791	986.1	1017.2	35	23	29.4	- 6.9	54	17	1	27	0	27	24	79	2.61	- 0.17	1.01	19	1	11.7	5	3.2	33	42	W	18+	1	6	24	8.4	38
INDIANAPOLIS	792	987.1	1017.2	42	26	33.7	- 5.2	62	1	11	19	0	26	26	74	2.17	- 1.24	0.64	15	1	5.3	2	2.5	30	35	W	17	4	6	21	7.8	43
SOUTH BEND	773	988.2	1017.2	35	23	28.7	- 6.2	53	1	4	27	0	29	23	78	3.35	0.61	1.02	20	1	20.5	6	2.0	30	32	10	17	2	6	23	8.3	
IOWA																																
BURLINGTON	694			35	18	26.7	-10.6	58	1	8	20+	0	31	23	81	2.22	- 0.49		15	0	13.9		4.7	31	29	27	17	4	12	15	6.7	
DES MOINES	938	983.7	1020.0	30	15	22.7	-11.1	54	31	1	10	0	31	18	82	3.02	0.93	1.12	17	1	17.3	11	7.0	34	56	NW	17	8	5	18	6.7	56
DUBUQUE	1065			32	17	24.2	- 7.7	50	1	0	21	0	31			3.81	1.05	1.15	14	0	19.5	8						4	8	19	7.6	
SIOUX CITY	1095	979.7	1021.4	31	16	23.8	- 9.3	59	31	- 2	26	0	31	18	78	1.67	0.21	0.77	10	0	17.2	7	6.8	32	60	NW	17	5	9	17	6.9	55
WATERLOO	868	985.8	1018.8	29	15	21.9	-10.1	47	1	0	24+	0	31	18	81	3.44	1.39	1.12	12	1	16.1	7	5.7	32	45	30	18+	7	7	17	6.9	
KANSAS																																
CONCORDIA	1470	965.5	1020.3	41	20	30.9	- 8.9	69	31	6	19	0	29	20	69	0.88	- 0.61	0.52	8	1	4.6	1	5.7	35	54	NW	17	6	10	15	6.6	60
DODGE CITY	2582	926.2	1019.5	47	21	33.8	- 8.0	79	31	9	26+	0	27	18	60	0.15	- 1.01	0.14	3	1	0.3	T	5.2	1	40	NE	22	7	9	15	6.4	70
GOODLAND	3645	888.9	1020.0	43	14	28.2	- 8.3	76	31	-17	20	0	31	15	64	0.48	- 0.58	0.21	4	1	6.4	3	3.9	34	40	34	17	9	6	16	6.2	
TOPEKA	876	987.1	1020.1	43	23	33.0	- 8.7	68	16	11	19	0	30	23	70	1.58	- 0.43	0.92	7	2	5.0	2	5.9	34	40	NW	17	3	12	16	7.1	50
WICHITA	1321	970.2	1019.3	48	26	36.8	- 7.7	78	28	13	20+	0	24	24	63	0.48	- 1.16	0.28	3	2	T	T	6.0	36	60	N	1	8	7	16	6.5	61
KENTUCKY																																
COVINGTON	869	984.4	1016.8	46	27	36.6	- 4.0	69	1	13	19	0	24	27	70	2.86	- 0.93	0.89	16	2	6.2	4	2.3	28	27	22	23+	4	8	19	7.8	
LEXINGTON	966	981.0	1017.2	46	29	37.9	- 5.3	66	28	16	20	0	22	27	69	5.45	0.70	1.15	15	3	2.8	1	2.7	23	32	22	23	4	8	19	7.5	
LOUISVILLE	474	999.0	1017.2	47	30	38.9	- 4.4	69	17	18	19	0	19	28	67	4.82	0.23	1.52	16	3	4.6	3	3.9	30	46	W	21	3	8	20	7.5	47
LOUISIANA																																
ALEXANDRIA	92	1013.5	1017.8	62	41	51.9	- 6.5	84	29	23	21	0	6	43	75	5.29	0.32	2.70	12	6	T	0	2.4	1	29	3	19	6	6	19	7.0	
BATON ROUGE	64	1014.9	1017.7	68	46	56.8	- 3.9	86	29	27	20	0	5	46	72	4.50	- 0.41	2.83	7	3	T	0	0.9	35	28	24	1	8	4	19	6.7	
LAKE CHARLES	14	1016.3	1017.2	67	47	56.8	- 4.3	82	29	30	20	0	3	47	75	3.34	- 0.90	3.38	6	3	T	0	0.7	6	26	17	25	7	7	17	6.6	
NEW ORLEANS	3	1016.3	1017.1	68	50	58.9	- 2.5	82	24	29	8	0	4	51	76	1.95	- 3.39	0.84	8	1	0.0	0	0.9	34	25	25	5	6	9	16	6.5	
SHREVEPORT	252	1008.1	1017.6	59	40	49.6	- 7.0	78	28+	22	20	0	6	40	74	3.39	- 0.76	2.01	11	8	4.0	3	2.2	36	30	31	5	7	5	19	7.0	43
MAINE																																
CARIBOU	624			34	18	25.6	2.8	48	5	2	22	0	26			0.66	- 1.72	0.43	6	0	6.1	14						11	6	14	5.4	
PORTLAND	61	1011.5	1013.7	42	25	33.3	1.9	61	4	9	22	0	25	18	57	0.81	- 3.53	0.24	8	0	3.4	1	4.3	32	31	NW	27	8	10	13	6.0	63
MARYLAND																																
BALTIMORE	148	1010.8	1016.4	48	30	39.2	- 3.9	65	29	8	21	0	19	26	63	4.31	0.49	1.80	12	0	8.4	4	3.9	31	34	S	23+	7	10	14	6.5	53
MASSACHUSETTS																																
BLUE HILL OBS R	629			41	26	33.5	1.3	58	4	14	21	0	26			2.44	- 2.10	0.55	12	0	11.8	4			50	NW	27					49
BOSTON	15	1013.2	1014.1	42	30	35.8	- 1.9	60	4	18	21	0	22	23	66	2.22	- 2.00	0.53	12	0	9.7	4	6.6	32	35	NW	27	8	9	14	6.2	53
NANTUCKET	43	1013.2	1013.6	42	29	35.5	- 0.6	53	4	23	22+	0	26	26	71	2.02	- 2.52	0.44	11	0	7.4	2	6.0	32	37	NE	7	10	9	12	5.5	65
PITTSFIELD	1170			37	22	29.4	- 1.3	53	4	9	22	0	30			1.43	- 1.79	0.29	15	0	14.9	3										
WORCESTER	986	976.3	1014.2	39	24	31.3	- 1.5	57	4	9	22+	0	28	18	60	2.37	- 1.74	0.58	12	0	17.7	5	6.8	31	35	28	27	8	5	18	6.6	
MICHIGAN																																
ALPENA	689			33	12	22.4	- 3.3	43	4	-10	20	0	30			1.25	- 0.77	0.63	15	0	11.5	13			42	SE	17	4	7	20	7.2	58
DETROIT	619	993.6	1017.1	35	25	30.1	- 4.7	44	17	10	24	0	24	22	73	3.02	0.60	0.89	15	2	12.9	8	3.1	32	40	SW	17	4	2	25	8.0	32
DETROIT M WAYNE CO	633	992.2	1017.1	36	24	30.1	- 4.8	44	22	8	27+	0	27	22	71	3.59	1.18	1.13	18	2	16.1	5	2.6	30				1	7	23	8.4	
DETROIT WILLOW RUN	711	988.2	1017.4	34	22	28.0	- 7.3	42	16	6	24	0	28	20	71	2.86	0.46	1.15	14	2	11.6	7	3.0	30	40	23	18	4	2	25	8.4	
FLINT	770	988.2	1017.1	34	21	27.1	- 3.5	42	1	- 7	24	0	28	20	73	1.49	- 0.65	0.52	17	0	19.4	8	2.0	29	31	24	18	1	9	21	8.2	
GRAND RAPIDS	784	987.1	1017.3	33	19	26.2		43	1	- 2	24	0	30	19	75	3.11		1.51	18	1	36.0	15	1.9	32	44	SW	18	2	9	20	8.3	26
HOUGHTON LAKE	1150	973.9	1017.7	33	12	22.5		43	5	- 9	24	0	30	16	74	1.83		0.74	14	0	17.9	9	1.3	35	31	25	18	4	6	21	7.7	
LANSING	841	984.4	1017.3	33	19	26.4	- 6.0	44	1	-10	24	0	28	23	85	3.17	0.77	1.26	19	1	18.6	7	2.3	30	47	SW	18	2	6	23	8.2	45
MARQUETTE U	677			29	18	23.3	- 3.4	39	13+	1	24	0	31			1.72	- 0.19	0.89	14	0	22.4	34			25	NE	17	3	6	22	8.2	55
MUSKEGON	627	993.2	1017.1	35	23	29.0	- 3.9	47	1	4	27	0	27	24	84	3.12	1.07	1.31	17	1	35.7	13	1.5	35	35	9	17	1	6	24	8.6	
SAULT STE MARIE	721	990.5	1018.1	31	13	22.3	- 1.5	46	5	- 7	21	0	29	15	76	0.93	- 0.88	0.27	12	0	18.9	24	2.0	1	46	9	17	5	4	22	7.5	58
MINNESOTA																																
DULUTH	1428	966.1	1020.2	27	5	15.8	- 5.5	40	6	-21	20	0	31	■	67	5.12	3.50	1.94	12	0	45.5	48	3.0	35	34	NW	18+	3	12	16	7.4	51

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No of days							No. of days		Snow, Sleet				Fastest mile							
		Station ☉	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In	In.	M.p.h		M p h							%
MINNESOTA																																
INTERNATIONAL FALLS	1179	976.3	1021.9	26	0	13.0	- 6.4	44	7	-28	20	0	31	6	73	1.34	0.31	0.39	13	0	15.1	23	4.2	34	27	34	18+	4	10	17	7.1	
MINNEAPOLIS	834	988.2	1020.1	27	12	19.5	- 7.9	38	5	- 9	20	0	31	14	77	4.75	3.22	1.66	13	0	37.1	27	5.2	35	34	NW	18+	6	8	17	6.9	50
ROCHESTER	1297	969.5	1019.5	26	10	18.1	- 9.8	40	1	- 8	20	0	31	13	77	2.85	1.21	1.34	14	1	12.2	7	5.4	32	38	32	18	8	4	19	6.7	
ST CLOUD	1034	981.0	1020.8	26	5	15.7	- 9.9	38	6	-22	24	0	31		72	3.43	2.15	1.14	14	0	51.7	35						5	11	15	6.9	
MISSISSIPPI																																
JACKSON	310	1005.8	1017.8	61	40	50.2		83	24	19	21	0	8	42	77	6.66		2.40	15	9	T	0	1.9	34	33	NE	29	5	10	16	7.2	44
MERIDIAN	290	1006.4	1017.9	63	41	52.0	- 4.5	85	24	20	21	0	9	42	74	5.04	- 1.28	1.59	13	4	T	T	1.5	30	29	18	25	4	6	21	7.6	
VICKSBURG U	234			59	42	50.6	- 7.0	78	28+	24	20	0	5			6.98	1.25	3.14	11	0	T	0			26	N	20+	7	8	16	6.8	50
MISSOURI																																
COLUMBIA	778	988.8	1018.1	42	24	32.9	- 9.0	68	16	11	19	0	29	23	71	3.40	0.75	1.04	13	3	13.5	9	5.2	33	45	NW	17	2	11	18	7.4	47
KANSAS CITY	742	991.5	1019.2	44	24	34.0	- 9.3	69	16	12	19+	0	27	22	66	3.51	1.02	1.64	14	2	9.6	7	4.7	34	31	NW	17	2	10	19	7.5	68
SAINT JOSEPH	811			42	21	31.5	- 8.7	68	16	6	18	0	28	21	71	3.06	0.73	1.70	10	2	8.2	3	6.7	32	40	31	17	4	12	15	6.8	
ST LOUIS	535	997.3	1018.5	45	24	34.5	- 8.1	68	16	10	19	0	29	23	68	2.34	- 0.74	0.93	12	2	8.7	6	4.4	31	35	W	17	4	9	18	7.3	47
SPRINGFIELD	1268	971.9	1018.4	48	26	37.1	- 6.9	73	16	10	20	0	22	26	70	1.96	- 0.88	0.55	11	3	8.0	5	3.2	32	38	SW	16	7	4	20	7.3	45
MONTANA																																
BILLINGS	3567	894.0	1023.2	31	12	21.4	-12.3	53	31+	-11	24	0	31	11	70	0.90	- 0.15	0.42	8	0	11.4	10	2.5	33	30	NW	8	9	8	14	6.0	69
GLASGOW	2284			21	0	10.5	-16.2	38	11	-16	24+	0	31			0.30	- 0.26	0.14	9	0	4.9	11						12	6	13	5.6	
GREAT FALLS	3662	891.6	1025.7	30	12	20.9	- 9.8	56	30	-18	24	0	30	11	67	0.79	- 0.13	0.21	12	0	7.7	7	1.9	29	29	N	8	9	9	13	5.9	83
HAVRE	2582			25	4	14.9	-12.0	42	13	-18	20	0	31			0.31	- 0.29	0.19	6	0	5.6	5			32	NW	8	9	10	12	5.7	75
HELENA	3828	883.2	1023.6	36	13	24.6	- 6.8	60	31	-16	24	0	30	13	63	0.85	0.15	0.34	9	0	12.9	6	4.3	31	24	NW	15+	8	9	14	6.1	68
KALISPELL	2965	914.3	1022.7	36	13	24.5	- 7.3	57	31	- 6	24	0	31	13	64	0.31	- 0.65	0.25	4	0	4.9	6	4.1	1	40	2	15	9	10	12	5.7	
MILES CITY	2629	927.2	1024.7	28	7	17.6	-13.6	48	30	-12	18	0	31	11	76	0.75	0.10		9	0	6.9		4.2	33								
MISSOULA	3190	906.9	1022.9	36	15	25.6	- 8.1	62	31	- 9	24	0	30	17	72	0.67	- 0.06	0.34	9	0	8.4	3	0.4	11	31	N	16	7	12	12	5.9	71
NEBRASKA																																
GRAND ISLAND	1841	952.6	1021.7	36	14	25.1	-10.6	68	31	- 5	25	0	30	15	70	1.26	- 0.01	0.97	9	1	6.3	4	6.7	34	44	35	1	5	10	16	6.5	
LINCOLN U	1150			35	19	26.7	-11.4	64	31	2	26	0	30			1.49	- 0.24	0.49	10	0	10.3	5			40	NW	17	6	11	14		
NORFOLK	1544			33	15	23.7	- 9.6	61	31	- 5	19	0	30			0.44	- 1.15	0.32	6	0	4.1	2						2	15	14	6.8	
NORTH PLATTE	2775	918.7	1020.4	39	12	25.5	- 9.5	76	31	- 6	19	0	31	13	64	0.25	- 0.73	0.16	5	0	5.0	3	5.7	35	50	NW	17	6	9	16	6.5	66
OMAHA	978	984.1	1021.0	34	20	27.1	- 9.8	64	31	4	26	0	28	20	76	2.63	1.18	1.31	14	0	16.1	6	7.0	34	45	N	2	7	8	16	6.6	48
SCOTTSBLUFF	3957	880.1	1020.8	40	12	26.1	- 9.2	71	30	- 5	19+	0	31	13	62	0.20	- 0.66	0.05	8	0	3.6	1	4.9	33	35	1	16	11	7	13	5.5	
VALENTINE	2587			33	9	21.1	-10.2	61	31	-11	25+	0	30			0.20	- 0.81	0.10	4	0	4.0	2			41	NW	17	5	11	15	6.6	61
NEVADA																																
ELKO	5050	843.2	1016.6	51	16	33.5	- 2.1	67	31	4	19+	0	30	16	54	0.44	- 0.39	0.17	4	0	4.5	T	1.5	30	26	26	16	11	8	12	5.3	
ELY	6253	806.0	1015.2	47	18	32.4	- 1.1	63	31	9	25+	0	31	16	56	0.46	- 0.39	0.21	5	0	4.6	1	1.8	22	33	NW	25	11	5	15	5.7	80
LAS VEGAS	2162	937.4	1014.4	66	41	53.2	- 1.6	80	31	30	5+	0	4	23	35	0.74	0.39	0.57	3	0	0.0	0	2.7	23	40	N	24	12	10	9	4.8	84
RENO	4404	864.9	1015.5	60	27	43.2	1.7	72	21	15	3	0	23	23	50	0.98	0.30	0.29	6	1	4.6	3	1.5	28	33	SW	26	10	7	14	5.8	89
WINNEMUCCA	4299	866.6	1016.4	55	19	37.1	- 0.9	70	31	2	19	0	29	14	44	0.28	- 0.53	0.26	2	0	1.5	1	1.4	36	39	NW	16	13	10	8	4.9	77
NEW HAMPSHIRE																																
CONCORD	339	1001.7	1014.6	41	23	31.9	0.2	59	4	5	22	0	28	18	62	0.93	- 2.33	0.28	7	0	5.2	3	5.4	31	37	W	27	9	11	11	6.0	61
MT WASHINGTON OBS	6262			15	1	7.7	4.0	30	4	-16	31	0	31			2.71	- 3.03	0.75	16	0	19.8	9			102Y	NW	17	5	8	18	7.3	32
NEW JERSEY																																
ATLANTIC CITY	64	1013.9	1016.4	48	28	37.8	- 3.3	67	23	13	21	0	24	26	65	3.75	- 0.16	1.06	11	0	2.8	1	4.2	31	30	25	23	9	6	16	6.3	51
ATLANTIC CITY U	11			46	33	39.6	- 1.5	55	16+	20	21	0	13			3.28	- 0.73	0.96	12	0					45	WNW	16					
NEWARK	11	1015.2	1016.2	46	32	39.0	- 2.5	59	4	18	21	0	12	25	63	2.81	- 1.28	0.79	9	0	4.6	3	5.5	32	30	32	10	10	6	15	5.9	
TRENTON U	56			46	32	38.8	- 1.9	59	23+	17	21	0	15			3.38	- 0.46	0.98	11	0	8.0	4			32	NW	27	9	6	16	6.1	56
NEW MEXICO																																
ALBUQUERQUE	5310	835.8	1013.6	58	32	44.6	- 1.2	73	31+	13	4	0	17	18	39	0.49	0.01	0.38	2	1	T	T	0.7	24	42	SE	1	10	13	8	5.2	74
CLAYTON	4969			48	20	33.7	- 7.2	74	31	4	20	0	29			0.28	- 0.35	0.08	9	0	5.0	2						9	8	14	5.7	
RATON	6379			47	15	31.1	- 7.0	71	31	- 3	20	0	30			0.29	- 0.23	0.11	7	0	3.4	1						11	9	11	5.5	
ROSWELL	3617			62	28	45.3	- 4.2	85	22	11	20	0	22			0.21	- 0.29	0.12	3	0	1.7	1			31	SW	16	12	6	13	5.3	77
SILVER CITY	5373			59	29	44.0	- 4.3	73	31	10	4+	0	18			0.50	0.05	0.39	5	0	0.9	1						18	4	9	4.2	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)				
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	°F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW YORK																																
ALBANY	277	1005.1	1016.2	39	23	31.2	- 1.8	55	4	12	22	0	29	21	70	1.73	- 0.99	0.80	12	0	8.4	5	5.5	32	33	NW	27	7	8	16	6.6	52
BINGHAMTON	1590	955.0	1015.4	35	22	28.7	- 2.6	52	4	8	22	0	30	22	77	2.23	- 0.66	0.51	15	0	14.3	3	3.5	31	31	W	22	4	7	20	7.4	46
BUFFALO	705	990.2	1016.6	36	24	30.0	- 1.5	55	4	12	21	0	28	23	77	1.97	- 1.27	0.42	18	0	17.5	5	2.4	27	36	SW	21+	5	5	21	7.7	37
NEW YORK U	132	1012.9	1016.2	46	34	40.0	- 0.5	61	4	21	21	0	9	24	58	2.49	- 1.52	0.75	10	0	2.8	2	4.1	31	34	NW	27	10	7	14	5.5	56
J.F. KENNEDY	15	1014.9	1015.8	46	31	38.6	- 0.1	59	4	19	21	0	17	24	61	2.74	- 1.41	0.81	11	0	3.6	1	4.8	32	32	9	5	8	8	15	6.1	
NEW YORK LA GUARDIA	11	1014.2	1015.9	45	35	40.2	- 0.6	58	4	23	21	0	8	27	62	1.94	- 2.29	0.63	10	0	3.1	2	5.0	33	30	NE	5	9	6	16	6.3	
ROCHESTER	547	996.6	1017.5	36	23	29.5	- 2.8	53	4	2	24	0	26	23	77	2.07	- 0.94	0.41	15	0	15.6	7	3.7	27	33	SW	19	5	9	17	7.2	51
SYRACUSE	417	1001.0	1016.3	38	23	30.3	- 2.3	55	4	8	2	0	28	22	72	1.63	- 1.97	0.39	16	0	13.3	8	3.9	29	22	S	19	6	7	18	6.8	41
NORTH CAROLINA																																
ASHEVILLE	2140	939.0	1016.2	53	32	42.4		72	18	14	21	0	18	34	77	5.10		2.26	14	3	5.0	3	3.2	35	26	35	20+	7	7	17	6.6	52
CAPE HATTERAS R	7	1016.3	1016.6	55	40	47.5	- 3.5	70	29	24	22	0	3	39	76	2.94	- 1.22	0.72	13	3	0.0	0	2.2	2	36	SSW	17	8	5	18	6.5	71
CHARLOTTE	735	988.5	1016.5	57	37	46.8	- 3.2	70	1	18	21	0	13	37	73	6.59	2.20	2.00	13	2	T	0	1.4	30	23	SW	23+	8	6	17	6.3	50
GREENSBORO	897	984.1	1016.4	55	34	44.3	- 3.1	69	18	15	21	0	14	33	71	5.04	1.35	1.93	11	2	0.2	0	1.9	31	26	N	26	7	10	14	6.4	53
RALEIGH	434	1000.3	1016.3	56	33	44.6	- 4.9	71	29	17	21	0	12	33	70	4.08	0.73	1.33	10	2	T	T	1.0	29	29	32	17	7	8	16	6.4	54
WILMINGTON	28	1015.6	1016.8	62	42	51.7	- 2.5	80	26	28	21	0	4	42	72	5.72	1.69	1.25	15	1	0.4	0	0.4	31	33	S	17	9	5	17	6.5	53
NORTH DAKOTA																																
BISMARCK	1647	961.4	1024.1	26	7	16.4	- 9.8	43	31	-14	21+	0	31	8	66	0.46	- 0.32	0.16	8	0	7.5	2	6.4	33	35	NW	17	4	10	17	6.9	59
FARGO	896	988.5	1023.3	24	3	13.7	-10.6	38	7	-16	23	0	31	10	80	1.36	0.61	0.60	12	0	13.1	5	5.3	36	50	NW	18	4	7	20	7.5	57
WILLISTON	1899			23	2	12.4	-11.9	36	7	-22	23	0	31			0.48	- 0.23	0.24	7	0	5.0	8			33	NW	14	11	4	16	6.1	59
OHIO																																
AKRON	1208	970.9	1016.6	41	24	32.3	- 4.6	58	28	10	21+	0	29	25	76	2.68	- 0.64	0.93	14	1	10.9	4	2.5	28	32	13	17	3	5	23	8.0	
CINCINNATI OBS	761			46	29	37.3	- 5.4	67	1	15	19	0	24			3.16	- 0.73	1.00	16	0	6.3	4			26	SW	21					43
CLEVELAND	777	986.8	1016.8	38	25	31.7	- 3.7	52	29	11	21	0	27	25	77	1.66	- 1.47	0.42	17	1	12.9	5	2.5	27	42	SE	17	2	7	22	8.0	38
COLUMBUS	812	986.5	1017.3	43	27	34.8	- 4.1	65	28	15	19	0	25	24	68	2.90	- 0.26	0.62	18	1	8.6	2	2.9	30	40	W	18	2	4	25	8.4	31
DAYTON	1002	980.0	1016.8	43	27	34.7	- 4.2	63	1	14	19	0	24	25	70	2.33	- 0.79	0.69	15	1	9.8	3	1.7	26	33	S	22+	2	7	22	8.3	44
MANSFIELD	1297			38	23	30.6	- 4.6	56	28+	12	27+	0	30			2.28	- 1.50	0.78	15	0	10.2	4						1	5	25	8.6	
TOLEDO	676	991.5	1017.5	36	23	29.8	- 5.4	51	17	6	27	0	29	24	79	1.77	- 0.49	0.74	19	1	10.2	4	2.4	31	41	SW	18	2	4	25	8.6	30
YOUNGSTOWN	1178	972.9	1016.7	38	23	30.8	- 4.5	54	29+	7	20	0	29	22	73	3.31	- 0.04	1.10	17	1	23.2	7	3.0	29	35	23	22	2	9	20	8.0	
OKLAHOMA																																
OKLAHOMA CITY	1280	971.6	1019.1	52	30	40.7	- 7.8	73	28+	12	20	0	19	27	63	0.86	- 1.11	0.78	6	0	0.1	T	4.9	2	47	SW	22	8	6	17	6.6	67
TULSA	650	994.6	1019.3	52	29	40.5	- 7.6	77	16	11	20	0	21	27	65	0.73	- 1.70	0.47	6	1	0.6	T	3.9	35	34	S	16	7	7	17	7.0	48
OREGON																																
ASTORIA	8	1018.6	1019.4	58	36	47.2	2.7	72	10	26	19	0	9	35	66	0.93	- 7.99	0.36	9	0	0.0	0	0.6	2	21	30	31+	8	8	15	6.3	
BURNS U	4151	872.7	1017.6	51	23	37.3	- 0.1	67	31	11	18	0	29	19	52	0.19	- 0.78	0.18	3	0	2.7	3	4.4	33				15	7	9	4.7	
EUGENE	359	1005.1	1018.7	60	36	47.8	1.8	68	11+	27	19	0	6	35	67	0.79	- 3.53	0.74	3	0	T	0	2.3	36	24	1	12	11	11	9	5.4	
MEACHAM	4050			40	24	32.0	- 1.3	62	31	1	18	0	28			1.10	- 2.86	0.56	6	0	14.3	11						15	4	12	5.0	
MEDFORD	1298	969.9	1017.8	65	33	48.7	4.4	73	21	24	18	0	16	33	61	0.41	- 1.37	0.07	4	1	0.0	0	0.6	35	23	14	5	11	9	11	5.4	
PENDLETON	1482	965.5	1020.1	51	30	40.6	- 4.5	69	31	15	18	0	20	25	59	0.29	- 0.91	0.16	5	0	2.5	1	0.8	28	38	28	16	15	4	12	4.7	
PORTLAND	21	1018.3	1019.5	60	36	47.6	1.5	72	10	25	19	0	8	34	64	1.10	- 2.73	0.77	5	0	0.3	0	2.1	8	35	NE	2	10	9	12	5.6	73
SALEM	196	1011.9	1019.2	61	33	46.6	1.3	71	10	22	19	0	18	34	67	0.87	- 3.81	0.65	3	0	T	T	2.1	34	26	3	12	13	6	12	5.2	
SEXTON SUMMIT R	3836	882.8	1016.2	52	34	43.1	4.5	63	21	23	18	0	13			0.26	- 3.21	0.14	4	0	1.4	T	4.7	4	35	10	2	15	8	8	4.5	
PACIFIC AREA																																
CANTON ISLAND	8			86	77	81.5	- 1.6	89	31	73	9	0	0			2.77	0.28	1.59	11	0	0.0	0						7	19	5	5.2	
ENIWETOK	13	1010.5	1011.3	86	77	81.1	- 0.2	87	25+	73	27+	0	0	71	72	0.60	- 1.26	0.26	8	0	0.0	0	14.3	8								
TAGUAC GUAM R	361			85	68	76.4	- 2.4	89	5	54	14	0	0			0.59	- 2.05	0.25	7	0	0.0	0			26	E	7+					86
JOHNSTON	7	1014.2	1014.8	80	71	75.2	- 2.0	84	21+	68	26+	0	0	64	69	1.05	- 1.29	0.43	11	0	0.0	0	11.4	7	33	NE	24	9	18	4	4.8	78
KOROR R	94	1006.1	1009.6	85	75	80.1	- 0.6	88	16+	72	16	0	0	75	88	14.60	6.97	2.38	27	2	0.0	0	5.8	9	23	E	1	0	0	31	9.9	51
KWAJALEIN	8	1009.8	1010.6	88	77	82.6	2.1	89	30+	75	2	0	0	71	71	0.18	- 6.28	0.14	4	0	0.0	0	18.1	7	28	6	13+	3	6	22	8.3	
MAJURO	10	1009.8	1010.0	85	78	81.5	0.9	86	31+	74	5	0	0	71	71	1.98	- 9.74	1.39	4	0	0.0	0	15.7	7	27	E	5	1	10	20	8.1	79
MARCUS ISLAND	20			75	66	70.3		82	4	60	17	0	0			3.38		1.44	11	0	0.0	0			40	SW	18	5	16	9	5.7	60
PONAPE R	123	1004.4	1009.8	86	76	80.9	0.3	88	27+	72	31+	0	0	73	79	6.36	- 8.19	1.91	17	0	0.0	0	9.3	6	21	NE	9+	0	4	27	9.0	60
TRUK MOEN ISLAND	5	1009.1	1009.4	85	75	80.0	- 0.8	87	14	72	9	0	0	73	78	15.30	7.55	3.35	21	1	0.0	0	11.0	5	24	NE	1	0	3	28	9.3	74
WAKE	11	1014.6	1014.7	82	72	76.8	- 1.0	83	31+	69	26+	0	0	67	73	1.38	- 0.09	0.51	9	0	0.0	0	6.5	7	25	3	1	12	15	4	4.3	
YAP R	55	1007.5	1009.4	85	75	79.9	- 1.1	87	31+	73	15+	0	0	74	84	7.63	2.25	2.35	20	1	0.0	0	8.5	7	28	E	8	0	2	29	9.7	45

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature												Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90° F. or above	Min. 32° F. or below	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PENNSYLVANIA																																
ALLENTOWN	376	1002.0	1016.3	45	28	36.2	- 1.4	59	4	10	21	0	24	24	65	2.69	- 1.10	1.07	11	0	5.1	3	5.2	31	38	32	27	9	6	16	6.3	
ERIE	732	989.5	1017.1	35	24	29.5	- 4.1	52	4	11	22	0	30	24	82	3.55	0.67	1.87	17	0	26.8	13	3.0	26	45	14	17	5	7	19	7.3	
HARRISBURG	335	1003.7	1016.9	46	29	37.5	- 2.8	60	28	12	21	0	21	25	63	3.61	0.18	1.72	13	0	15.1	5	4.2	30	36	W	16	7	7	17	6.6	56
PHILADELPHIA	5	1015.2	1016.2	46	30	37.6	- 3.4	61	23	12	21	0	19	26	66	3.19	- 0.61	0.97	10	0	6.5	2	3.8	32	36	W	16	7	7	17	6.4	51
PITTSBURGH	1137	971.2	1016.3	43	27	35.2	- 1.6	62	28	9	21	0	23	27	74	3.16	- 0.16	0.81	18	0	13.3	6	4.0	29	35	24	22	3	7	21	7.9	38
READING U	266			46	31	38.8	- 2.5	60	4	17	21	0	18			2.43	- 1.35	1.03	9	0	5.7	3			49	E	5	9	8	14	6.2	46
SCRANTON	930	981.4	1016.3	41	27	34.2	- 2.0	56	4	11	21	0	22	23	66	1.83	- 0.99	0.79	12	0	9.9	3	2.3	32	30	S	22	6	6	19	7.1	46
WILLIAMSPORT	527	997.0	1016.7	41	26	33.5	- 3.9	54	28	8	22+	0	27	25	75	3.21	- 0.52	1.27	12	0	9.9	3	3.6	29	22	17	22	7	7	17	6.8	
RHODE ISLAND																																
BLOCK ISLAND	110			40	30	35.0	1.7	51	4	20	21	0	21			1.57	- 2.50	0.57	8	0	2.6	2										
PROVIDENCE	51	1012.2	1014.5	44	29	36.1	- 0.9	60	4	17	21	0	25	22	61	1.72	- 2.42	0.52	11	0	6.6	3	5.7	32	26	31	27	9	5	17	6.5	51
SOUTH CAROLINA																																
CHARLESTON	41	1014.9	1016.6	65	44	54.5	- 2.2	81	26	28	22	0	3	45	74	7.99	4.06	1.35	18	5	T	0	2.1	26	43Y	NW	26	7	5	19	7.2	40
CHARLESTON U	9			63	48	55.2	- 2.3	80	26	33	21	0	0			8.03	4.41	1.42	17	0	0.0	0			34	NW	26					
COLUMBIA	217	1008.1	1016.5	64	41	52.2	- 2.2	82	25	24	21	0	7	41	71	7.68	3.42	1.45	14	3	T	0	1.9	26	31	34	29	6	7	18	6.9	47
FLORENCE	146	1011.2	1016.5	62	41	51.2	- 3.5	79	17	25	22	0	9	40	70	6.33	2.69		13	5	0.1		1.1	27	28	32	26	8	5	18	6.7	
GNVLE-SPARTANBURG	957	981.4	1016.4	58	37	47.8	- 3.6	74	30	18	21	0	12	36	69	7.60	2.85	1.94	17	3	1.3	0	1.4	30	25	W	10	8	8	15	6.5	50
SOUTH DAKOTA																																
ABERDEEN	1296	973.6	1023.0	30	9	19.3	- 8.9	49	7	-12	21	0	31	11	71	0.71	- 0.38	0.36	10	0	10.4	5	6.8	34	37	35	17	3	9	19	7.4	
HURON	1282	973.6	1022.4	31	11	21.1	- 7.6	47	14	- 6	21+	0	30	11	66	1.21	0.10	0.84	10	0	17.2	10	6.3	32	47	NW	17	3	9	19	7.5	54
RAPID CITY	3165	906.5	1022.4	32	10	21.2	- 9.9	61	30	-10	25	0	31	11	67	0.46	- 0.55	0.14	10	0	4.6	2	9.4	34	45	N	3	6	12	13	6.0	65
SIOUX FALLS	1418	967.5	1021.4	30	14	21.7	- 8.4	60	31	- 5	21+	0	30	14	73	1.09	- 0.45	0.57	9	0	13.3	7	5.7	33	40	31	17	5	9	17	7.1	
TENNESSEE																																
BRISTOL	1507	961.4	1016.5	54	34	43.6	- 2.4	72	28	12	21	0	15	33	70	5.82	1.84	2.08	14	3	5.5	2	3.2	28	30	30	26	5	9	17	7.2	
CHATTANOOGA	670	992.2	1017.3	56	36	45.9	- 5.3	71	28	15	21	0	15	36	74	9.43	3.79	3.48	12	5	0.7	T	1.5	29	32	NW	25	6	7	18	7.4	43
KNOXVILLE	980	981.4	1017.1	56	38	46.8	- 2.8	74	28	18	21	0	13	37	71	9.31	4.58	3.69	15	4	4.4	1	2.8	28	42	NW	25	7	4	20	7.3	38
MEMPHIS	263	1007.8	1018.2	53	35	44.0	- 7.1	77	16	18	20	0	10	34	72	5.35	0.28	1.75	14	5	4.6	2	1.7	33	34	SW	17	4	7	20	7.5	38
NASHVILLE	590	995.3	1017.3	51	33	41.9	- 7.2	70	17	16	21+	0	17	32	71	6.13	0.94	2.07	15	5	3.4	1	2.5	30	34	NW	25	7	5	19	7.2	42
OAK RIDGE	905			54	36	45.1	- 2.4	73	28	16	21	0	11			9.92	4.33	4.00	14	0	1.2	T						7	5	19	7.1	
TEXAS																																
ABILENE	1762	955.3	1017.6	60	36	48.1	- 6.9	83	16	15	20	0	12	30	55	0.59	- 0.45	0.30	2	2	T	T	2.6	36	35	NE	17	9	6	16	6.2	59
AMARILLO	3604	891.0	1016.6	52	25	38.4	- 9.2	78	28+	8	20	0	23	21	58	0.72	- 0.10	0.52	3	1	2.3	1	1.7	34	42	SW	16	10	9	12	5.8	73
AUSTIN	597	995.6	1017.8	64	43	53.4	- 6.3	85	10	24	20	0	5	41	69	1.30	- 0.83	0.46	10	3	2.0	1	5.0	36	38	N	1	8	8	15	6.2	41
BROWNSVILLE	16	1014.9	1015.5	73	55	64.2	- 3.7	85	25+	38	5	0	0	53	72	0.13	- 0.91	0.08	3	0	0.0	0	3.9	9	33	SE	23	7	6	18	6.8	52
CORPUS CHRISTI	41	1014.9	1016.5	70	49	59.8	- 5.4	86	10	29	4	0	2	50	73	0.78	- 0.66	0.68	6	2	0.0	0	4.7	8	37	N	2	7	5	19	6.9	43
DALLAS	481	1000.7	1018.3	57	38	47.3	- 8.8	76	14	20	20	0	11	36	67	2.00	- 0.85	1.10	7	5	T	T	4.0	1	34	NW	23	8	3	20	6.6	45
DEL RIO	1026	980.0	1016.6	70	45	57.4		86	10	27	4	0	6	38	55	0.33	1.44	0.17	5	2	3.0	3	2.4	7	21	13	16+	11	8	12	5.7	
EL PASO	3918	880.8	1013.3	66	39	52.1	- 2.8	80	22	15	4	0	7	22	35	0.03	- 0.32	0.03	2	0	T	T	3.2	26	56	W	16	14	12	5	4.1	81
FORT WORTH	537	997.6	1018.6	57	37	47.0	- 8.9	76	14	19	20	0	10	35	67	1.45	- 1.06	0.66	5	4	T	0	4.8	36	30	31	23	9	3	19	6.5	
GALVESTON U	7			63	51	57.0	- 4.4	78	17	32	20	0	1			0.36	- 2.50	0.18	5	0	0.0	0			40	S	25					53
HOUSTON U	41			68	50	59.0	- 3.4	84	10	30	20	0	1			0.53	- 1.87	0.32	10	0	0.0	0										
HOUSTON	50	1014.9	1017.2	70	48	58.7	- 2.6	85	23	28	4	0	2	47	69	0.81	- 1.86	0.32	10	2	0.0	0	1.5	36	31	32	1	7	7	17	6.6	60
LUBBOCK	3243	903.8	1016.9	57	29	42.8	- 6.8	81	22	8	20	0	19	25	56	0.22	- 0.51	0.12	6	0	1.2	T	2.6	7	46	26	16	9	5	17	6.3	
MIDLAND	2851	916.0	1015.4	62	34	47.7	- 7.5	82	28	14	20	0	14	27	53	0.06	- 0.30	0.06	1	0	1.0	1	1.4	5	39	26	16	11	6	14	5.6	
PORT ARTHUR	16	1016.6	1017.2	68	46	57.1	- 4.0	82	29+	27	4	0	5	47	74	2.96	- 0.48	0.94	8	3	T	0	0.4	3	50	SE	25	10	5	16	6.3	49
SAN ANGELO	1903	949.5	1017.0	62	37	49.7	- 7.3	81	16	17	20	0	14	32	56	0.12	- 0.81	0.07	4	0	0.8	1	1.1	3	23	20	22+	11	6	14	5.7	
SAN ANTONIO	788	988.8	1017.2	67	43	54.9	- 6.1	85	10	23	4	0	7	41	63	2.30	0.63	2.05	7	2	T	0	4.4	3	30	N	16	8	7	16	6.1	60
VICTORIA	104	1012.9	1017.1	69	48	58.3	- 4.9	86	10	28	20	0	2	47	71	0.80	- 1.52	0.60	6	2	0.0	0	3.2	2				6	6	19	7.2	
WACO	500	999.7	1017.9	62	40	51.2	- 6.7	82	14	22	20	0	9	39	67	3.13	0.78	2.41	6	3	0.2	T	4.5	34	30	28	4+	10	4	17	6.2	
WICHITA FALLS	994	981.0	1018.6	56	32	44.0	- 9.8	81	16	9	20	0	17	29	61	0.66	- 0.88	0.35	3	1	1.4	1	3.6	35	31	32	5	9	5	17	6.5	
UTAH																																
MILFORD	5028			52	22	37.2	- 1.3	72	31	6	20+	0	28			0.68	- 0.35	0.35	7	0	4.3	2						13	9	9	4.7	
SALT LAKE CITY	4220	870.6	1016.8	49	24	36.8	- 3.6	74	31	10	19	0	28	18	49	0.14	- 1.42	0.08	4	0	1.1	T	1.3	17	24	SW	26+	11	6	14	5.5	76
WENDOVER	4237			49	27	38.2	- 3.3	68	31+	17	25+	0	23			0.05	- 0.34	0.05	2	0	T	T						12	9	10	4.9	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

MARCH 1965

State and Station	Elevation (ground)	Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)				
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	F.	°F.	°F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
VERMONT																																
BURLINGTON	332	1002.7	1015.8	36	19	27.4	0.7	51	5	5	24	0	29	16	65	0.38	- 1.73	0.14	9	0	7.9	3	3.9	34	26	NW	27	10	8	13	5.8	65
VIRGINIA																																
LYNCHBURG	916			52	31	41.5	- 4.0	67	18	7	21	0	15			4.35	0.74	1.49	10	0	2.8	2			33	SW	29	9	8	14	5.9	57
NORFOLK	26	1015.6	1016.5	53	35	44.4	- 3.6	74	29	26	21+	0	11	31	64	2.83	- 0.62	0.89	12	2	T	0	0.7	33	11	S	12	8	5	18	6.5	62
RICHMOND	162	1010.8	1016.9	53	33	43.0	- 4.7	69	29	21	21	0	12	29	63	3.68	0.26	1.51	9	0	1.0	T	1.6	34	27	SE	17	9	5	17	6.4	56
ROANOKE	1149	973.2	1016.1	52	32	41.9	- 3.6	69	23+	14	21	0	17	27	60	3.93	0.40	1.19	9	0	4.1	3	3.2	28	25	29	14+	10	9	12	5.9	
WASHINGTON																																
OLYMPIA	195	1012.5	1019.9	58	29	43.8	- 0.4	68	11+	18	24+	0	21	30	65	0.48	- 4.92	0.15	8	0	0.2	T	0.2	27	24	24	16	10	8	13	5.7	
SEATTLE TACOMA	400	1003.4	1020.0	57	37	47.0	3.2	69	3	27	19	0	7	30	57	0.57	- 3.22	0.31	8	0	T	0	1.8	2	25	35	11	11	10	10	5.4	68
SPOKANE	2356	934.6	1020.2	46	23	34.4	- 3.7	62	31	10	18+	0	28	17	53	0.31	- 1.19	0.12	4	0	2.0	2	1.7	6	24	NW	22	16	6	9	4.8	75
STAMPEDE PASS R	3958			38	27	32.5	2.5	53	7	10	18	0	22			2.56	- 8.04	0.73	9	0	23.7	136						12	5	14	5.5	
TATOOSH ISLAND R	101	1016.3	1019.6	51	41	45.8	1.6	66	11	35	27+	0	0	36	72	2.94	- 5.40	1.62	11	0	T	0	11.1	7	60	E	1	11	6	14	5.9	72
WALLA WALLA U	949			54	34	43.6	- 2.4	72	31	18	18	0	12			0.34	- 1.25	0.25	3	0	1.7	T			21	NE	12	17	3	11	4.1	74
YAKIMA	1052	981.0	1020.5	55	27	41.2	- 0.8	68	31	14	19	0	26	22	53	0.10	- 0.52	0.10	1	0	1.0	1	2.0	30	37	3	11	10	9	12	5.3	
WEST INDIES																																
SAN JUAN P.R.	15	1015.9	1018.3	85	71	77.7	2.4	89	7	65	5+	0	0	67	71	0.86	- 1.34	0.46	6	0	0.0	0	9.1	9	29	E	20	13	17	1	3.8	92
SWAN ISLAND	28			83	75	79.1	- 0.9	85	25	71	5	0	0			1.95	1.32	1.41	7	0	0.0	0						16	11	4	4.0	
WEST VIRGINIA																																
BECKLEY	2504	925.8	1016.7	45	27	36.0		67	28	4	21	0	21	28	74	4.70		1.31	16	1	10.5	5	3.4	26	46	15	17	3	6	22	8.1	
CHARLESTON	939	981.4	1016.3	49	31	39.6	- 4.8	70	28	9	21	0	19	30	72	4.52	0.18	1.27	15	2	8.5	3	2.7	25	27	22	21	3	8	20	7.6	
ELKINS	1970	943.4	1016.3	46	25	35.3	- 4.2	68	28	- 3	21	0	24	27	76	4.51	0.37	0.87	19	1	14.0	6	4.5	27	28	29	16+	2	9	20	8.0	
HUNTINGTON	827	985.8	1016.6	50	31	40.9	- 3.9	73	28	16	21	0	16	30	71	4.81	0.61	1.12	16	1	7.3	3	2.2	27	22	13	17	3	7	21	7.5	
PARKERSBURG U	615			47	29	38.4	- 4.3	70	28	12	21	0	22			3.59	0.06	1.10	15	0	5.1	3			35	SE	17					32
WISCONSIN																																
GREEN BAY	682	991.2	1018.0	31	18	24.4	- 3.8	41	8	- 4	20	0	29	18	76	2.38	1.04	0.69	15	0	17.0	9	3.2	1	33	NE	5	8	6	17	6.8	50
LA CROSSE	651	993.9	1019.6	31	15	23.0	- 7.5	41	31	-13	20	0	31	16	76	2.05	- 0.02	0.62	12	0	15.0	8	3.5	31	26	27	18	6	7	18	6.9	
MADISON	858	985.1	1017.7	33	18	25.0	- 4.1	46	1	- 7	20	0	29	20	81	2.51	0.67	0.77	16	1	19.4	7	2.8	35	34	E	17	6	7	18	7.3	44
MILWAUKEE	672	991.9	1018.1	31	20	25.3	- 5.7	41	1	1	20	0	29	21	80	3.61	1.30	1.29	18	1	26.7	12	2.8	32	43	SW	18	5	8	18	7.2	46
WYOMING																																
CASPER	5338	836.1	1020.5	33	8	20.5	-11.6	60	30	-21	25	0	30	9	61	0.52	- 0.51	0.18	11	0	11.4	4	2.9	26	31	30	21	10	11	10	5.7	
CHEYENNE	6126	809.3	1019.7	34	10	22.2	-10.2	62	31	-10	18	0	30	9	59	0.76	- 0.45	0.34	12	0	10.0	4	7.6	32	42	NW	21+	13	7	11	5.3	73
LANDER	5563	827.3	1019.6	37	10	23.7	- 8.5	66	31	-14	18	0	30	10	59	0.43	- 0.72	0.12	7	0	10.2	3	0.9	21	33	NW	16	11	5	15	5.4	73
SHERIDAN	3964	880.8	1023.9	31	8	19.3	-11.7	54	31+	-23	25	0	31	9	65	0.70	- 0.72	0.36	9	0	12.8	7	6.3	32	33	NW	14	7	12	12	6.2	62

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

A Maximum hourly average.
B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No of days							No of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
ALABAMA																																
BIRMINGHAM	189	994.6	1017.2	15.6	4.4	9.9	-2.6	27.2	28	-7.2	21	0	11	5.0	74	155	3	37	17	5	T	T	0.9	28	16.5	S	17	2	10	19	8.1	35
HUNTSVILLE	183	993.9	1017.4	13.3	3.3	8.3	-2.7	25.6	28	-6.7	21	0	12	2.8	71	208	67	52	14	6	58	T	0.8	32	13.0	30	25	6	5	20	7.4	
MOBILE	64	1008.8	1016.8	20.0	9.4	14.6	-1.2	27.2	24	0.0	21+	0	2	9.4		126	-57	54	12	4	0	0	0.4	34	14.3	2	20	7	7	17	6.8	
MONTGOMERY	59	1010.2	1017.4	17.2	6.7	12.1	-1.2	27.8	24	-3.9	21	0	5	6.7	72	205	49	49	13	5	T	0	0.6	27	14.3	N	29	2	9	20	7.9	33
ALASKA												B																				
ANCHORAGE PRK STRIP	26			4.4	-1.1	1.7	6.5	11.1	8	-11.1	16	0	18			21	8	10	11	0	30	406										
ANCHORAGE	44	1012.9	1017.8	5.6	-0.6	2.5		9.4	8	-10.0	16	0	11	-3.3	68	21		9	13	0	76	584	0.5	18	14.3	16	9	2	2	27	8.9	24
ANNETTE	34	1019.3	1023.6	7.8	-0.6	3.6	0.3	15.0	12+	-6.7	18	0	22	-3.9	64	76	-166	39	7	0	64	T	1.2	2	11.6	14	1	10	9	12	5.8	
BARROW	7	1021.3	1022.0	-18.9	-26.7	-22.6	3.3	-0.6	9	-37.2	16	0	31	-26.1	72	7	5	3	8	0	114	330	2.2	11	13.9	27	10	13	5	13	5.7	
BARTER ISLAND	12	1020.3	1022.2	-18.3	-25.6	-21.9	4.2	-2.2	10	-40.0	1	0	31	-23.9	82	7	2	2	7	0	69	457	0.3	8	16.5	27	10	5	6	20	7.5	
BETHEL	38	1005.4	1011.1	0.0	-6.7	-3.3	8.0	6.7	22	-26.1	14	0	26	-4.4	89	26	0	6	20	0	198	813	1.8	11	14.8	13	6	3	4	24	8.5	
COLD BAY	29	1002.4	1006.0	3.9	0.0	2.0	3.8	8.3	26	-3.9	2	0	15	0.0	87	77	33	18	22	0	41	76	4.9	16	24.6	17	6+	0	6	25	9.0	
FAIRBANKS	133	999.7	1017.3	1.7	-10.0	-4.2	8.7	8.9	24+	-30.0	1	0	30	-7.2	78	7	-3	4	7	0	36	432	0.4	1	9.4	25	12+	2	3	26	8.6	
JUNEAU	4	1023.4	1024.2	5.6	-2.2	1.7	2.6	12.8	24	-10.0	17	0	25	-2.2	80	42	-41	22	10	0	102	711	2.3	12	15.6	12	1	6	5	20	7.3	50
KING SALMON	13	1009.8	1011.7	4.4	-2.8	1.0	7.9	12.2	22	-11.7	5	0	20	-1.1	86	57	33	14	19	0	109	152	3.9	11	30.8	9	18	0	2	29	9.2	
KOTZEBUE	3	1015.2	1015.7	-7.2	-15.6	-11.4	7.5	2.8	24+	-32.8	15	0	30	-13.9	80	22	15	7	16	0	267	559	2.5	12	17.4	11	21	4	3	24	8.6	
MC GRATH	102	1002.0	1015.0	2.2	-7.2	-2.7	10.5	9.4	23	-31.7	1	0	25	-6.1	78	26	3	7	11	0	246	813	0.4	19	12.5	13	11	1	3	27	9.0	
NOME	4	1011.5	1012.3	-2.8	-10.6	-6.9	6.5	5.6	24	-32.2	15	0	28	-8.9	84	40	18	6	21	0	241	279	3.5	8	17.0	9	16	1	3	27	9.2	37
ST. PAUL ISLAND	7	1004.4	1005.3	-1.7	-6.7	-4.2	0.1	2.8	21	-21.7	13	0	30	-4.4	95	49	22	10	20	0	229	787	3.7	3	25.9	6	15	1	3	27	9.0	
SHEMYA	37	998.6	1002.5	1.7	-1.1	0.4	0.2	3.9	27+	-5.0	5	0	19	-1.7	85	33	-33	10	16	0	173	76	2.3	4	25.0	22	29	0	3	28	9.2	
YAKUTAT	9	1022.0	1023.0	2.8	-2.8	0.1	0.4	7.2	11	-12.8	16	0	27	-1.1	91	436	215	134	16	1	505	1346	1.7	11	17.4	13	1	1	6	24	8.7	
ARIZONA																																
FLAGSTAFF	2131	784.3	1015.4	7.8	-6.7	0.8	-1.2	17.2	31	-15.0	14	0	31	-7.2	63	85	48	22	10	3	874	305	1.3	19	13.0	19	15	10	10	11	5.5	
PHOENIX	340	974.9	1014.2	20.6	6.1	13.4	-1.6	29.4	31	-1.1	3	0	2	1.7	49	35	19	20	5	1	0	0	0.9	12	14.8Y	W	15	15	6	10	4.4	86
TUCSON	788	924.8	1013.2	20.6	5.0	12.8	-1.6	30.0	31	-6.7	4	0	3	-4.4	35	7	-7	4	3	0	0	0	1.3	21	13.0	SW	15	17	7	7	4.0	81
WINSLOW	1492	849.6	1015.7	14.4	-2.2	6.0	-1.6	25.0	31	-12.8	3	0	19	-7.2	48	25	15	15	5	0	112	76	2.2	23	19.7	22	24	13	11	7	4.5	
YUMA	59	1007.1	1014.3	23.3	8.9	16.2	-2.4	28.9	31	2.8	3	0	0	-0.6	37	1	-5	1	2	0	0	0	0.7	28	13.0	N	1	17	9	5	3.3	94
ARKANSAS																																
FORT SMITH	137	1002.0	1019.0	11.1	-0.6	5.4	-5.2	26.1	16	-10.0	20	0	18	-0.6	68	57	-31	26	7	5	T	0	1.5	35	14.3	W	17	6	7	18	7.2	46
LITTLE ROCK	78	1008.5	1018.2	12.2	1.7	6.9	-4.1	25.0	16	-8.3	20	0	10	1.1		92	-30	29	13	5	109	76	1.2	36	13.9	NW	2	6	6	19	7.2	38
TEXARKANA	113	1005.1	1018.3	13.9	3.3	8.6	-4.1	25.6	23	-7.8	20	0	8	2.2	66	82	-38	27	14	10	38	T	0.8	1				6	8	17	7.0	
CALIFORNIA																																
	151	998.3	1016.0	20.0	8.3	13.9	0.1	28.9	30	4.4	2	0	0	4.4	58	30	3	19	6	1	0		0.8	3	11.6	18	30+	11	8	12	5.4	
BISHOP	1252			17.2	-1.1	8.2	-0.5	23.3	22	-7.2	3	0	21			1	-13	1	2	0	0	0						13	7	11	5.1	
BLUE CANYON	1609			8.3	1.1	4.7	0.5	15.6	21	-2.8	28	0	12			121	-94	54	9	0	630	483			11.6	4	1	12	4	15	5.9	
BURBANK	221	990.2	1015.9	18.9	8.3	13.5	0.9	27.2	21	4.4	3	0	0	5.6	65	24	-30	22	7	3	0	0	1.6	17	13.0	12	31	10	11	10	5.3	
EUREKA U	13			12.2	6.1	9.2	-0.1	16.7	2	2.8	28+	0	0			31	-102	17	5	0	0	0			11.6	NW	18	6	7	18	7.3	60
FRESNO	100	1004.4	1016.3	20.0	6.1	13.1	0.3	26.7	22+	1.7	1	0	0	6.1	68	60	11	39	5	1	0	0	0.6	1	10.7	SW	4	12	8	11	5.0	80
LONG BEACH	10	1015.6	1016.9	18.9	9.4	14.1	0.3	25.6	21+	5.6	3	0	0	6.1	65	57	22	29	6	2	0	0	1.1	23	8.9	12	31	8	13	10	5.5	
LOS ANGELES	30	1012.9	1016.5	18.3	10.0	14.2	0.3	23.9	21	7.2	11+	0	0	6.7	65	41	-4	28	8	1	0	0	1.5	26	15.6Y	E	31	11	11	9	5.1	
LOS ANGELES U	82			19.4	10.6	15.0	-0.2	26.7	20	7.8	14+	0	0			63	6	26	7	0	0	0			9.4	SW	4	10	11	10	5.6	48
MT SHASTA R	1080			13.3	-0.6	6.3	1.2	20.0	21	-6.1	2	0	19			16	-97	4	6	0	0	0										
OAKLAND	2	1016.3	1016.6	15.6	8.9	12.3	0.3	22.2	21	6.1	19+	0	0	6.7	71	50	-12	16	8	0	0	0	1.9	28	10.3	30	11	8	10	13	6.0	
RED BLUFF	104	1003.1	1015.7	18.9	6.1	12.7	0.4	26.7	15	1.7	3	0	0	4.4	64	50	-19	30	6	1	0	0	0.3	23	13.4	S	26	9	11	11	5.7	67
SACRAMENTO	5	1015.2	1016.1	17.2	6.1	11.7	-0.2	24.4	21	1.7	2	0	0	5.6	70	37	-23	14	6	1	0	0	1.3	21	13.0	N	1	7	9	15	6.4	60
SANDBERG R	1377			10.0	1.1	5.5	-1.7	17.8	21	-2.2	11	0	12			36		23	8	0	18	T			17.0	17	30+	7	9	15	6.6	
SAN DIEGO	4	1015.6	1016.8	18.9	10.6	14.8	-0.2	26.7	20	6.7	5	0	0	7.8	67	45	6	19	8	0	0	0	1.3	26	9.8	S	31	8	12	11	5.6	69
SAN FRANCISCO	2	1016.6	1017.1	15.0	7.2	11.3	-0.6	23.3	21	3.9	19	0	0	5.6	72	45	-24	24	9	0	0	0	2.4	26	16.5	ESE	31	8	9	14	6.3	
SAN FRANCISCO U	16			15.6	9.4	12.4	-0.2	23.9	21	7.8	13	0	0			74		24	10	0	0	0			12.5	SW	22					67
SANTA CATALINA	478			13.3	8.3	11.1	-1.4	21.7	21+	6.1	11	0	0			55	6	29	8	1	0	0						6	11	14	6.2	
SANTA MARIA	72			17.2	5.6	11.5	-0.3	23.9	21	1.7	28	0	0			43	-9	14	8	0	0	0						12	5	14	5.5	
STOCKTON	7	1015.9	1016.8	18.9	6.1	12.5	0.4	25.0	22	2.8	1	0	0	6.7	72	55	3	36	7	1	0	0	1.3	27	10.7	15	31	8	9	14	5.8	
COLORADO																																
ALAMOSA	2297			5.0	-9.4	-2.2	-2.2	16.7	31	-25.0	4	0	30			13	7	6	7	0	231	102						13	10	8	4.5	
COLORADO SPRINGS	1873	808.0	1018.9	2.8	-10.0	-3.6	-5.9	18.9	31	-21.7	25+	0	30	-11.1	61	28	13	12	12	0	366	152	1.7	3	16.5	28	22	8	6	17	6.6	
DENVER	1610	834.7	1017.6	4.4	-7.8	-1.7	-4.1	21.1	31	-19.4	24	0	29	-7.8	68	30		8	14	0	378	102	0.5	11	11.6	NE	22+	7	10	14	6.4	74
GRAND JUNCTION	1480	850.0	1014.8	10.6	-1.1	4.7	-0.6	23.3	31	-11.7	3	0	15	-6.7	51	22	3	13	9	1	97	T	0.5	5	14.3	NW	22	11	6	14	5.6	66
PUEBLO	1428	855.4	1018.9	7.8	-8.3	-0.3	-4.8	24.4	31	-21.7	20	0	30	-8.9	59	11	-3	5	9	0	249	127	1.4	5	21.5	NW	21+	8	9	14	5.7	70

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)				
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		°C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
CONNECTICUT																																
BRIDGEPORT	2	1015.6	1016.1	6.7	- 1.1	2.6	-0.4	12.8	4	- 8.3	21	0	19	- 3.3	69	29	- 78	8	11	0	119	76	2.7	32	21.5	26	21	10	4	17	6.2	
HARTFORD	52	1008.1	1014.9	6.7	- 2.2	2.3	0.1	16.1	4	- 8.3	21	0	25	- 5.6	60	38	- 58	11	13	0	198	102	2.3	32	17.0	Nw	27	6	8	17	6.7	57
NEW HAVEN	2			6.7	- 1.7	2.4	-0.3	12.2	2	- 8.3	21	0	24			43	- 74	15	12	0	183	76			17.4	Nw	27	10	4	17	6.1	54
DELAWARE																																
WILMINGTON	24	1013.2	1016.3	8.3	- 1.1	3.6	-1.6	17.2	23	-11.1	21	0	21	- 2.8	66	81	- 21	30	9	1	147	51	2.1	29	14.3	27	16	7	8	16	6.5	
DIST.OF COLUMBIA																																
WASH NATL AP	4	1014.6	1016.9	10.0	0.6	5.2	-1.9	22.8	29	- 7.2	21	0	15	- 3.3	59	111	29	49	10	0	137	76	1.5	32	15.2	Nw	27	6	8	17	6.9	57
FLORIDA																																
APALACHICOLA U	4			18.9	12.2	15.6	-0.5	24.4	30+	2.8	21	0	0			217	102	177	11	3	0	0			12.1	77	5+	7	11	13	6.6	46
DAYTONA BEACH	9	1016.6	1018.0	22.8	12.8	17.6	-0.1	30.6	26+	1.1	9+	0	0	12.8	79	77	- 13	33	11	7	0	0	0.9	25	14.3	27	5	6	10	15	6.5	
FORT MYERS	5	1017.6	1017.8	26.1	16.1	21.2	1.1	30.6	26	7.2	9	0	0	16.1	77	74	7	57	6	1	0	0	1.3	21	13.0	18	2	9	16	6	5.2	
JACKSONVILLE	7	1016.3	1017.3	22.2	11.1	16.9	0.1	31.1	26+	2.8	9	0	0	10.6	71	99	11	34	11	4	0	0	1.1	28	18.3	Sw	12	6	5	20	7.0	58
KEY WEST	1	1016.9	1017.6	27.2	22.2	24.8	2.3	29.4	31+	14.4	10	0	0	19.4	74	14	- 30	13	3	1	0	0	1.9	12	12.1	SE	1	14	14	3	3.8	90
LAKELAND U	65			24.4	14.4	19.6	0.4	31.7	30	5.6	8	0	0			48	- 60	17	8	5	0	0						8	6	17	6.6	58
MIAMI	2	1017.6	1017.9	27.2	18.9	22.8	1.4	31.7	20	7.8	9	0	0	17.2	73	101	43	51	5	3	0	0	1.6	16	13.0	27	6	10	17	4	5.1	
ORLANDO	33	1013.5	1017.8	25.0	13.9	19.4	0.6	32.2	30	3.9	9	1	0	13.9	75	77	- 10	61	9	4	0	0	1.0	24	11.6	36	13	6	10	15	6.5	
PENSACOLA	34	1013.2	1017.4	18.9	9.4	14.1	2.0	26.1	30	0.0	21+	0	2	10.0	77	96	- 58	36	14	0	0	0	0.3	29	18.3	SE	1					45
TALLAHASSEE	18	1015.2	1017.6	21.7	9.4	15.4	-0.4	30.0	17	- 3.3	9	0	3	10.0	75	200	68	107	13	5	0	0	0.8	25	20.6	36	18	4	12	15	6.7	
TAMPA	6	1017.3	1017.6	23.9	14.4	19.1	0.2	30.6	31	4.4	7	0	0	13.9	76	58	- 37	30	6	4	0	0	1.0	23	13.0	27	6	8	7	16	6.6	57
WEST PALM BEACH	5	1016.9	1017.7	27.2	16.7	22.1	1.1	33.3	20	7.2	9	1	0	15.6	71	29	- 58	14	6	2	0	0	1.7	17	11.6	28	6	8	15	8	5.5	
GEORGIA																																
ATHENS	244	987.1	1016.6	15.6	4.4	9.9	-1.0	25.6	25	- 6.1	21	0	9	4.4	75	178	48	53	14	5	T	T	1.3	26	12.5	29	17	4	6	21	7.4	
ATLANTA	308	979.7	1016.9	14.4	4.4	9.3	-1.4	23.9	25+	- 6.1	21	0	11	3.3	73	151	14	36	15	5	13	T	1.0	26	14.3	Sw	17	4	6	21	7.7	41
AUGUSTA	44	1011.2	1016.5	18.3	5.0	11.8	-0.9	26.7	29+	- 3.9	22	0	6	5.6	73	185	79	35	17	4	T	0	0.9	25	11.2	30	17	4	9	18	7.6	
COLUMBUS	117			18.9	6.7	12.7	-0.3	28.3	28+	- 3.3	22+	0	7	6.1	70	154	1	42	13	0	T	0	0.8	29	14.3	30	17	3	5	23	7.9	
MACON	108	1004.4	1017.6	18.3	6.1	12.1	-1.8	27.8	29	- 4.4	22	0	7	6.7	75	177	51	38	19	7	T	0	0.9	28	14.3	Sw	17	4	8	19	7.5	45
ROME	194			15.0	2.8	8.9	-1.3	25.6	17	-10.6	21	0	14			186	37	67	14	0	T	T										
SAVANNAH	14	1015.2	1017.0	20.0	7.8	13.8	-0.8	29.4	26	- 1.7	22	0	4	8.3	73	197	96	45	18	9	T		0.8	26	12.5	Nw	6+	6	8	17	6.8	57
HAWAII																																
HILO	9	1014.9	1015.9	25.0	16.7	20.9	-0.5	28.3	20	13.9	17	0	0	16.7	78	212	-162	57	17	1	0	0	0.3	28	11.2	5	3	4	9	18	7.4	26
HONOLULU	2	1015.6	1015.9	26.7	17.8	22.3	0.4	28.3	30	14.4	27	0	0	15.6	68	25	- 48	17	3	2	0	0	1.6	4	15.2	NE	23	18	9	4	4.0	90
KAHULUI	15	1013.5	1015.7	25.6	15.6	20.6	-1.7	27.8	21	12.8	16	0	0			95	39	48	8	0	0	0	1.9	6	13.0	NE	4	9	15	7	5.3	73
LIHUE	35	1011.5	1016.6	24.4	16.1	20.3	-1.3	27.8	18	12.8	1	0	0	16.1	77	23	- 93	8	12	2	0	0	1.6	4	8.9	NE	2	6	20	5	5.4	55
IDAHO																																
BOISE	865	916.4	1018.1	11.1	- 3.3	4.0	-1.4	22.2	31	-13.3	18	0	25	- 7.2	48	11	- 23	10	3	0	10	T	0.4	21	16.1	Nw	16	14	8	9	4.4	88
IDAHO FALLS 42NW R	1460			5.6	- 9.4	- 2.2	-0.7	18.9	31	-23.3	18	0	31			2	- 10	1	2	0	0				14.3	Sw	26					
IDAHO FALLS 46W R	1504			5.6	- 8.9	- 1.7	-0.6	18.3	31+	-18.9	18	0	31			2	- 14	1	2	0	15	T	0.7	31	21.5	w	26					
LEWISTON	431			11.1	- 2.2	4.5	-1.4	22.8	31	-11.1	24	0	24			14	- 16	6	5	0	46	T						14	6	11	4.9	
POCATELLO	1358	862.2	1017.8	7.8	- 7.2	0.3	-1.8	20.0	31	-16.1	18	0	31	- 9.4	52	3	- 23	2	2	1	23	T	1.4	25	17.0	w	16	12	8	11	5.2	83
ILLINOIS																																
CAIRO U	96			8.9	0.0	4.3	-4.7	21.1	17+	- 8.3	19	0	16			122	0	50	14	0	94	102			18.8	Sw	17	6	9	16	7.0	44
CHICAGO O HARE	201	992.6	1017.7	1.1	- 6.7	- 3.0	-4.5	14.4	1	-18.3	27	0	29	- 6.1	77	78	10	25	20	1	627	279	0.9	32	17.9	25	17	1	12	18	8.0	
CHICAGO MIDWAY	185	994.2	1017.8	2.2	- 3.9	- 1.0	-3.4	15.6	1	-13.3	20	0	28	- 6.1		87	18	36	15	1	566	203	1.3	32	18.3	Sw	18	0	15	16	7.9	36
MOLINE	177	995.6	1018.1	1.7	- 7.2	- 2.8	-4.7	14.4	1	-13.9	21	0	31	- 5.6	79	64	3	20	19	0	411	127	1.8	30	19.7	w	18	3	10	18	7.5	42
PEORIA	199	993.6	1018.3	2.2	- 6.7	- 2.2	-5.3	13.3	1	-13.9	20	0	30	- 5.0	80	86	14	28	14	2	343	152	1.3	32	18.8	w	18	5	9	17	7.2	45
ROCKFORD	221	989.5	1017.6	0.6	- 7.2	- 3.4	-4.5	11.1	1	-16.7	27	0	29	- 7.2	74	58	- 4	19	14	1	488	127	1.3	32	16.1	11	17	4	9	18	7.4	
SPRINGFIELD	179	994.9	1018.0	3.9	- 5.0	- 0.5	-5.1	16.7	1	-12.2	20+	0	30	- 3.9	79	67	- 7	20	14	2	282	102	1.9	30	20.1	w	17	5	7	19	7.4	46
INDIANA																																
EVANSVILLE	116	1003.4	1018.0	7.8	- 2.2	2.7	-4.7	20.6	17	-11.1	20	0	28	- 2.2	74	76	- 34	17	14	2	66	51	1.3	31	16.5	Sw	17	5	7	19	7.3	44
FORT WAYNE	241	986.1	1017.2	1.7	- 5.0	- 1.4	-3.8	12.2	17	-17.2	27	0	27	- 4.4	79	66	- 4	26	19	1	297	127	1.4	33	18.8	w	18+	1	6	24	8.4	38
INDIANAPOLIS	241	987.1	1017.2	5.6	- 3.3	0.9	-2.9	16.7	1	-11.7	19	0	26	- 3.3	74	55	- 31	16	15	1	135	51	1.1	30	15.6	W	17	4	6	21	7.8	43
SOUTH BEND	236	988.2	1017.2	1.7	- 5.0	- 1.8	-3.4	11.7	1	-15.6	27	0	29	- 5.0	78	85	15	26	20	1	521	152	0.9	30	14.3	10	17	2	6	23	8.3	
IOWA																																
BURLINGTON	212			1.7	- 7.8	- 2.9	-5.9	14.4	1	-13.3	20+	0	31	- 5.0	81	56	- 12		15	0	353		2.1	31	13.0	27	17	4	12	15	6.7	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
IOWA																																
DES MOINES	286	983.7	1020.0	- 1.1	- 9.4	- 5.2	-6.2	12.2	31	-17.2	10	0	31	- 7.8	82	77	24	28	17	1	439	279	3.1	34	25.0	NW	17	8	5	18	6.7	56
DUBUQUE	325			0.0	- 8.3	- 4.3	-4.3	10.0	1	-17.8	21	0	31			97	27	29	14	0	495	203						4	8	19	7.6	
SIOUX CITY	334	979.7	1021.4	- 0.6	- 8.9	- 4.6	-5.2	15.0	31	-18.9	26	0	31	- 7.8	78	42	5	20	10	0	437	178	3.0	32	26.8	NW	17	5	9	17	6.9	55
WATERLOO	265	985.8	1018.8	- 1.7	- 9.4	- 5.6	-5.6	8.3	1	-17.8	24+	0	31	- 7.8	81	87	35	2P	12	1	409	178	2.5	32	20.1	30	18+	7	7	17	6.9	
KANSAS																																
CONCORDIA	448	965.5	1020.3	5.0	- 6.7	- 0.6	-4.9	20.6	31	-14.4	19	0	29	- 6.7	69	22	- 15	13	8	1	117	T	2.5	35	24.1	NW	17	6	10	15	6.6	60
DODGE CITY	787	926.2	1019.5	8.3	- 6.1	1.0	-4.4	26.1	31	-12.8	26+	0	27	- 7.8	60	4	- 26	4	3	1	8	T	2.3	1	17.9	NE	22	7	9	15	6.4	70
GOODLAND	1111	888.9	1020.0	6.1	-10.0	- 2.1	-4.6	24.4	31	-27.2	20	0	31	- 9.4	64	12	- 15	5	4	1	163	76	1.7	34	17.9	34	17	9	6	16	6.2	
TOPEKA	267	987.1	1020.1	6.1	- 5.0	0.6	-4.8	20.0	16	-11.7	19	0	30	- 5.0	70	40	- 11	23	7	2	127	51	2.6	34	17.9	NW	17	3	12	16	7.1	50
WICHITA	403	970.2	1019.3	8.9	- 3.3	2.7	-4.3	25.6	28	-10.6	20+	0	24	- 4.4	63	12	- 29	7	3	2	T	T	2.7	36	26.8	N	1	8	7	16	6.5	61
KENTUCKY																																
COVINGTON	265	984.4	1016.8	7.8	- 2.8	2.6	-2.2	20.6	1	-10.6	19	0	24	- 2.8	70	73	- 24	23	16	2	157	102	1.0	28	12.1	22	23+	4	8	19	7.8	
LEXINGTON	294	981.0	1017.2	7.8	- 1.7	3.3	-2.9	18.9	28	- 8.9	20	0	22	- 2.8	69	138	18	29	15	3	71	T	1.2	23	14.3	22	23	4	8	19	7.5	
LOUISVILLE	144	999.0	1017.2	8.3	- 1.1	3.8	-2.4	20.6	17	- 7.8	19	0	19	- 2.2	67	122	6	39	16	3	117	76	1.7	30	20.6	W	21	3	8	20	7.5	47
LOUISIANA																																
ALEXANDRIA	28	1013.5	1017.8	16.7	5.0	11.1	-3.6	28.9	29	- 5.0	21	0	6	6.1	75	134	8	69	12	6	T	0	1.1	1	13.0	3	19	6	6	19	7.0	
BATON ROUGE	20	1014.9	1017.7	20.0	7.8	13.8	-2.2	30.0	29	- 2.8	20	0	5	7.8	72	114	- 10	72	7	3	T	0	0.4	35	12.5	24	1	8	4	19	6.7	
LAKE CHARLES	4	1016.3	1017.2	19.4	8.3	13.8	-2.4	27.8	29	- 1.1	20	0	3	8.3	75	85	- 23	86	6	3	T	0	0.3	6	11.6	17	25	7	7	17	6.6	
NEW ORLEANS	1	1016.3	1017.1	20.0	10.0	14.9	-1.4	27.8	24	- 1.7	8	0	4	10.6	76	50	- 86	21	8	1	0	0	0.4	34	11.2	25	5	6	9	16	6.5	
SHREVEPORT	77	1008.1	1017.6	15.0	4.4	9.8	-3.9	25.6	28+	- 5.6	20	0	6	4.4	74	86	- 19	51	11	8	102	76	1.0	36	13.4	31	5	7	5	19	7.0	43
MAINE																																
CARIBOU	190			1.1	- 7.8	- 3.6	1.6	8.9	5	-16.7	22	0	26			17	- 44	11	6	0	155	356						11	6	14	5.4	
PORTLAND	19	1011.5	1013.7	5.6	- 3.9	0.7	1.1	16.1	4	-12.8	22	0	25	- 7.8	57	21	- 90	6	8	0	86	T	1.9	32	13.9	NW	27	8	10	13	6.0	63
MARYLAND																																
BALTIMORE	45	1010.8	1016.4	8.9	- 1.1	4.0	-2.2	18.3	29	-13.3	21	0	19	- 3.3	63	109	12	46	12	0	213	102	1.7	31	15.2	S	23+	7	10	14	6.5	53
MASSACHUSETTS																																
BLUE HILL OBS R	192			5.0	- 3.3	0.8	0.7	14.4	4	-10.0	21	0	26			62	- 53	14	12	0	300	102			22.4	NW	27					49
BOSTON	5	1013.2	1014.1	5.6	- 1.1	2.1	-1.1	15.6	4	- 7.8	21	0	22	- 5.0	66	56	- 51	13	12	0	246	102	3.0	32	15.6	NW	27	8	9	14	6.2	53
NANTUCKET	13	1013.2	1013.6	5.6	- 1.7	1.9	-0.3	11.7	4	- 5.0	22+	0	26	- 3.3	71	51	- 64	11	11	0	188	51	2.7	32	16.5	NE	7	10	9	12	5.5	65
PITTSFIELD	357			2.8	- 5.6	- 1.4	-0.7	11.7	4	-12.8	22	0	30			36	- 45	7	15	0	378	76										
WORCESTER	301	976.3	1014.2	3.9	- 4.4	- 0.4	-0.8	13.9	4	-12.8	22+	0	28	- 7.8	60	60	- 44	15	12	0	450	127	3.0	31	15.6	28	27	8	5	18	6.6	
MICHIGAN																																
ALPENA	210			0.6	-11.1	- 5.3	-1.8	6.1	4	-23.3	20	0	30			32	- 20	16	15	0	292	330			18.8	SE	17	4	7	20	7.2	58
DETROIT	189	993.6	1017.1	1.7	- 3.9	- 1.1	-2.6	6.7	17	-12.2	24	0	24	- 5.6	73	77	15	23	15	2	328	203	1.4	32	17.9	SW	17	4	2	25	8.0	32
DETROIT M WAYNE CO	193	992.2	1017.1	2.2	- 4.4	- 1.1	-2.7	6.7	22	-13.3	27+	0	27	- 5.6	71	91	30	29	18	2	409	127	1.2	30				1	7	23	8.4	
DETROIT WILLOW RUN	217	988.2	1017.4	1.1	- 5.6	- 2.2	-4.1	5.6	16	-14.4	24	0	28	- 6.7	71	73	12	29	14	2	295	178	1.3	30	17.9	23	18	4	2	25	8.4	
FLINT	235	988.2	1017.1	1.1	- 6.1	- 2.7	-1.9	5.6	1	-21.7	24	0	28	- 6.7	73	38	- 17	13	17	0	493	203	0.9	29	13.9	24	18	1	9	21	8.2	
GRAND RAPIDS	239	987.1	1017.3	0.6	- 7.2	- 3.2		6.1	1	-18.9	24	0	30	- 7.2	75	79		38	18	1	914	381	0.8	32	19.7	SW	18	2	9	20	8.3	26
HOUGHTON LAKE	351	973.9	1017.7	0.6	-11.1	- 5.3		6.1	5	-22.8	24	0	30	- 8.9	74	46		19	14	0	455	229	0.6	35	13.9	25	18	4	6	21	7.7	
LANSING	256	984.4	1017.3	0.6	- 7.2	- 3.1	-3.3	6.7	1	-23.3	24	0	28	- 5.0	85	81	20	32	19	1	472	178	1.0	30	21.0	SW	18	2	6	23	8.2	45
MARQUETTE U	206			- 1.7	- 7.8	- 4.8	-1.9	3.9	13+	-17.2	24	0	31			44	- 5	23	14	0	569	864			11.2	NE	17	3	6	22	8.2	55
MUSKEGON	191	993.2	1017.1	1.7	- 5.0	- 1.7	-2.2	8.3	1	-15.6	27	0	27	- 4.4	84	79	27	33	17	1	907	330	0.7	35	15.6	9	17	1	6	24	8.6	
SAULT STE MARIE	220	990.5	1018.1	- 0.6	-10.6	- 5.4	-0.8	7.8	5	-21.7	21	0	29	- 9.4	76	24	- 22	7	12	0	480	610	0.9	1	20.6	9	17	5	4	22	7.5	58
MINNESOTA																																
DULUTH	435	966.1	1020.2	- 2.8	-15.0	- 9.0	-3.1	4.4	6	-29.4	20	0	31	-13.3	67	130	89	49	12	0	1156	1219	1.3	35	15.2	NW	18+	3	12	16	7.4	51
INTERNATIONAL FALLS	359	976.3	1021.9	- 3.3	-17.8	-10.6	-3.6	6.7	7	-33.3	20	0	31	-14.4	73	34	8	10	13	0	384	584	1.9	34	12.1	34	18+	4	10	17	7.1	
MINNEAPOLIS	254	988.2	1020.1	- 2.8	-11.1	- 6.9	-4.4	3.3	5	-22.8	20	0	31	-10.0	77	121	82	42	13	0	942	686	2.3	35	15.2	NW	18+	6	8	17	6.9	50
ROCHESTER	395	969.5	1019.5	- 3.3	-12.2	- 7.7	-5.4	4.4	1	-22.2	20	0	31	-10.6	77	72	31	34	14	1	310	178	2.4	32	17.0	32	18	8	4	19	6.7	
ST CLOUD	315	981.0	1020.8	- 3.3	-15.0	- 9.1	-5.5	3.3	6	-30.0	24	0	31		72	87	55	29	14	0	1313	889						5	11	15	6.9	
MISSISSIPPI																																
JACKSON	94	1005.8	1017.8	16.1	4.4	10.1		28.3	24	- 7.2	21	0	8	5.6	77	169		61	15	9	T	0	0.8	34	14.8	NE	29	5	10	16	7.2	44
MERIDIAN	88	1006.4	1017.9	17.2	5.0	11.1	-2.5	29.4	24	- 6.7	21	0	9	5.6	74	128	- 33	40	13	4	T	T	0.7	30	13.0	18	25	4	6	21	7.6	
VICKSBURG U	71			15.0	5.6	10.3	-3.9	25.6	28+	- 4.4	20	0	5			177	32	80	11	0	T	0			11.6	N	20+	7	8	16	6.8	50

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		°C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
MISSOURI																																
COLUMBIA	237	988.8	1018.1	5.6	-4.4	0.5	-5.0	20.0	16	-11.7	19	0	29	-5.0	71	86	19	26	13	3	343	229	2.3	33	20.1	NW	17	2	11	18	7.4	47
KANSAS CITY	226	991.5	1019.2	6.7	-4.4	1.1	-5.2	20.6	16	-11.1	19+	0	27	-5.6	66	89	26	42	14	2	244	178	2.1	34	13.9	NW	17	2	10	19	7.5	68
SAINT JOSEPH	247			5.6	-6.1	-0.3	-4.8	20.0	16	-14.4	18	0	28	-6.1	71	78	19	43	10	2	208	76	3.0	32	17.9	31	17	4	12	15	6.8	
ST LOUIS	163	997.3	1018.5	7.2	-4.4	1.4	-4.5	20.0	16	-12.2	19	0	29	-5.0	68	59	-19	24	12	2	221	152	2.0	31	15.6	W	17	4	9	18	7.3	47
SPRINGFIELD	386	971.9	1018.4	8.9	-3.3	2.8	-3.8	22.8	16	-12.2	20	0	22	-3.3	70	50	-22	14	11	3	203	127	1.4	32	17.0	SW	16	7	4	20	7.3	45
MONTANA																																
BILLINGS	1087	894.0	1023.2	-0.6	-11.1	-5.9	-6.8	11.7	31+	-23.9	24	0	31	-11.7	70	23	-4	11	8	0	290	254	1.1	33	13.4	NW	8	9	8	14	6.0	69
GLASGOW	696			-6.1	-17.8	-11.9	-9.0	3.3	11	-26.7	24+	0	31			8	-7	4	9	0	124	279						12	6	13	5.6	
GREAT FALLS	1116	891.6	1025.7	-1.1	-11.1	-6.2	-5.4	13.3	30	-27.8	24	0	30	-11.7	67	20	-3	5	12	0	196	178	0.8	29	13.0	N	8	9	9	13	5.9	83
HAVRE	787			-3.9	-15.6	-9.5	-6.7	5.6	13	-27.8	20	0	31			8	-7	5	6	0	142	127			14.3	NW	8	9	10	12	5.7	75
HELENA	1167	883.2	1023.6	2.2	-10.6	-4.1	-3.8	15.6	31	-26.7	24	0	30	-10.6	63	22	4	9	9	0	328	152	1.9	31	10.7	NW	15+	8	9	14	6.1	68
KALISPELL	904	914.3	1022.7	2.2	-10.6	-4.2	-4.1	13.9	31	-21.1	24	0	31	-10.6	64	8	-17	6	4	0	124	152	1.8	1	17.9	2	15	9	10	12	5.7	
MILES CITY	801	927.2	1024.7	-2.2	-13.9	-8.0	-7.6	8.9	30	-24.4	18	0	31	-11.7	76	19	3		9	0	175		1.9	33								
MISSOULA	972	906.9	1022.9	2.2	-9.4	-3.6	-4.5	16.7	31	-22.8	24	0	30	-8.3	72	17	-2	9	9	0	213	76	0.2	11	13.9	N	16	7	12	12	5.9	71
NEBRASKA																																
GRAND ISLAND	561	952.6	1021.7	2.2	-10.0	-3.8	-5.9	20.0	31	-20.6	25	0	30	-9.4	70	32		25	9	1	160	102	3.0	34	19.7	35	1	5	10	16	6.5	
LINCOLN U	351			1.7	-7.2	-2.9	-6.3	17.8	31	-16.7	26	0	30			38	-6	12	10	0	262	127			17.9	NW	17	6	11	14		
NORFOLK	471			0.6	-9.4	-4.6	-5.3	16.1	31	-20.6	19	0	30			11	-29	8	6	0	104	51						2	15	14	6.8	
NORTH PLATTE	846	918.7	1020.4	3.9	-11.1	-3.6	-5.3	24.4	31	-21.1	19	0	31	-10.6	64	6	-19	4	5	0	127	76	2.5	35	22.4	NW	17	6	9	16	6.5	66
OMAHA	298	984.1	1021.0	1.1	-6.7	-2.7	-5.4	17.8	31	-15.6	26	0	28	-6.7	76	67	30	33	14	0	409	152	3.1	34	20.1	N	2	7	8	16	6.6	48
SCOTTSBLUFF	1206	880.1	1020.8	4.4	-11.1	-3.3	-5.1	21.7	30	-20.6	19+	0	31	-10.6	62	5	-17	1	8	0	91	T	2.2	33	15.6	1	16	11	7	13	5.5	
VALENTINE	789			0.6	-12.8	-6.1	-5.7	16.1	31	-23.9	25+	0	30			5	-21	3	4	0	102	51			18.3	NW	17	5	11	15	6.6	61
NEVADA																																
ELKO	1539	843.2	1016.6	10.6	-8.9	0.8	-1.2	19.4	31	-15.6	19+	0	30	-8.9	54	11	-10	4	4	0	114	T	0.7	30	11.6	26	16	11	8	12	5.3	
ELY	1906	806.0	1015.2	8.3	-7.8	0.2	-0.6	17.2	31	-12.8	25+	0	31	-8.9	56	12	-10	5	5	0	117	T	0.8	22	14.8	NW	25	11	5	15	5.7	80
LAS VEGAS	659	937.4	1014.4	18.9	5.0	11.8	-0.9	26.7	31	-1.1	5+	0	4	-5.0	35	19	10	14	3	0	0	0	1.2	23	17.9	N	24	12	10	9	4.8	84
RENO	1342	864.9	1015.5	15.6	-2.8	6.2	0.9	22.2	21	-9.4	3	0	23	-5.0	50	25	8	7	6	1	117	76	0.7	28	14.8	SW	26	10	7	14	5.8	89
WINNEMUCCA	1310	866.6	1016.4	12.8	-7.2	2.8	-0.5	21.1	31	-16.7	19	0	29	-10.0	44	7	-13	7	2	0	38	T	0.6	36	17.4	NW	16	13	10	8	4.9	77
NEW HAMPSHIRE																																
CONCORD	103	1001.7	1014.6	5.0	-5.0	-0.1	0.1	15.0	4	-15.0	22	0	28	-7.8	62	24	-59	7	7	0	132	76	2.4	31	16.5	W	27	9	11	11	6.0	61
MT WASHINGTON OBS	1909			-9.4	-17.2	-13.5	2.2	-1.1	4	-26.7	31	0	31			69	-77	19	16	0	503	229			45.6Y	NW	17	5	8	18	7.3	32
NEW JERSEY																																
ATLANTIC CITY	20	1013.9	1016.4	8.9	-2.2	3.2	-1.8	19.4	23	-10.6	21	0	24	-3.3	65	95	-4	27	11	0	71	T	1.9	31	13.4	25	23	9	6	16	6.3	51
ATLANTIC CITY U	3			7.8	0.6	4.2	-0.8	12.8	16+	-6.7	21	0	13			83	-19	24	12	0					20.1	WNW	16					
NEWARK	3	1015.2	1016.2	7.8	0.0	3.9	-1.4	15.0	4	-7.8	21	0	12	-3.9	63	71	-33	20	9	0	117	76	2.5	32	13.4	32	10	10	6	15	5.9	
TRENTON U	17			7.8	0.0	3.8	-1.1	15.0	23+	-8.3	21	0	15			86	-12	25	11	0	203	102			14.3	NW	27	9	6	16	6.1	56
NEW MEXICO																																
ALBUQUERQUE	1618	835.8	1013.6	14.4	0.0	7.0	-0.7	22.8	31+	-10.6	4	0	17	-7.8	39	12		10	2	1	T	T	0.3	24	18.8	SE	1	10	13	8	5.2	74
CLAYTON	1515			8.9	-6.7	0.9	-4.0	23.3	31	-15.6	20	0	29			7	-9	2	9	0	127	51						9	8	14	5.7	
RATON	1944			8.3	-9.4	-0.5	-3.9	21.7	31	-19.4	20	0	30			7	-6	3	7	0	86	T						11	9	11	5.5	
ROSWELL	1102			16.7	-2.2	7.4	-2.3	29.4	22	-11.7	20	0	22			5	-7	3	3	0	43	T			13.9	SW	16	12	6	13	5.3	77
SILVER CITY	1638			15.0	-1.7	6.7	-2.4	22.8	31	-12.2	4+	0	18			13	1	10	5	0	23	T						18	4	9	4.2	
NEW YORK																																
ALBANY	84	1005.1	1016.2	3.9	-5.0	-0.4	-1.0	12.8	4	-11.1	22	0	29	-6.1	70	44	-25	20	12	0	213	127	2.5	32	14.8	NW	27	7	8	16	6.6	52
BINGHAMTON	485	955.0	1015.4	1.7	-5.6	-1.8	-1.4	11.1	4	-13.3	22	0	30	-5.6	77	57	-17	13	15	0	363	76	1.6	31	13.9	W	22	4	7	20	7.4	46
BUFFALO	215	990.2	1016.6	2.2	-4.4	-1.1	-0.8	12.8	4	-11.1	21	0	28	-5.0	77	50	-32	11	18	0	445	127	1.1	27	16.1	SW	21+	5	5	21	7.7	37
NEW YORK U	40	1012.9	1016.2	7.8	1.1	4.4	-0.3	16.1	4	-6.1	21	0	9	-4.4	58	63	-39	19	10	0	71	51	1.8	31	15.2	NW	27	10	7	14	5.5	56
J.F. KENNEDY	5	1014.9	1015.8	7.8	-0.6	3.7	-0.1	15.0	4	-7.2	21	0	17	-4.4	61	70	-36	21	11	0	91	T	2.1	32	14.3	9	5	8	8	15	6.1	
NEW YORK LA GUARDIA	3	1014.2	1015.9	7.2	1.7	4.6	-0.3	14.4	4	-5.0	21	0	8	-2.8	62	49	-58	16	10	0	79	51	2.2	33	13.4	NE	5	9	6	16	6.3	
ROCHESTER	167	996.6	1017.5	2.2	-5.0	-1.4	-1.6	11.7	4	-16.7	24	0	26	-5.0	77	53	-24	10	15	0	396	178	1.7	27	14.8	SW	19	5	9	17	7.2	51
SYRACUSE	127	1001.0	1016.3	3.3	-5.0	-0.9	-1.3	12.8	4	-13.3	2	0	28	-5.6	72	41	-50	10	16	0	338	203	1.7	29	9.8	S	19	6	7	18	6.8	41
NORTH CAROLINA																																
ASHEVILLE	652	939.0	1016.2	11.7	0.0	5.8		22.2	18	-10.0	21	0	18	1.1	77	130		57	14	3	127	76	1.4	35	11.6	35	20+	7	7	17	6.6	52
CAPE HATTERAS R	2	1016.3	1016.6	12.8	4.4	8.6	-1.9	21.1	29	-4.4	22	0	3	3.9	76	75	-31	18	13	3	0	0	1.0	2	16.1	SSW	17	8	5	18	6.5	71
CHARLOTTE	224	988.5	1016.5	13.9	2.8	8.2	-1.8	21.1	1	-7.8	21	0	13	2.8	73	167	56	51	13	2	T	0	0.6	30	10.3	SW	23+	8	6	17	6.3	50

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station		Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)				
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
	Elevation (ground)	Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 C or lower	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
NORTH CAROLINA																																
GREENSBORO	273	984.1	1016.4	12.8	1.1	6.8	-1.7	20.6	18	- 9.4	21	0	14	0.6	71	128	34	49	11	2	5	0	0.8	31	11.6	N	26	7	10	14	6.4	53
RALEIGH	132	1000.3	1016.3	13.3	0.6	7.0	-2.7	21.7	29	- 8.3	21	0	12	0.6	70	104	19	34	10	2	T	T	0.4	29	13.0	32	17	7	8	16	6.4	54
WILMINGTON	9	1015.6	1016.8	16.7	5.6	10.9	-1.4	26.7	26	- 2.2	21	0	4	5.6	72	145	43	32	15	1	10	0	0.2	31	14.8	S	17	9	5	17	6.5	53
NORTH DAKOTA																																
BISMARCK	502	961.4	1024.1	- 3.3	-13.9	- 8.7	-5.4	6.1	31	-25.6	21+	0	31	-13.3	66	12	- 8	4	8	0	191	51	2.9	33	15.6	NW	17	4	10	17	6.9	59
FARGO	273	988.5	1023.3	- 4.4	-16.1	-10.2	-5.9	3.3	7	-26.7	23	0	31	-12.2	80	35	15	15	12	0	333	127	2.4	36	22.4	NW	18	4	7	20	7.5	57
WILLISTON	579			- 5.0	-16.7	-10.9	-6.6	2.2	7	-30.0	23	0	31			12	- 6	6	7	0	127	203			14.8	NW	14	11	4	16	6.1	59
OHIO																																
AKRON	368	970.9	1016.6	5.0	- 4.4	0.2	-2.6	14.4	28	-12.2	21+	0	29	- 3.9	76	68	- 16	24	14	1	277	102	1.1	28	14.3	13	17	3	5	23	8.0	
CINCINNATI OBS	232			7.8	- 1.7	2.9	-3.0	19.4	1	- 9.4	19	0	24			80	- 19	25	16	0	160	102			11.6	SW	21					43
CLEVELAND	237	986.8	1016.8	3.3	- 3.9	- 0.2	-2.1	11.1	29	-11.7	21	0	27	- 3.9	77	42	- 37	11	17	1	328	127	1.1	27	18.8	SE	17	2	7	22	8.0	38
COLUMBUS	247	986.5	1017.3	6.1	- 2.8	1.6	-2.3	18.3	28	- 9.4	19	0	25	- 4.4	68	74	- 7	16	18	1	218	51	1.3	30	17.9	W	18	2	4	25	8.4	31
DAYTON	305	980.0	1016.8	6.1	- 2.8	1.5	-2.3	17.2	1	-10.0	19	0	24	- 3.9	70	59	- 20	18	15	1	249	76	0.8	26	14.8	S	22+	2	7	22	8.3	44
MANSFIELD	395			3.3	- 5.0	- 0.8	-2.6	13.3	28+	-11.1	27+	0	30			58	- 38	20	15	0	259	102						1	5	25	8.6	
TOLEDO	206	991.5	1017.5	2.2	- 5.0	- 1.2	-3.0	10.6	17	-14.4	27	0	29	- 4.4	79	45	- 12	19	19	1	259	102	1.1	31	18.3	SW	18	2	4	25	8.6	30
YOUNGSTOWN	359	972.9	1016.7	3.3	- 5.0	- 0.7	-2.5	12.2	29+	-13.9	20	0	29	- 5.6	73	84	- 1	28	17	1	589	178	1.3	29	15.6	23	22	2	9	20	8.0	
OKLAHOMA																																
OKLAHOMA CITY	390	971.6	1019.1	11.1	- 1.1	4.8	-4.3	22.8	28+	-11.1	20	0	19	- 2.8	63	22	- 28	20	6	0	T	T	2.2	2	21.0	SW	22	8	6	17	6.6	67
TULSA	198	994.6	1019.3	11.1	- 1.7	4.7	-4.2	25.0	16	-11.7	20	0	21	- 2.8	65	19	- 43	12	6	1	15	T	1.7	35	15.2	S	16	7	7	17	7.0	48
OREGON																																
ASTORIA	2	1018.6	1019.4	14.4	2.2	8.4	1.5	22.2	10	- 3.3	19	0	9	1.7	66	24	-203	9	9	0	0	0	0.3	2	9.4	30	31+	8	8	15	6.3	
BURNS U	1265	872.7	1017.6	10.6	- 5.0	2.9	-0.1	19.4	31	-11.7	18	0	29	- 7.2	52	5	- 20	5	3	0	69	76	2.0	33				15	7	9	4.7	
EUGENE	109	1005.1	1018.7	15.6	2.2	8.8	1.0	20.0	11+	- 2.8	19	0	6	1.7	67	20	- 90	19	3	0	T	0	1.0	36	10.7	1	12	11	11	9	5.4	
MEACHAM	1234			4.4	- 4.4	0.0	-0.7	16.7	31	-17.2	18	0	28			28	- 73	14	6	0	363	279						15	4	12	5.0	
MEDFORD	396	969.9	1017.8	18.3	0.6	9.3	2.4	22.8	21	- 4.4	18	0	16	0.6	61	10	- 35	2	4	1	0	0	0.3	35	10.3	14	5	11	9	11	5.4	
PENDLETON	452	965.5	1020.1	10.6	- 1.1	4.8	-2.5	20.6	31	- 9.4	18	0	20	- 3.9	59	7	- 23	4	5	0	64	T	0.4	28	17.0	28	16	15	4	12	4.7	
PORTLAND	6	1018.3	1019.5	15.6	2.2	8.7	0.8	22.2	10	- 3.9	19	0	8	1.1	64	28	- 69	20	5	0	8	0	0.9	8	15.6	NE	2	10	9	12	5.6	73
SALEM	60	1011.9	1019.2	16.1	0.6	8.1	0.7	21.7	10	- 5.6	19	0	18	1.1	67	22	- 97	17	3	0	T	T	0.9	34	11.6	3	12	13	6	12	5.2	
SEXTON SUMMIT R	1169	882.8	1016.2	11.1	1.1	6.2	2.5	17.2	21	- 5.0	18	0	13			7	- 82	4	4	0	36	T	2.1	4	15.6	10	2	15	8	8	4.5	
PACIFIC AREA																																
CANTON ISLAND	2			30.0	25.0	27.5	-0.9	31.7	31	22.8	9	0	0			70	7	40	11	0	0	0						7	19	5	5.2	
ENIWETOK	4	1010.5	1011.3	30.0	25.0	27.3	-0.1	30.6	25+	22.8	27+	0	0	21.7	72	15	- 32	7	8	0	0	0	6.4	8								
TAGUAC GUAM R	110			29.4	20.0	24.7	-1.3	31.7	5	12.2	14	0	0			15	- 52	6	7	0	0	0			11.6	E	7+					86
JOHNSTON	2	1014.2	1014.8	26.7	21.7	24.0	-1.1	28.9	21+	20.0	26+	0	0	17.8	69	27	- 33	11	11	0	0	0	5.1	7	14.8	NE	24	9	18	4	4.8	78
KOROR R	29	1006.1	1009.6	29.4	23.9	26.7	-0.3	31.1	16+	22.2	16	0	0	23.9	88	371	177	60	27	2	0	0	2.6	9	10.3	E	1	0	0	31	9.9	51
KWAJALEIN	2	1009.8	1010.6	31.1	25.0	28.1	1.2	31.7	30+	23.9	2	0	0	21.7	71	5	-160	4	4	0	0	0	8.1	7	12.5	6	13+	3	6	22	8.3	
MAJURO	3	1009.8	1010.0	29.4	25.6	27.5	0.5	30.0	31+	23.3	5	0	0	21.7	71	50	-247	35	4	0	0	0	7.0	7	12.1	E	5	1	10	20	8.1	79
MARCUS ISLAND	6			23.9	18.9	21.3		27.8	4	15.6	17	0	0			86		37	11	0	0	0			17.9	SW	18	5	16	9	5.7	60
PONAPE R	37	1004.4	1009.8	30.0	24.4	27.2	0.2	31.1	27+	22.2	31+	0	0	22.8	79	162	-208	49	17	0	0	0	4.2	6	9.4	NE	9+	0	4	27	9.0	60
TRUK MOEN ISLAND	2	1009.1	1009.4	29.4	23.9	26.7	-0.4	30.6	14	22.2	9	0	0	22.8	78	389	192	85	21	1	0	0	4.9	5	10.7	NE	1	0	3	28	9.3	74
WAKE	3	1014.6	1014.7	27.8	22.2	24.9	-0.6	28.3	31+	20.6	26+	0	0	19.4	73	35	- 2	13	9	0	0	0	2.9	7	11.2	3	1	12	15	4	4.3	
YAP R	17	1007.5	1009.4	29.4	23.9	26.6	-0.6	30.6	31+	22.8	15+	0	0	23.3	84	194	57	60	20	1	0	0	3.8	7	12.5	E	8	0	2	29	9.7	45
PENNSYLVANIA																																
ALLENTOWN	115	1002.0	1016.3	7.2	- 2.2	2.3	-0.8	15.0	4	-12.2	21	0	24	- 4.4	65	68	- 28	27	11	0	130	76	2.3	31	17.0	32	27	9	6	16	6.3	
ERIE	223	989.5	1017.1	1.7	- 4.4	- 1.4	-2.3	11.1	4	-11.7	22	0	30	- 4.4	82	90	17	47	17	0	681	330	1.3	26	20.1	14	17	5	7	19	7.3	
HARRISBURG	102	1003.7	1016.9	7.8	- 1.7	3.1	-1.6	15.6	28	-11.1	21	0	21	- 3.9	63	92	5	44	13	0	384	127	1.9	30	16.1	W	16	7	7	17	6.6	56
PHILADELPHIA	2	1015.2	1016.2	7.8	- 1.1	3.1	-1.9	16.1	23	-11.1	21	0	19	- 3.3	66	81	- 15	25	10	0	165	51	1.7	32	16.1	W	16	7	7	17	6.4	51
PITTSBURGH	347	971.2	1016.3	6.1	- 2.8	1.8	-0.9	16.7	28	-12.8	21	0	23	- 2.8	74	80	- 4	21	18	0	338	152	1.8	29	15.6	24	22	3	7	21	7.9	38
READING U	81			7.8	- 0.6	3.8	-1.4	15.6	4	- 8.3	21	0	18			62	- 34	26	9	0	145	76			21.9	E	5	9	8	14	6.2	46
SCRANTON	283	981.4	1016.3	5.0	- 2.8	1.2	-1.1	13.3	4	-11.7	21	0	22	- 5.0	66	46	- 25	20	12	0	251	76	1.0	32	13.4	S	22	6	6	19	7.1	46
WILLIAMSPORT	161	997.0	1016.7	5.0	- 3.3	0.8	-2.2	12.2	28	-13.3	22+	0	27	- 3.9	75	82	- 13	32	12	0	251	76	1.6	29	9.8	17	22	7	7	17	6.8	
RHODE ISLAND																																
BLOCK ISLAND	34			4.4	- 1.1	1.7	0.9	10.6	4	- 6.7	21	0	21			40	- 64	14	8	0	66	51										
PROVIDENCE	16	1012.2	1014.5	6.7	- 1.7	2.3	-0.5	15.6	4	- 8.3	21	0	25	- 5.6	61	44	- 61	13	11	0	168	76	2.5	32	11.6	31	27	9	5	17	6.5	51

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station ○	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
SOUTH CAROLINA																																
CHARLESTON	12	1014.9	1016.6	18.3	6.7	12.5	-1.2	27.2	26	-2.2	22	0	3	7.2	74	203	103	34	18	5	T	0	0.9	26	19.2Y	NW	26	7	5	19	7.2	40
CHARLESTON U	3			17.2	8.9	12.9	-1.3	26.7	26	0.6	21	0	0			204	112	36	17	0	0	0			15.2	NW	26					
COLUMBIA	66	1008.1	1016.5	17.8	5.0	11.2	-1.2	27.8	25	-4.4	21	0	7	5.0	71	195	87	37	14	3	T	0	0.8	26	13.9	34	29	6	7	18	6.9	47
FLORENCE	45	1011.2	1016.5	16.7	5.0	10.7	-1.9	26.1	17	-3.9	22	0	9	4.4	70	161	68		13	5	T		0.5	27	12.5	32	26	8	5	18	6.7	
GNVLE SPARTANBURG	292	981.4	1016.4	14.4	2.8	8.8	-2.0	23.3	30	-7.8	21	0	12	2.2	69	193	72	49	17	3	33	0	0.6	30	11.2	W	10	8	8	15	6.5	50
SOUTH DAKOTA																																
ABERDEEN	395	973.6	1023.0	-1.1	-12.8	-7.1	-4.9	9.4	7	-24.4	21	0	31	-11.7	71	18	-10	9	10	0	264	127	3.0	34	16.5	35	17	3	9	19	7.4	
HURON	391	973.6	1022.4	-0.6	-11.7	-6.1	-4.2	8.3	14	-21.1	21+	0	30	-11.7	66	31	3	21	10	0	437	254	2.8	32	21.0	NW	17	3	9	19	7.5	54
RAPID CITY	965	906.5	1022.4	0.0	-12.2	-6.0	-5.5	16.1	30	-23.3	25	0	31	-11.7	67	12	-14	4	10	0	117	51	4.2	34	20.1	N	3	6	12	13	6.0	65
SIOUX FALLS	432	967.5	1021.4	-1.1	-10.0	-5.7	-4.7	15.6	31	-20.6	21+	0	30	-10.0	73	28	-11	14	9	0	338	178	2.5	33	17.9	31	17	5	9	17	7.1	
TENNESSEE																																
BRISTOL	459	961.4	1016.5	12.2	1.1	6.4	-1.3	22.2	28	-11.1	21	0	15	0.6	70	148	47	53	14	3	140	51	1.4	28	13.4	30	26	5	9	17	7.2	
CHATTANOOGA	204	992.2	1017.3	13.3	2.2	7.7	-2.9	21.7	28	-9.4	21	0	15	2.2	74	240	96	88	12	5	18	T	0.7	29	14.3	NW	25	6	7	18	7.4	43
KNOXVILLE	299	981.4	1017.1	13.3	3.3	8.2	-1.6	23.3	28	-7.8	21	0	13	2.8	71	236	116	94	15	4	112	T	1.3	28	18.8	NW	25	7	4	20	7.3	38
MEMPHIS	80	1007.8	1018.2	11.7	1.7	6.7	-3.9	25.0	16	-7.8	20	0	10	1.1	72	136	7	44	14	5	117	51	0.8	33	15.2	SW	17	4	7	20	7.5	38
NASHVILLE	180	995.3	1017.3	10.6	0.6	5.5	-4.0	21.1	17	-8.9	21+	0	17	0.0	71	156	24	53	15	5	86	T	1.1	30	15.2	NW	25	7	5	19	7.2	42
OAK RIDGE	276			12.2	2.2	7.3	-1.3	22.8	28	-8.9	21	0	11			252	110	102	14	0	30	T						7	5	19	7.1	
TEXAS																																
ABILENE	537	955.3	1017.6	15.6	2.2	8.9	-3.8	28.3	16	-9.4	20	0	12	-1.1	55	15	-11	8	2	2	1	T	1.2	36	15.6	NE	17	9	6	16	6.2	59
AMARILLO	1098	891.0	1016.6	11.1	-3.9	3.6	-5.1	25.6	28+	-13.3	20	0	23	-6.1	58	18	-3	13	3	1	58	T	0.8	34	18.8	SW	16	10	9	12	5.8	73
AUSTIN	182	995.6	1017.8	17.8	6.1	11.9	-3.5	29.4	10	-4.4	20	0	5	5.0	69	33	-21	12	10	3	51	T	2.2	36	17.0	N	1	8	8	15	6.2	41
BROWNSVILLE	5	1014.9	1015.5	22.8	12.8	17.9	-2.1	29.4	25+	3.3	5	0	0	11.7	72	3	-23	2	3	0	0	0	1.7	9	14.8	SE	23	7	6	18	6.8	52
CORPUS CHRISTI	12	1014.9	1016.5	21.1	9.4	15.4	-3.0	30.0	10	-1.7	4	0	2	10.0	73	20	-17	17	6	2	0	0	2.1	8	16.5	N	2	7	5	19	6.9	43
DALLAS	147	1000.7	1018.3	13.9	3.3	8.5	-4.9	24.4	14	-6.7	20	0	11	2.2	67	51	-22	28	7	5	T	T	1.8	1	15.2	NW	23	8	3	20	6.6	45
DEL RIO	313	980.0	1016.6	21.1	7.2	14.1		30.0	10	-2.8	4	0	6	3.3	55	8	37	4	5	2	76	76	1.1	7	9.4	13	16+	11	8	12	5.7	
EL PASO	1194	880.8	1013.3	18.9	3.9	11.2	-1.6	26.7	22	-9.4	4	0	7	-5.6	35	1	-8	1	2	0	T	T	1.4	26	25.0	W	16	14	12	5	4.1	81
FORT WORTH	164	997.6	1018.6	13.9	2.8	8.3	-4.9	24.4	14	-7.2	20	0	10	1.7	67	37	-27	17	5	4	T	0	2.1	36	13.4	31	23	9	3	19	6.5	
GALVESTON U	2			17.2	10.6	13.9	-2.4	25.6	17	0.0	20	0	1			9	-64	5	5	0	0	0			17.9	S	25					53
HOUSTON U	12			20.0	10.0	15.0	-1.9	28.9	10	-1.1	20	0	1			13	-47	8	10	0	0	0										
HOUSTON	15	1014.9	1017.2	21.1	8.9	14.8	-1.4	29.4	23	-2.2	4	0	2	8.3	69	21	-47	8	10	2	0	0	0.7	36	13.9	32	1	7	7	17	6.6	60
LUBBOCK	988	903.8	1016.9	13.9	-1.7	6.0	-3.8	27.2	22	-13.3	20	0	19	-3.9	56	6	-13	3	6	0	30	T	1.2	7	20.6	26	16	9	5	17	6.3	
MIDLAND	869	916.0	1015.4	16.7	1.1	8.7	-4.2	27.8	28	-10.0	20	0	14	-2.8	53	2	-8	2	1	0	25	T	0.6	5	17.4	26	16	11	6	14	5.6	
PORT ARTHUR	5	1016.6	1017.2	20.0	7.8	13.9	-2.2	27.8	29+	-2.8	4	0	5	8.3	74	75	-12	24	8	3	T	0	0.2	3	22.4	SE	25	10	5	16	6.3	49
SAN ANGELO	580	949.5	1017.0	16.7	2.8	9.8	-4.1	27.2	16	-8.3	20	0	14	0.0	56	3	-21	2	4	0	20	T	0.5	3	10.3	20	22+	11	6	14	5.7	
SAN ANTONIO	240	988.8	1017.2	19.4	6.1	12.7	-3.4	29.4	10	-5.0	4	0	7	5.0	63	58	16	52	7	2	T	0	2.0	3	13.4	N	16	8	7	16	6.1	60
VICTORIA	32	1012.9	1017.1	20.6	8.9	14.6	-2.7	30.0	10	-2.2	20	0	2	8.3	71	20	-39	15	6	2	0	0	1.4	2				6	6	19	7.2	
WACO	152	999.7	1017.9	16.7	4.4	10.7	-3.7	27.8	14	-5.6	20	0	9	3.9	67	80	20	61	6	3	5	T	2.0	34	13.4	28	4+	10	4	17	6.2	
WICHITA FALLS	303	981.0	1018.6	13.3	0.0	6.7	-5.4	27.2	16	-12.8	20	0	17	-1.7	61	17	-22	9	3	1	36	T	1.6	35	13.9	32	5	9	5	17	6.5	
UTAH																																
MILFORD	1533			11.1	-5.6	2.9	-0.7	22.2	31	-14.4	20+	0	28			17	-9	9	7	0	109	51						13	9	9	4.7	
SALT LAKE CITY	1286	870.6	1016.8	9.4	-4.4	2.7	-2.0	23.3	31	-12.2	19	0	28	-7.8	49	4	-36	2	4	0	28	T	0.6	17	10.7	SW	26+	11	6	14	5.5	76
WENDOVER	1291			9.4	-2.8	3.4	-1.8	20.0	31+	-8.3	25+	0	23			1	-9	1	2	0	T	T						12	9	10	4.9	
VERMONT																																
BURLINGTON	101	1002.7	1015.8	2.2	-7.2	-2.6	0.4	10.6	5	-15.0	24	0	29	-8.9	65	10	-44	4	9	0	201	76	1.7	34	11.6	NW	27	10	8	13	5.8	65
VIRGINIA																																
LYNCHBURG	279			11.1	-0.6	5.3	-2.2	19.4	18	-13.9	21	0	15			110	19	38	10	0	71	51			14.8	SW	29	9	8	14	5.9	57
NORFOLK	8	1015.6	1016.5	11.7	1.7	6.9	-2.0	23.3	29	-3.3	21+	0	11	-0.6	64	72	-16	23	12	2	T	0	0.3	33	4.9	S	12	8	5	18	6.5	62
RICHMOND	49	1010.8	1016.9	11.7	0.6	6.1	-2.6	20.6	29	-6.1	21	0	12	-1.7	63	93	7	38	9	0	25	T	0.7	34	12.1	SE	17	9	5	17	6.4	56
ROANOKE	350	973.2	1016.1	11.1	0.0	5.5	-2.0	20.6	23+	-10.0	21	0	17	-2.8	60	100	10	30	9	0	104	76	1.4	28	11.2	29	14+	10	9	12	5.9	
WASHINGTON																																
OLYMPIA	59	1012.5	1019.9	14.4	-1.7	6.6	-0.2	20.0	11+	-7.8	24+	0	21	-1.1	65	12	-125	4	8	0	5	T	0.1	27	10.7	24	16	10	8	13	5.7	
SEATTLE TACOMA	122	1003.4	1020.0	13.9	2.8	8.3	1.8	20.6	3	-2.8	19	0	7	-1.1	57	14	-82	8	8	0	T	0	0.8	2	11.2	35	11	11	10	10	5.4	68
SPOKANE	718	934.6	1020.2	7.8	-5.0	1.3	-2.1	16.7	31	-12.2	18+	0	28	-8.3	53	8	-30	3	4	0	51	51	0.8	6	10.7	NW	22	16	6	9	4.8	75
STAMPEDE PASS R	1206			3.3	-2.8	0.3	1.4	11.7	7	-12.2	18	0	22			65	-204	19	9	0	602	3454						12	5	14	5.5	
TATOOSH ISLAND R	31	1016.3	1019.6	10.6	5.0	7.7	0.9	18.9	11	1.7	27+	0	0	2.2	72	75	-137	41	11	0	T	0	5.0	7	26.8	E	1	11	6	14	5.9	72
WALLA WALLA U	289			12.2	1.1	6.4	-1.3	22.2	31	-7.8	18	0	12			9	-32	6	3	0	43	T			9.4	NE	12	17	3	11	4.1	74

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
WASHINGTON																																
YAKIMA	321	981.0	1020.5	12.8	- 2.8	5.1	-0.4	20.0	31	-10.0	19	0	26	- 5.6	53	3	- 13	3	1	0	25	T	0.9	30	16.5	3	11	10	9	12	5.3	
WEST INDIES																																
SAN JUAN P.R.	5	1015.9	1018.3	29.4	21.7	25.4	1.3	31.7	7	18.3	5+	0	0	19.4	71	22	- 34	12	6	0	0	0	4.1	9	13.0	E	20	13	17	1	3.8	92
SWAN ISLAND	9			28.3	23.9	26.2	-0.5	29.4	25	21.7	5	0	0			50	34	36	7	0	0	0						16	11	4	4.0	
WEST VIRGINIA																																
BECKLEY	763	925.8	1016.7	7.2	- 2.8	2.2		19.4	28	-15.6	21	0	21	- 2.2	74	119		33	16	1	267	127	1.5	26	20.6	15	17	3	6	22	8.1	
CHARLESTON	286	981.4	1016.3	9.4	- 0.6	4.2	-2.7	21.1	28	-12.8	21	0	19	- 1.1	72	115	5	32	15	2	216	76	1.2	25	12.1	22	21	3	8	20	7.6	
ELKINS	600	943.4	1016.3	7.8	- 3.9	1.8	-2.3	20.0	28	-19.4	21	0	24	- 2.8	76	115	9	22	19	1	356	152	2.0	27	12.5	29	16+	2	9	20	8.0	
HUNTINGTON	252	985.8	1016.6	10.0	- 0.6	4.9	-2.2	22.8	28	- 8.9	21	0	16	- 1.1	71	122	15	28	16	1	185	76	1.0	27	9.8	13	17	3	7	21	7.5	
PARKERSBURG U	187			8.3	- 1.7	3.6	-2.4	21.1	28	-11.1	21	0	22			91	2	28	15	0	130	76			15.6	SE	17					32
WISCONSIN																																
GREEN BAY	208	991.2	1018.0	- 0.6	- 7.8	- 4.2	-2.1	5.0	8	-20.0	20	0	29	- 7.8	76	60	26	18	15	0	432	229	1.4	1	14.8	NE	5	8	6	17	6.8	50
LA CROSSE	198	993.9	1019.6	- 0.6	- 9.4	- 5.0	-4.2	5.0	31	-25.0	20	0	31	- 8.9	76	52	- 1	16	12	0	381	203	1.6	31	11.6	27	18	6	7	18	6.9	
MADISON	262	985.1	1017.7	0.6	- 7.8	- 3.9	-2.3	7.8	1	-21.7	20	0	29	- 6.7	81	64	17	20	16	1	493	178	1.3	35	15.2	E	17	6	7	18	7.3	44
MILWAUKEE	205	991.9	1018.1	- 0.6	- 6.7	- 3.7	-3.2	5.0	1	-17.2	20	0	29	- 6.1	80	92	33	33	18	1	678	305	1.3	32	19.2	SW	18	5	8	18	7.2	46
WYOMING																																
CASPER	1627	836.1	1020.5	0.6	-13.3	- 6.4	-6.4	15.6	30	-29.4	25	0	30	-12.8	61	13	- 13	5	11	0	290	102	1.3	26	13.9	30	21	10	11	10	5.7	
CHEYENNE	1867	809.3	1019.7	1.1	-12.2	- 5.4	-5.7	16.7	31	-23.3	18	0	30	-12.8	59	19	- 11	9	12	0	254	102	3.4	32	18.8	NW	21+	13	7	11	5.3	73
LANDER	1696	827.3	1019.6	2.8	-12.2	- 4.6	-4.7	18.9	31	-25.6	18	0	30	-12.2	59	11	- 18	3	7	0	259	76	0.4	21	14.8	NW	16	11	5	15	5.4	73
SHERIDAN	1208	880.8	1023.9	- 0.6	-13.3	- 7.1	-6.5	12.2	31+	-30.6	25	0	31	-12.8	65	18	- 18	9	9	0	325	178	2.8	32	14.8	NW	14	7	12	12	6.2	62

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

A	Maximum hourly average.
B	Number of days maximum 21.1°C. or above for Alaskan Stations.
Y	Peak Gust.
+	And also on an earlier date or dates.
Ø	Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

MARCH 1965

State and station	Current season		Normals
	This month	Period July through this month	July through this month
ALABAMA			
BIRMINGHAM	478	2661	2434
HUNTSVILLE	549	3166	2913
MOBILE	240	1561	1518
MONTGOMERY	364	2182	2201
ALASKA			
ANCHORAGE PRK STRIP	924	9237	9078
ANCHORAGE	879	9356	
ANNETTE	819	6235	5610
BARROW	2289	16741	15828
BARTER ISLAND	2247	16587	15642
BETHEL	1203	11078	10815
COLD BAY	907	7545	7547
FAIRBANKS	1249	13023	12434
JUNEAU	923	7582	7283
KING SALMON	964	9562	9296
KOTZEBUE	1662	12924	12858
MC GRATH	1168	12339	12255
NOME	1400	11449	11354
ST. PAUL ISLAND	1252	8685	8439
SHEMYA	994	7336	7269
YAKUTAT	1012	8140	7185
ARIZONA			
FLAGSTAFF	985	5816	5884
PHOENIX	269	1667	1690
TUCSON	305	1717	1719
WINSLOW	686	4170	4395
YUMA	126	1051	959
ARKANSAS			
FORT SMITH	712	3342	3126
LITTLE ROCK	629	3043	3084
TEXARKANA	538	2461	2428
CALIFORNIA			
BAKERSFIELD	241	2055	1998
BISHOP	562	3505	3742
BLUE CANYON	759	4361	4333
BURBANK	264	1503	1409
EUREKA U	505	3624	3548
FRESNO	287	2231	2286
LONG BEACH	231	1526	1435
LOS ANGELES	226	1324	1447
LOS ANGELES U	183	1050	1140
MT SHASTA R	669	4549	4691
OAKLAND	331	2193	2345
RED BLUFF	311	2238	2300
SACRAMENTO	363	2367	2449
SANDBERG U	707	3612	3462
SAN DIEGO	195	1196	1196
SAN FRANCISCO	384	2453	2396
SAN FRANCISCO U	319	2239	2303
SANTA CATALINA	399	1691	1506
SANTA MARIA	376	2471	2287
STOCKTON	320	2311	2456
COLORADO			
ALAMOSA	1136	7928	7225
COLORADO SPRINGS	1214	5498	5438
DENVER	1108	5311	5371
GRAND JUNCTION	758	4782	5087
PUEBLO	1030	4869	4844
CONNECTICUT			
BRIDGEPORT	872	5031	4872
HARTFORD	888	5560	5476
NEW HAVEN	884	5131	5064
DELAWARE			
WILMINGTON	816	4595	4425
DIST.OF COLUMBIA			
WASH NATL AP	724	3998	3862
FLORIDA			
APALACHICOLA U	177	1155	1275
DAYTONA BEACH	136	686	864
FORT MYERS	38	196	442
JACKSONVILLE	170	1029	1218
KEY WEST	0	14	108
LAKELAND U	83	451	661
MIAMI	18	110	214
ORLANDO	82	454	760
PENSACOLA	252	1492	1427
TALLAHASSEE	218	1534	1449
TAMPA	84	544	683
WEST PALM BEACH	30	161	253
GEORGIA			
ATHENS	467	2661	2766
ATLANTA	500	2813	2789
AUGUSTA	367	2204	2307
COLUMBUS	349	2100	2287
MACON	373	2245	2073
ROME	519	3108	3115
SAVANNAH	282	1732	1774
IDAHO			
BOISE	793	4874	5045
IDAHO FALLS 42NW R	1134	7388	7523
IDAHO FALLS 46W R	1112	7060	7241
LEWISTON	765	4778	4787
POCATELLO	999	5801	6018
ILLINOIS			
CAIRO U	773	3725	3579
CHICAGO O HARE	1185	6331	5773
CHICAGO MIDWAY	1069	5702	5416
MOLINE	1174	6043	5730
PEORIA	1139	5853	5383
ROCKFORD	1204	6538	6018
SPRINGFIELD	1041	5258	4921
INDIANA			
EVANSVILLE	867	4572	4130
FORT WAYNE	1098	5827	5506
INDIANAPOLIS	964	5194	5051
SOUTH BEND	1120	5920	5615
IOWA			
BURLINGTON	1183	5833	5478
DES MOINES	1305	6595	5940
DUBUQUE	1259	6921	6492
SIOUX CITY	1270	6861	6215
WATERLOO	1327	7248	6506
KANSAS			
CONCORDIA	1050	5328	4940
DODGE CITY	960	4829	4499
GOODLAND	1134	5524	5356
TOPEKA	984	5034	4716
WICHITA	868	4441	4257
KENTUCKY			
COVINGTON	872	4718	4702
LEXINGTON	834	4494	4253
LOUISVILLE	802	4282	4231
LOUISIANA			
ALEXANDRIA	416	2150	1852
BATON ROUGE	286	1598	1527
LAKE CHARLES	276	1433	1420
NEW ORLEANS	231	1395	1346
SHREVEPORT	473	2145	2103
MAINE			
CARIBOU	1213	8397	8258
PORTLAND	975	6666	6353
MARYLAND			
BALTIMORE	792	4326	4237
MASSACHUSETTS			
BLUE HILL OBS R	970	5717	5453
BOSTON	900	5336	4877
NANTUCKET	910	4958	4757
PITTSFIELD	1095	6605	6487
WORCESTER	1040	6141	5975
MICHIGAN			
ALPENA	1313	7272	7127
DETROIT	1078	5569	5448
DETROIT M WAYNE CO	1074	6075	5463
DETROIT WILLOW RUN	1140	6129	5465
FLINT	1167	6342	6329
GRAND RAPIDS	1197	6334	
HOUGHTON LAKE	1314	7386	
LANSING	1190	6377	5988
MARQUETTE U	1287	7370	6977
MUSKEGON	1108	5980	5714
SAULT STE MARIE	1316	7970	7560
MINNESOTA			
DULUTH	1519	9084	8472
INTERNATIONAL FALLS	1606	9843	9161
MINNEAPOLIS	1405	7840	7392
ROCHESTER	1444	8029	7271
ST CLOUD	1523	8565	7782
MISSISSIPPI			
JACKSON	459	2279	
MERIDIAN	418	2385	2208
VICKSBURG U	447	2146	1972
MISSOURI			
COLUMBIA	990	4733	4589
KANSAS CITY	955	4662	4308
ST JOSEPH	1032		
ST LOUIS	938	4758	4452
SPRINGFIELD	857	4223	4159
MONTANA			
BILLINGS	1347	6790	6092
GLASGOW	1689	8953	7863
GREAT FALLS	1361	7148	6538
HAVRE	1551	8750	7543
HELENA	1250	6834	6902
KALISPELL	1249	7463	6948
MILES CITY	1472	8808	6769
MISSOULA	1218	7315	6894
NEBRASKA			
GRAND ISLAND	1229	6426	5812
LINCOLN U	1182	5914	5261
NORFOLK	1271	6820	6200
NORTH PLATTE	1217	6289	5860
OMAHA	1168	6030	5619
SCOTTSBLUFF	1198	6026	5761
VALENTINE	1354	6851	6474
NEVADA			
ELKO	969	5963	6211
ELY	1006	6282	6380
LAS VEGAS	358	2398	2592
RENO	667	4557	5276
WINNEMUCCA	859	5237	5672
NEW HAMPSHIRE			
CONCORD	1015	6584	6374
MT WASHINGTON OBS	1771	11464	11024
NEW JERSEY			
ATLANTIC CITY	838	4675	4244
ATLANTIC CITY U	778	4151	4060
NEWARK	799	4512	4360
TRENTON U	806	4547	4448
NEW MEXICO			
ALBUQUERQUE	624	3874	3979
CLAYTON	965	4615	4525
RATON	1043	5499	5321
ROSWELL	606	3385	3561
SILVER CITY	646	3535	3357
NEW YORK			
ALBANY	1041	6228	6027
BINGHAMTON	1119	6231	6229
BUFFALO	1080	5993	6010
NEW YORK U	765	4434	4336
J.F. KENNEDY	809	4524	4560
NEW YORK LA GUARDIA	763	4353	4267
ROCHESTER	1095	6012	5824
SYRACUSE	1069	5948	5893
NORTH CAROLINA			
ASHEVILLE	691		
CAPE HATTERAS R	537	2405	2410
CHARLOTTE	554	3057	3013
GREENSBORO	637	3532	3524
RALEIGH	628	3358	3179
WILMINGTON	408	2192	2251
NORTH DAKOTA			
BISMARCK	1501	9057	7760
FARGO	1582	9225	8105
WILLISTON	1624	9356	8064
OHIO			
AKRON	1005	5564	5307
CINCINNATI OBS	850	4567	4343
CLEVELAND	1025	5497	5473
COLUMBUS	932	5151	5036
DAYTON	930	5003	4996
MANSFIELD	1059	5681	5555
TOLEDO	1084	5981	5649
YOUNGSTOWN	1053	5759	5569
OKLAHOMA			
OKLAHOMA CITY	745	3718	3502
TULSA	752	3600	3600
OREGON			
ASTORIA	542	4100	4112
BURNS U	852	5764	5844
EUGENE	522	3724	3886
MEACHAM	1018	6413	6282
MEDFORD	498	3789	4256
PENDLETON	750	4583	4463
PORTLAND	533	4161	3889
SALEM	565	4048	3920
SEXTON SUMMIT R	670	4917	4901
PENNSYLVANIA			
ALLENTOWN	889	5233	5148
ERIE	1093	5605	5518
HARRISBURG	847	4943	4719
PHILADELPHIA	839	4638	4584
PITTSBURGH	920	5201	5273
PITTSBURGH U	890	4686	4527
READING U	806	4580	4468
SCRANTON	951	5536	5528
WILLIAMSPORT	970	5531	5265
RHODE ISLAND			
BLOCK ISLAND	923	4961	4749
PROVIDENCE	891	5261	5133
SOUTH CAROLINA			
CHARLESTON	340	1912	1979
CHARLESTON U	310	1620	1752
COLUMBIA	398	2352	2403
FLORENCE	426	2377	2303
GNVLE SPARTANBURG	527	2904	2829
SOUTH DAKOTA			
ABERDEEN	1413	8710	7482
HURON	1352	8078	7248
RAPID CITY	1351	6689	6278
SIOUX FALLS	1340	7688	6918
TENNESSEE			
BRISTOL	656	3844	3814
CHATTANOOGA	587	3287	3079
KNOXVILLE	559	3381	3253
MEMPHIS	645	3109	3063
TENNESSEE			
NASHVILLE	711	3546	3349
OAK RIDGE	610	3614	3533
TEXAS			
ABILENE	522	2423	2510
AMARILLO	820	3831	3677
AUSTIN	367	1758	1660
BROWNSVILLE	138	673	600
CORPUS CHRISTI	222	1070	914
DALLAS	538	2359	2267
DEL RIO	268	1580	
EL PASO	397	2532	2595
FORT WORTH	551	2528	2306
GALVESTON U	249	1179	1205
HOUSTON U	239	1123	1248
HOUSTON	250	1294	1360
LUBBOCK	682	3256	3346
MIDLAND	529	2484	2501
PORT ARTHUR	270	1414	1408
SAN ANGELO	471	2290	2189
SAN ANTONIO	327	1702	1507
VICTORIA	255	1269	1152
WACO	424	2015	1964
WICHITA FALLS	647	3045	2706
UTAH			
MILFORD	855	5355	5612
SALT LAKE CITY	869	5130	5276
WENDOVER	824	4925	5142
VERMONT			
BURLINGTON	1159	7105	7112
VIRGINIA			
LYNCHBURG	724	4061	3821
NORFOLK	635	3205	3168
RICHMOND	674	3771	3593
ROANOKE	710	3963	3824
WASHINGTON			
OLYMPIA	650	4759	4302
SEATTLE TACOMA	553	4191	4217
SPOKANE	942	6185	5701
STAMPEDE PASS R	1001	7580	7291
TATOOSH ISLAND R	589	4662	4430
WALLA WALLA U	657	4296	4241
YAKIMA	731	5384	5217
WEST VIRGINIA			
BECKLEY	891	4899	
CHARLESTON	780	4256	4071
ELKINS	912	5269	4985
HUNTINGTON	741	4275	4041
PARKERSBURG U	819	4522	4294
WISCONSIN			
GREEN BAY	1249	7213	6941
LA CROSSE	1299	7359	6735
MADISON	1234	7114	6833
MILWAUKEE	1226	6618	6486
WYOMING			
CASPER	1377	6847	6243
CHEYENNE	1320	6224	6123
LANDER	1275	6526	6682
SHERIDAN	1412	7053	7717

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

MARCH 1965

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				ø ALL OTHER			
								†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS
Alabama	1	1	0	22	6	0	0	4	3	0	0	5	0																
Alaska *																													
Arizona *																													
Arkansas	2	2	0	0	4					0	0	4	0																
California *																													
Colorado	2	1	0	0	0																								
Connecticut																						0	0	4	0				
Delaware *																													
Florida	1	1	0	0	4	0	0	4	0	0	0	4	0																
Georgia	2	2	0	0	4	0	0	6	4	0	0	4	0																
Hawaii								°4	C																				
Idaho *																													
Illinois *																													
Indiana *																													
Iowa														0	0	4	0	1	7	6	0	0	0	5	0	0	0	6	0
Kansas	2	1	0	5	5	0	0	6	2																				
Kentucky																												F 5	3
Louisiana	1	1	0	1	4	0	0	5	0	0	0	4	0													0	0	0	6
Maine *																													
Maryland																						0	0	3	0	1	0	4	0
Massachusetts *																													
Michigan										0	0	4	0					0	0	5	0								
Minnesota																		1	0	0	0					0	0	F 6	0
Mississippi	5	3	0	11	5	0	0	5	C	0	0	5	0	2	0	3	0									0	0	5	6
Missouri						0	0	4	0					0	0	4	0												
Montana *																													
Nebraska *																													
Nevada *																													
New Hampshire *																													
New Jersey *																													
New Mexico *																													
New York *																													
North Carolina	1	1	2	100	6	0	0	0	3	0	0	6	3	0	0	4	0									0	0	5	4
North Dakota *																													
Ohio	1	1	0	0	4																								
Oklahoma	3	1	0	2	5	0	0	5	3					0	0	4	0												
Oregon *																													
Pacific Area *																													
Pennsylvania										0	0	5	0					0	0	6	0								
Puerto Rico *																													
Rhode Island *																													
South Carolina	4	2	0	0	4	0	0	6	0	0	0	4	0													8	0	0	0
South Dakota																		0	?	?	0								
Tennessee	7	1	0	3	6					0	S	6	0	0	1	?	0	0	?	?	0					0	S	6	?
Texas	3	2	0	1	4					0	1	5	0	0	1	4	0												
Utah *																													
Vermont *																													
U. S. Virgin Is. *																													
Virginia *																													
Washington *																													
West Virginia *																													
Wisconsin *																													
Wyoming *																													

° Includes crop damage
C Crop damage
F Floods
S Several

* No occurrence of storms or unusual weather phenomena.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
ø For breakdown of "All Others", and for detailed listing of other storms, see the U. S. Weather Bureau monthly publication STORM DATA.

† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5,000,000
7 $5,000,000 to $50,000,000
8 $50,000,000 to $500,000,000
9 $500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

MARCH 1965

Severe flooding occurred along a number of tributaries in the Upper Mississippi Basin during the first part of March. Overflow was particularly severe in the Zumbro and Root River Basins in Minnesota as the streams rose to record high levels. Hundreds of families were evacuated from their homes in the Root Valley. Record high stages were also observed on the Cedar and lower Boyer River in western Iowa. Stages approaching record high levels occurred locally on the Iowa River in Iowa and on the Pecatonica River in Wisconsin.

ST. LAWRENCE DRAINAGE

Lake Michigan.--Heavy rain over the Lower Grand in Michigan, on the 4th, caused a rapid rise on the 4th and 5th. This rain changed to wet snow, accumulating to 4 to 6 inches over the basin. Runoff was heavy as the Lower Grand and ground was frozen solid. Prolonged high stages continued for 4 to 6 days. Several minor ice jams occurred without much damage. The water rose 1 to 2 feet over low-lying access roads in the North Park and Comstock Park areas in Grand Rapids, Mich. However, crests were generally 2 to 3 feet below official flood stage.

Lake Erie.--Minor flooding occurred on the St. Marys and Maumee Rivers in Indiana and on the St. Joseph River in Ohio between the 4th and 10th. Only low-lying farm ground and park areas were affected. Runoff was slow and somewhat erratic due to daytime melting and nighttime freezing.

ATLANTIC SLOPE DRAINAGE

Minor flooding occurred on the Monocacy River at Frederick, Md., on the 6th. Several roads were inundated. One drowning was reported. Slight flooding occurred on Rock Creek near Washington, D. C., on the 5th and along the lower Potomac near Washington, D. C., on the 6th and 7th. This rise was the result of nearly 3 inches of rainfall over the middle portion of the Potomac.

There were two rises in the James Basin in Virginia during March which resulted in about bankfull stage in the lower reach at Richmond, Va. The first, was due to rains on the 4th and 5th ranging from 1/2 to 1 inch in the upper basins to 1 to 2 inches in the lower basins. The second, was due to rains on the 25th to 26th, ranging from 1 to 2 inches in the upper basins.

There were two major rises and one minor rise with flooding resulting in streams in eastern North Carolina. The first was due to heavy rains accompanying a low pressure center, moving northward out of the Gulf of Mexico during the first week of the month. The rain fell mainly on the 2d and 4th and generally averaged between 1 and 2 inches, except 1 1/2 to 2 1/2 inches over the Cape Fear Basin. The Cape Fear rose rapidly to slightly below bankfull stages in the upper reaches to 9 to 10 feet above flood stage in the lower portion. The Neuse rose to 1 to 3 1/2 feet above bankfull stage. Sharp rises occurred on the upper Roanoke, Dan, and Tar Rivers with minor overflow occurring in the lower Roanoke. The second period of flooding was due to rain ranging from 1 to 2 inches during the afternoon and evening of the 17th. The Cape Fear rose to bankfull stages in the upper portion to about 9 feet above in the lower portion. The Neuse rose to about 3 feet over its banks. Sharp rises occurred on the upper Roanoke, Tar, and Dam Rivers. Precipitation on the 25th and 26th produced a third rise with less than 1 foot of overflow on the lower Cape Fear. Sharp rises occurred on the upper Roanoke and Dan Rivers. No damage was reported.

This was the 15th consecutive month that some flooding had been reported on South Carolina streams. Heavy rainfall on the 2d to 5th, 17th to 20th, and 23d to the 26th accounted for most of the flooding during March. The Rocky was out of its banks twice, at least 8 feet on one occasion. The highest crests since the big floods of last October were reached on the Pee Dee. Shallow flooding occurred on the Black and lower Yadkin Rivers. The North Fork Edisto at Orangeburg, S. C., was out of its banks practically all month. A prolonged flood that began along the Edisto on February 15 continued throughout March into April. The Lumber River at Lumberton, N. C., was 2 to 3 feet higher than usual, overflowing its lower banks. Some flooding occurred along the Broad and Saluda Rivers. Moderate lowland flooding occurred on the Congaree below Columbia, S. C.

This was the 9th consecutive month that flooding had been reported on some streams in Georgia. The Savannah River at Clyo, Ga., and the Satilla River at Atkinson, Ga., continued in flood the entire month. The lower reaches of the Ogeechee River experienced considerable minor flooding. Light flooding occurred on the Ocmulgee and Oconee Rivers during the latter part of the month. The Altamaha River at Charlotte, Ga., receded below flood stage on the 6th and went above flood stage again on the 24th. Rainfall was distributed throughout the month.

EAST GULF OF MEXICO DRAINAGE

The Apalachicola River at Blountstown, Fla., has been above flood stage continuously since January 25 except for 1 day (Feb. 8). Rainfall was quite frequent throughout March over the Chattahoochee, Flint, and Apalachicola Rivers. The heaviest rains occurred from the 2d-4th, 17th-20th, and 24th-28th. No damages resulted.

Flooding on the Oostanaula River in Georgia and the Coosa River in Alabama during the latter part of the month was due to heavy rains from the 23d to the 25th. The rainfall ranged from 4 to 6 inches over the 3-day period.

Moderate rains on the 1st caused slight rises on the upper Tombigbee and prolonged the flooding in the lower Tombigbee, which began in February. Widely scattered rains near the end of March caused some minor flooding with the lower Tombigbee still rising at the close of the month.

The Pearl River was slightly above flood stage in the reach from Jackson, Miss., to below Bogalusa, La., in the beginning of the month. Two inches of rainfall during the first 2 days of March and 3 days of rain near the 12th kept the Pearl River at Jackson, Miss., above flood stage during the first 2 weeks of March. Rainfall during the last 6 days of the month caused additional overflow on the Pearl beginning on the 30th. Damages from the flooding are believed to be light.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--Winter precipitation from October 1964 through February 1965 was below normal in the Upper Mississippi Basin above Guttenberg, Iowa, except in the Zumbro-Whitewater and Chippewa subbasins in Minnesota. A comparison of the precipitation this winter, compared to the 1931-1960 normal and the two preceding winters is given in the following table:

TABLE I

WINTER PRECIPITATION
November 1 through February 28

Drainage Area (River or Stream)	Season 1964-65	Season 1963-64	Season 1962-63	Normal (1931-60)	Percent of Normal this Season	Moisture Content 3-16-65	Moisture Content 3-16-64
Mississippi River to Guttenberg, Iowa	4.09	2.48	1.81	4.57	89	3.16	0.93
Mississippi River to Minneapolis, Minn.	3.31	2.28	1.42	3.32	100	4.83	1.18
Minnesota	3.17	1.36	1.54	3.43	92	3.12	0.52
St. Croix	3.65	2.33	1.69	4.21	87	5.24	1.23
Chippewa	5.82	3.31	2.22	4.80	121	3.04	1.55
Trempealeau	4.11	2.62	1.70	4.48	92	0.88	0.38
Black	4.65	2.69	1.72	5.08	92	1.08	0.73
Zumbro-Whitewater	4.78	2.38	1.51	4.30	111	1.41	0.48
La Crosse	3.64	2.77	1.56	4.96	73	0.93	0.22
Root	4.09	2.40	1.53	4.98	82	0.50	0.34
Kickapoo-Pine	3.40	2.27	1.80	5.55	61	0.35	none
Wisconsin	4.82	2.86	1.97	5.63	86	2.24	0.57
Upper Iowa	3.44	2.28	1.49	5.30	65	0.80	none

Some of the winter snow accumulation in the subbasins of southeastern Minnesota, Wisconsin, and Iowa melted during the last few days of February and early March. Moderate to heavy rains during this period produced heavy runoff which resulted in disastrous floods in some tributary basins.

Heavy snowfall occurred throughout the remainder of the month, which combined with unusually low temperatures, resulted in a very deep snow cover by the end of March. Parts of Minnesota and Wisconsin received 300% of normal March precipitation. In many areas in Minnesota, snowfall during March exceeded previous alltime records. At St. Cloud, Minn., a record 51.7 inches of snow was recorded which exceeded the previous record of 36 inches in March 1916 and 1917 by nearly 16 inches and the March normal snowfall of 9.9 inches by nearly 42 inches. In the Alexandria-Milaca, Minn., area, 12 inches of snow fell on St. Patrick's Day (March 17). Except for a brief period early in the month, temperatures were as much as 10° below normal for March. Frost penetration was deeper than normal, particularly throughout the southern half of Minnesota and Wisconsin. Frost in those areas ranged from 2 to 4 feet deep.

In central Iowa, only 5 days during March had temperatures that were normal or slightly above. At Des Moines, Iowa, it was the second coldest March of record. Only 3 other months of March recorded heavier snow over the states than March 1965. Most of the snow occurred in two storms, on the 1st and 2d, and on the 17th and 18th. The first of these two storms caused considerable ice and sleet across the southern and central counties of Iowa and 6 to 10 inches of snow in the northern counties. The second storm was more intense across the northern counties of Iowa with 4 to 12 inches of new snow reported. Strong winds drifted the snow to the roofs in north-central Iowa while adjacent fields were swept clear of snow.

It was also cold and snowy in the Illinois portion of the Upper Mississippi Basin. Only once in more than 50 years had it been as cold or snowy.

The first high water bulletin was issued by the Weather Bureau for the Zumbro, Whitewater, Root, and upper Iowa Rivers in Minnesota on February 28. By 6 a.m. on March 1 moderate to heavy rain was occurring over southeastern Minnesota and southwestern Wisconsin. By midafternoon the rain changed to snow. At Rochester, Minn., 1.46 inches of precipitation occurred during this period.

The South Fork of the Zumbro River rose rapidly to a record crest of 19.1 feet at Rochester, Minn., by 6:30 p.m. on March 1. The previous record stage of 18.5 feet occurred on March 29, 1962. The Zumbro River rose to a near record crest of 28.4 feet at Zumbro Falls, Minn.; a record crest of 45.75 feet at Theilman, Minn., on March 2. The previous record stage of 43.43 feet occurred in July 1951. Flood stage at this point is 38 feet. The Root River rose rapidly to record stages on the 2d. Because of alternating periods of freezing and thawing the rise along the Kickapoo River in southwest Wisconsin extended over a longer period, March 1 through March 11.

Near record stages occurred on the Pecatonica River in Wisconsin and on the Turkey River in Iowa during the first part of March. Most of the winter snow cover was depleted during the last few days of February. The rapid melting of this snow cover accompanied by a 1-inch rainfall during the period caused the rivers to rise rapidly, beginning March 1. The ice in the rivers broke up and moved out rapidly, forming only temporary jams. Flood damage was minor since mostly unplanted farmland and pastures were involved. The same areas that were flooded in February were involved.

High temperatures near the end of February resulted in rapid snowmelt that caused rapid rises on the middle reaches of the Des Moines River and throughout the Cedar River in Iowa. Ice jams, from thick blocks of ice formed during the cold winter, complicated the problems for many communities. At Charles City, Iowa, on the Cedar River, an ice jam below the gaging station caused the water level to rise to a stage of 21.6 feet, equalling the previous record stage of March 1961. At Des Moines, Iowa, on the Raccoon River, a major ice jam formed on the Raccoon River a short distance upstream from the water works which lasted the remainder of the month. Downstream on the Des Moines River a major ice jam below Keosauqua caused a crest 2.7 feet above flood stage on the 5th. Further upstream a major ice jam between Chillicothe and Tracy, Iowa, caused high readings at Eddyville and Tracy. Downstream from the ice jam, Ottumwa, Iowa, remained below flood stage.

Rapid rises occurred on the South, Middle, North, Racoon, and Skunk Rivers from heavy rains during the night of the 16th and the morning of the 17th. The rainfall was the heaviest across the middle portions of the Des Moines Basin with amounts ranging from 1 1/4 to 1 1/2 inches. Further north, snows accumulated over a wide area in northern Iowa.

Moderate to heavy rains on the 16th plus some snowmelt caused minor flooding on the Fox and Illinois Rivers in Illinois and on the Salt River at New London, Mo. Actual flooding was limited to farmlands immediately adjacent to the rivers. No appreciable damage was reported.

Flooding occurred along the main stem of the Mississippi in the reach from Hannibal, Mo., to Winfield, Mo., between the 18th and 21st. Flooding was minor and limited to farmlands immediately adjacent to the river.

Missouri Basin.--There were two periods of flooding on the Floyd River in Iowa during March. The first rise was due to runoff from snowmelt. Mild weather during the last 2 days of February caused considerable thawing over the lower half of the Floyd River Basin and ice breakup. Another warm period from the 14th to the 15th caused most of the winter snow to melt and the ice to break up. Heavy runoff caused the Floyd to rise 2 1/2 to 3 feet above flood stage. The ice jammed and lodged but did not move out. The Big Sioux River below Sioux Falls, S. Dak., rose to about three-quarters bankfull stage during this period. The ice broke loose from the banks, during this rise, but remained intact. In central and western South Dakota, the soil absorbed the small amount of melted snow. The rises on streams were minor.

Melting snow and accompanying light to moderate precipitation caused most tributaries of the Elkhorn River in Nebraska to run near bankfull stage during the first 7 days of March. The Elkhorn was at bankfull stage from West Point, Nebr., to the mouth from the 1st to the 16th. Overflow occurred in the vicinity of ice jams between West Point and Scribner, Nebr. The North Fork was near bankfull from the 1st to the 4th between Pierce and Norfolk, Nebr. Snow depths over the eastern portion of the basin ranged from 4 to 8 inches in the beginning of the month. Snow depths diminished to a trace from Norfolk westward. A snow survey on the 8th indicated a water content of about 1 inch in the heaviest snow cover near Lyons and Fremont, Nebr. Damages were confined to pastureland along the lower reaches of the Elkhorn from Valley to the mouth. Some damage resulted to fences and a few homes in the town of Waterloo, Nebr. A few persons were evacuated from their homes.

A mild period from February 26 to 28 accompanied by some rain on February 28 caused rapid snowmelt and rapid runoff with severe flooding on the lower reaches of the Boyer River in western Iowa. The ground was still frozen to considerable depth and practically all of the snowmelt was surface runoff. The high volume of water tore loose some of the ice in the stream, causing many ice jams. Many families in the southern and eastern parts of the Iowa city Missouri Valley were evacuated. Colder weather set in March 1 and remained for 4 days. Ice jams continued at the mouth of the Boyer River impounding the water which poured into parts of Missouri Valley, Iowa. Many additional families were evacuated from their homes by March 3. Main highways into Missouri Valley were blocked. By the 5th, the water receded about 1 foot, but the remaining water in the lowland portions of the town froze. The threat due to ice jams finally ended on the 17th when mild weather and rains caused the Boyer River to rise and clear out the ice jams at Missouri Valley. Flood damage was heavy. Over 200 homes reported water over the first floor to a maximum depth of 5 1/2 feet. Some residents of Missouri Valley, Iowa, were still removing foot-thick ice floes from their yards on March 22.

Light to moderate overflows developed on the Big Blue River from near DeWitt, Nebr., downstream into Tuttle Creek Reservoir on the night of February 28 - March 1. The Black Vermillion River at Frankfort, Kans., overflowed moderately during the first 2 days of March. Flooding occurred in the upper Kansas river Valley on Mill Creek at Paxico, Kans., and on Vermillion Creek at Wamego, Kans. Heavy snowmelt runoff during the latter part of February, augmented by rainfall of around an inch, caused the Big Blue River to rise up to over 4 feet above flood stage in the reach between Beatrice, Nebr., and Blue Rapids, Kans. Tributaries in the upper Kansas Basin rose to flood stage due to heavier rainfall which exceeded 2 inches locally. The greater part of the snowmelt was released slowly by gradual daytime warming and nighttime freezing.

Minor overflow occurred on Stranger Creek at Easton, Kans., in the Kansas River Basin on the 17th. Stages downstream rose to near bankfull at Tonganoxie, Kans. A substantial rise of about two-thirds bankfull developed along the Marais des Cygnes in Kansas on the 17th-19th. The upper Republican River at Stratton, Nebr., rose to near flood stage on the 7th due to a brief ice jam. Losses were negligible from the minor overflow on Stranger Creek.

There were two periods of flooding in tributary streams in northwestern Missouri during March. The first rise occurred from the 1st through the 4th and was due to rains of over an inch plus snowmelt. Minor flooding occurred intermittently along the Missouri below Nebraska City, Nebr. Minor flooding occurred on the Grand at Brunswick, Mo., on the 3d from water which backed up the mouth from the Missouri. The second rise was due to heavy rains during the night of the 16th-17th. This resulted in widespread overflow along most of the tributaries and minor intermittent flooding in the lower Missouri.

Ohio Basin.--Moderate to heavy rain from the 24th to the 26th (1.75 to 2.5 inches) caused flooding on the Tug and Levisa Forks of the Big Sandy River in southeastern Kentucky and southwestern West Virginia. Several highways were flooded along the Guyandot River in West Virginia. The Little Kanawha River at Creston, W. Va., crested 2.5 feet above flood stage. Several business places and homes along the Tug Fork were flooded. Many highways in West Virginia were blocked by water from overflow of small streams. Actual damages were light.

Minor flooding occurred on Paint Creek at Bourneville, Ohio, on the 5th. The stream rose rapidly to 2 feet over bankfull stage.

Minor flooding occurred on the Licking River in Kentucky on the 26th and on the North Fork of the Kentucky on the 26th and 27th. Little or no damage resulted from this flooding.

Heavy rains on the 25th-26th and again on the 29th-30th caused minor flooding on the Green River in Kentucky. The flooding began on the 27th at Munfordville and continued until April 10 at Calhoun, Ky.

The overflow caused the closing of a few county roads. Losses were light.

Light rains which occurred daily over the Wabash Basin in Indiana during the first 6 days of the month caused minor flooding along portions of the White and Wabash Rivers. Little or no damage resulted.

Heavy rains occurred in the Cumberland valley in Kentucky for 30 hours beginning on the morning of the 25th. Minor flooding resulted on the Stones and Harpeth Rivers in Tennessee and along the main stem of the Cumberland from Baxter to Williamsburg, Ky., and Clarksville, Tenn. No flooding occurred between Wolf Creek and Cheatham Dams. The greatest damage occurred at the Percy Priest Dam site on Stones River and from flash flooding of small streams.

Heavy rains occurred over the French Broad and Swannanoa River Basins in western North Carolina on the 25th and 26th. Flooding resulted on the French Broad River from Asheville, N. C., downstream to Hot Springs, N. C., and on the Swannanoa River in low places. The precipitation overaged from 1 to 2 inches in the basin above Asheville and 3.5 to 4.5 inches in the basin below. There was some damage to tobacco beds and garden plots in low-lying areas along the river.

General heavy rains over the Tennessee Basin from the 24th to the 26th caused flooding along the Little Pigeon, South Chickamauga Creek, the Elk, the Duck, and along the main stem of the Tennessee. The rainfall totalled 6 to 7 inches over the Little Pigeon and 5 to 6 inches over the Elk and Duck Rivers. The Little Pigeon crested 7.2 feet above flood stage, causing severe damage. Preliminary estimates range from $1 to $1.5 million. No damage resulted from the flooding on the Elk and Duck Rivers. Scattered flooding occurred along the main stem of the Tennessee at Whitesburg, Ala., and below.

Flooding developed along the main stem of the Ohio in the reach at and below Tell City, Ind., during the last 2 days of the month. The flooding continued well into April, cresting at Tell City on April 1 and at Cairo, Ill., on April 8 and April 16.

White Basin.--The Cache River at Patterson, Ark., has been in flood continuously since January 9. Periodic rains from March 25 through the 30th started the river to rise again and the flooding continued into April.

Arkansas Basin.--Showers and thunderstorms (1.5 inches) during the night of the 28th caused the Petit Jean River to rise slightly above flood stage on the 30th.

Red Basin.--Heavy rainfall (1.5 inches) during the night of February 23 caused the Sulphur River to rise above flood stage on February 28 and continue in flood at Naples, Tex., until March 5. No significant damage resulted from the 3.5-foot overflow.

Lower Mississippi Basin.--The most significant flooding in the Lower Mississippi Basin occurred on the Big Black River during the first half of the month. The stream went above flood stage at Pickens, Miss., on February 12 and continued in flood until March 8. The Big Black began overflowing its banks at Bovina, Miss., on March 1 and continued in flood until the 14th. Heavy rains during the latter part of the month caused the Big Black to go out of its banks again at Pickens on the 30th and continue in flood into April. Minor flooding occurred on the lower Yazoo River during the first week of the month. Light flooding occurred on the Coldwater River at Sarah, Miss., on the 26th. Damages along the Big Black were moderate with most of the damage resulting to farm roads, bridges, and farm- and pasturelands.

WEST GULF OF MEXICO DRAINAGE

Minor flooding occurred on the Mermentau River at Mermentau, La., from the 2d to the 6th. The overflow was due to rainfall averaging 5 inches on the 1st.

The Calcasieu River began overflowing its banks at Hineston, La., on February 28. This flooding was due to heavy rain which began over the basin on February 28. Flooding spread to Oakdale, La., and Old Town Bay, La., on March 2 and to Kinder, La., on March 4. Additional heavy rain towards the end of the month caused a second rise with flooding beginning at Hineston, La., on March 31.

Flooding was in progress on the Trinity River at Liberty, Tex., in the beginning of the month. This overflow began on the afternoon of February 17 and continued until March 3. Flooding persisted at Moss Bluff below Liberty until March 14.

Low-lying areas along the Nueces River at Calallen, Tex., were in flood from February 25 to March 2. Flood waters covered several thousand acres of farm- and ranchland. Many dwellings were isolated by flood waters.

Excessive rains in the headwaters of the Navasota River on the 29th and 30th caused flooding at Easterly, Tex., beginning on the 31st. More than 5 inches of rain was reported between Mexico and Long Lake, Tex., during the 24-hour period ending near 7 a.m. on the 30th.

FLOOD STAGE DATA

(All dates in March unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
ST. LAWRENCE DRAINAGE	Ft.			Ft.	
Lake Erie					
St. Marys: Decatur, Ind.	13	4	10	16.2	5
St. Joseph: Montpelier, Ohio	10	6	10	12.95	8
Maumee: Fort Wayne, Ind.	15	5	7	15.6	5
ATLANTIC SLOPE DRAINAGE					
Monocacy: Frederick, Md.	15	6	6	#16.6	6
Rock Creek: Washington, D. C.	7	5	5	7.3	5
Potomac: Washington, D. C.	12	6	7	#12.8	7
Roanoke: Williamston, N. C.	10	(13 (28	14 31	#10.1 10.5	13 31
Neuse: Neuse, N. C.	14	(6 (19	8 21	15.4 15.9	7 20
Smithfield, N. C.	13	(5 (19	10 23	16.5 16.8	9 23
Goldsboro, N. C.	14	(7 (22	14 29	16.45 16.25	12 26
Kinston, N. C.	14	(11 (26	16 31	14.9 14.7	14 28
Cape Fear: Fayetteville, N. C.	35	(6 (19	7 20	#36.6 35.3	6 19
Lock No.3, Tarheel, N. C.	42	(5 (18 (28	9 23 28	51.7 #50.8 42.0	7 20 28
Lock No.2, Elizabethtown, N.C.	20	5 19 28	10 24 29	28.6 28.2 #20.7	7 21 28
Yadkin: Yadkin College, N. C.	18	27	28	19.1	27
Rocky: Norwood, N. C.	15	(3 (17	3 19	18.25 22.5	3 18
Pee Dee: Cheraw, S. C.	30	18	21	35.8	19
Peedee, S. C.	19	(4 (19	16 Apr. 9	22.1 23.0	9 25
Black: Kingstree, S. C.	12	19	Apr. 2	13.0	27
Saluda: Chappells, S. C.	14	25	28	16.5	25
Broad: Blair, S. C.	14	(3 (18 (25	4 20 29	16.5 18.6 18.0	3 19 28
North Fork Edisto: Orangeburg, S. C.	[illegible]	2 18	8 Apr. 10	8.6 (8.3 (9.5 (9.0 (8.7 (8.6	4 20 25 29 Apr. 2 Apr. 6
Edisto: Givhans, S. C.	10	Feb. 15	Apr. 17	(12.6 (13.85	9 Apr. 3
Savannah: Millhaven, Ga.	15	6 25	11 Apr. 19	16.1 17.6	8 Apr. 5
Clyo, Ga.	11	Feb. 16	1/	(14.1 (14.6 (16.5	Feb. 23 12 Apr. 5
Ogeechee: Midville, Ga.	11	23	23	6.0	23
Dover, Ga.	7	Feb. (18 (21	3 Apr. 10	9.0 8.7 8.3	Feb. 22 28 Apr. 2
Eden, Ga.	9	Feb. 16	Apr. 16	(12.4 (11.8 (11.6	Feb.22-23 30 Apr. 5
Ocmulgee: Abbeville, Ga.	12	25	Apr. 5	(12.2 (12.5	27 Apr. 2,3
Oconee: Milledgeville, Ga.	20	25	25	20.4	25
Mt. Vernon, Ga.	16	(26 (29	27 Apr. 5	17.9	Apr. 2
Altamaha: Charlotte, Ga.	15	Feb. 17 24	6 Apr. 11	19.05 17.7	Feb. 21 Apr. 1,2
Satilla: Atkinson, Ga.	13	Feb. 14	Apr. 16	16.4 15.9	Feb. (22 (8 8
EAST GULF OF MEXICO DRAINAGE					
Apalachicola: Blountstown, Fla.	15	Feb. 9	Apr. 18	(21.0 (19.9	Feb. 21 31,Apr.1
Oostanaula: Resaca, Ga.	22	27	Apr. 2	27.2	29
Coosa: Gadsden, Ala.	20	28	Apr. 2	22.7	28
Old Town Creek: Tupelo, Miss.	21	(2 (26	2 26	27.1 22.8	2 26

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
EAST GULF OF MEXICO DRAINAGE (Cont'd.)	Ft.			Ft	
East Fork Tombigbee: Fulton, Miss.	16	(4 (26	4 Apr. 1	16.1 16.95	4 31
Black Warrior: Warrior Lock & Dam, Ala.	30	29	Apr. 1	38.1	31
Tombigbee: Amory, Miss.	20	(2 (27	3 Apr. 2	21.9 25.0	2 30
Aberdeen, Miss.	34	31	1/		
Demopolis Lock & Dam, Ala.	48	31	1/		
Jackson Lock & Dam, Ala.	43	Feb. 13	Apr. 5	52.9	Feb. 23
Pearl: Jackson, Miss.	18	Feb. (11 (30	15 1	(32.08 (25.1	Feb. 18 5
Monticello, Miss.	19	Feb. 12	5	(23.85 (21.75	Feb. 22 3
Columbia, Miss.	17	Feb. 15	5	(18.75 (17.35	Feb. 25 1
Bogalusa, La.	15	Feb. 13	23	(19.6 (19.3	Feb. 20 2
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
South Fork Zumbro: Rochester, Minn.	12	1	2	19.1	1
Rochester Belt Line, Minn.	9	1	2	9.2	1
Bear Creek: Rochester Belt Line, Minn.	8	1	1	9.8	1
Zumbro: Zumbro Falls, Minn.	18	1	3	28.4	2
Theilman, Minn.	38	1	4	45.75	2
Trempealeau: Dodge, Wis.	7	3	5	8.1	4
Root: Houston, Minn.	15	1	3	19.5	2
Hokah, Minn.	47	1	4	50.8	2
Upper Iowa: Dorchester, Iowa	14	1	3	17.85	1
Kickapoo: Lafarge, Wis.	12	2	3	12.55	2
Soldiers Grove, Wis.	723	1	8	726	3
Gays Mills, Wis.	698	1	8	701.05	3
Steuben, Wis.	8	1	11	(11.05 (11.2 (10.0 (9.6	3 4 6,8 10
Turkey: Garber, Iowa	17	1	3	26.0	1
East Branch Pecatonica: Blanchardville, Wis.	11	1	3	14.9	2
Pecatonica: Darlington, Wis.	11	1	3	14.7	2
Martintown, Wis.	11	2	10	19.9	4
Freeport, Ill.	13	5	9	14.3	6
Shell Rock: Marble Rock, Iowa	4	1	3	9.3	2
Shell Rock, Iowa	12	1	3	14.5	2
Black Hawk Creek: Hudson, Iowa	12	1	3	15.3	1
West Fork Cedar: Finchford, Iowa	12	3	5	13.0	3
Cedar: Austin, Minn.	15	1	1	18.0	1
Charles City, Iowa	12	1	4	21.6	2
Janesville, Iowa	11	3	5	16.4	3
Iowa: Marshalltown, Iowa	13	1	4	16.5	2
Wapello, Iowa	10	4	11	14.2	5
North Fork Skunk: Sigourney, Iowa	16	17	17	18.15	17
Skunk: Ames, Iowa	10	1	1	10.9	1
Oskaloosa, Iowa	15	(4 (17	4 17	15.3 17.5	4 17
Augusta, Iowa	15	18	19	16.95	18
South Raccoon: Redfield, Iowa	14	(1 (17	2 17	15.0 19.65	2 17
Raccoon: Jefferson, Iowa	10	(1 (13	4 19	13.85 12.1	2 17
Van Meter, Iowa	13	(2 (17	2 18	15.2 18.2	2 17
Middle: Indianola, Iowa	19	17	17	20.45	17
South: Ackworth, Iowa	19	17	17	25.0	17
Cedar Creek: Bussey, Iowa	16	17	17	19.1	17

FLOOD STAGE DATA

(All dates in March unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
MISSISSIPPI SYSTEM (Cont'd.)	Ft.			Ft.	
Upper Mississippi Basin (Cont'd.)					
Des Moines: Des Moines (SE 14th St.), Iowa	21	18	18	21.5	18
Tracy, Iowa	14	(3 (17	8 20	19.1 18.3	5 18
Eddyville, Iowa	15	(4 (16	9 21	19.7 19.8	5 19
Ottumwa, Iowa	10	17	21	12.6	17
Keosauqua, Iowa	15	5	7	17.7	5
Salt: New London, Mo.	19	18	19	21.1	18
Fox: Dayton, Ill.	12	(21 (25	22 25	14.6 12.1	21 25
Illinois: LaSalle, Ill.	20	18	19	20.95	18
Havanna, Ill.	14	20	24	14.45	21
Meredosia, Ill.	10	17	1/	12.3	22
Mississippi: Hannibal, Mo.	16	19	20	17.2	19
Louisiana, Mo.	15	18	20	16.7	19
Clarksville, Mo.	25	18	21	26.8	20
Winfield, Mo.	26	20	21	26.2	21
Missouri Basin					
Floyd: Alton, Iowa	12	Feb. (28 (13	1 17	13.0 14.9	1 16
James, Iowa	16	Feb. (28 (13	[illegible] 17	18.4 18.4	1 16
Elkhorn: Waterloo, Nebr.	15	13	15	15.5	15
West Nishnabotna: Randolph, Mo.	19	(1 (17	2 17	22.65 19.25	1 17
East Nishnabotna: Red Oak, Mo.	15	17	17	16.4	17
One Hundred and Two: Rosendale, Mo.	13	18	18	#16.1	18
Platte: Agency, Mo.	20	17	19	22.7	18
Black Vermillion: Frankfort, Kans.	19	1	2	26.2	1
Big Blue: Beatrice, Nebr.	16	1	1	19.35	1
Barneston, Nebr.	18	1	1	22.1	1
Marysville, Kans.	35	1	1	35.8	1
Blue Rapids, Kans.	20	1	1	#23.8	1
Vermillion Creek: Wamego, Kans.	24	1	1	25.2	1
Mill Creek: Paxico, Kans.	19	1	1	19.1	1
Stranger Creek: Easton, Kans.	15	17	17	16.1	17
Grand: Pattonsburg, Mo.	25	17	18	27.75	18
Gallatin, Mo.	21	18	18	#22.05	18
Chillicothe, Mo.	24	17	19	#29.40	18
Sumner, Mo.	26	(15 (16	15 21	26.0 32.3	15 19
Brunswick, Mo.	12	(3 (17	3 22	12.55 16.6	3 19
Chariton: Rathbun, Mo.	18	17	18	19.2	17
Novinger, Mo.	20	17	17	#20.3	17
Prairie Hill, Mo.	15	17	18	#18.3	17
Blackwater: Blue Lick, Mo.	25	20	20	25.2	20
Missouri: Rulo, Nebr.	17	1	2	#17.35	1
St. Joseph, Mo.	17	(1 (18	2 18	#19.1 #17.2	2 18
Lexington, Mo.	22	3	3	#22.0	3
Waverly, Mo.	18	(3 (18	3 19	#19.3 #19.7	3 19
Hermann, Mo.	21	20	20	21.8	20
St. Charles, Mo.	25	20	21	25.2	21
Ohio Basin					
Little Kanawha: Creston, W. Va.	20	26	27	22.5	27
Guyandot: Branchland, W. Va.	30	27	27	#33.3	27
Tug Fork: Williamson, W. Va.	27	26	27	29.9	27
Levisa Fork: Prestonsburg, W. Va.	30	(26 (30	28 31	34.2 30.7	27 30

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
MISSISSIPPI SYSTEM (Cont'd.)	Ft.			Ft.	
Ohio Basin (Cont'd.)					
Paint Creek: Bourneville, Ohio	10	5	5	10.2	5
Licking: Salyersville, Ky.	T 21	26	26	21.5	26
North Fork Kentucky: Hazard, Ky.	20	26	26	21.6	26
Jackson, Ky.	29	27	27	29.0	27
Green: Munfordville, Ky.	28	27	Apr. 1	33.3	31
Lock 6, Brownsville, Ky.	18	28	Apr. 2	22.9	31
Lock 4, Woodbury, Ky.	33	28	Apr. 4	41.2	31
Lock 2, Calhoun, Ky.	23	29	Apr. 11	28.6	Apr. 5
Muscatatuck: Austin, Ind.	T 16	5	6	16.9	5-6
White: Spencer, Ind.	14	5	6	14.7	5
Elliston, Ind.	18	6	6	18.35	6
Edwardsport, Ind.	15	7	8	15.5	8
Petersburg, Ind.	16	5	10	17.5	8
Wabash: Wabash, Ind.	12	5	7	14.3	6
Lafayette, Ind.	11	4	10	14.6	6
Covington, Ind.	16	6	10	17.35	8
Montezuma, Ind.	14	7	11	15.5	7
Terre Haute, Ind.	14	10	10	14.0	10
Stones: Donelson, Tenn.	40	(26 (30	27 30	41.5 42.5	27 30
Harpeth: Kingston Springs, Tenn.	15	(26 (27 (29	27 27 30	17.7 E 15.3 E 21.8	26 26 29
Cumberland: Baxter, Ky.	16	26	26	17.9	26
Barbourville, Ky.	27	(26 (30	28 30	34.3 27.3	27 30
Williamsburg, Ky.	21	26	31	(23.9 (23.8	27 30
Clarksville, Tenn.	46	30	Apr. 1	49.0	31
Little Pigeon Creek: Sevierville, Tenn.	9	25 29	26 30	16.2 9.5	26 29
French Broad: Asheville, N. C.	[illegible]	26	26	8.05	26
Marshall, N. C.	10	26	26	15.25	26
Hot Springs, N. C.	13	26	26	21.0	26
Tuckasegee: Bryson City, N. C.	11	26	26	13.1	26
South Chickamauga Creek: Chickamauga, Tenn.	10	(25 (29	29 31	16.9 11.1	27 30
Elk: Fayetteville, Tenn.	659	25	31	664.2	26
Duck: Shelbyville, Tenn.	719	26	27	721.7	26
Columbia, Tenn.	32	26	28	35.6	27
Tennessee: Whitesburg, Ala.	11	25	1/	21.5	30
Florence, Ala.	18	26	1/	24.7	30
Savannah, Tenn.	80	26	1/	87.9	31
Gilbertsville, Ky.	20	26	1/	35.1	Apr. 1
Ohio: Tell City, Ind.	38	30	Apr. 3	40.1	Apr. 1
Dam 47, Newburgh, Ind.	38	30	Apr. 5	42.3	Apr. 2
Dam 48, Cypress, Ind.	38	31	Apr. 5	41.0	Apr. 3
Mt. Vernon, Ind.	35	31	Apr. 6	37.8	Apr. 3
Dam 49, Uniontown, Ky.	37	Apr. 2	Apr. 6	38.5	Apr. 4
Shawneetown, Ill.	33	31	Apr. 9	38.3	Apr. 4
Dam 50, Fords Ferry, Ky.	34	(8 (30	12 Apr. 11	 41.6	 Apr. 5
Paducah, Ky.	39	31	Apr. 9	#42.5	Apr. 5
Dam 52, Brookport, Ill.	37	30	Apr. 23	44.5	Apr. 5
Dam 53, Grand Chain, Ill.	42	30	Apr. 25	48.7	Apr. 6-7
Cairo, Ill.	40	31	Apr. 27	(47.4 (47.0	Apr. 8 Apr. 16
White Basin					
Cache: Patterson, Ark.	7	Jan. 9	1/	(9.0 (8.2 8.3	Jan. 12 Feb. 28 [illegible]

FLOOD STAGE DATA

(All dates in March unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
MISSISSIPPI SYSTEM (Cont'd.)	*Ft.*			*Ft.*	
Arkansas Basin					
Petit Jean: Danville, Ark.	20	30	31	20.4	30
Red Basin					
Sulphur: Naples, Tex.	22	Feb. 28	5	25.4	2
Lower Mississippi Basin					
Cold Water: Sarah, Miss.	18	26	26	#18.4	26
Yazoo: Yazoo City, Miss.	29	2	2	#29.1	2
Big Black: Pickens, Miss.	16	Feb. 12 30	8 1/	#18.2 #18.0	4 Apr. 3
Bovina, Miss.	28	1	14	#34.5	5

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
WEST GULF OF MEXICO DRAINAGE	*Ft.*			*Ft.*	
Mermentau: Mermentau, La.	5	2	6	5.6	3,4
Calcasieu: Hineston, La.	12	Feb. 28 31	8 1/	13.4	2
Oakdale, La.	12	2	3	12.7	2
Kinder, La.	16	4	7	18.0	5
Old Town Bay, La.	4	2	6	4.2	4
Trinity: Liberty, Tex.	24	Feb. 17	3	26.5	Feb. 20-21
Navasota: Easterly, Tex.	14	31	1/		
Nueces: Calallen, Tex.	7	Feb. 25	2	8.8	Feb. 27

E	Estimated
T	Tentative
*	Provisional
#	Highest stage observed
1/	Continued at end of month

RAWINSONDE DATA

Average monthly values

ALBANY, N. Y.
1006 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	86	-3.2	76	306	3.9
1000	30	132			303	6.2
950	30	535	-4.4	69	321	9.5
900	30	962	-6.5	72	321	9.1
850	30	1,408	-7.9	70	308	11.7
800	30	1,878	-9.6	63	305	14.4
750	30	2,376	-11.5	57	298	19.4
700	30	2,902	-13.4	53	287	22.9
650	30	3,464	-15.8	46	280	28.4
600	30	4,065	-18.7	44	277	32.8
550	30	4,706	-22.3	42	279	37.5
500	30	5,404	-26.8	38	280	40.2
450	30	6,151	-32.1	35	280	42.9
400	30	6,979	-37.8	32	283	44.5
350	30	7,887	-43.7		283	45.3
300	30	8,917	-49.7		283	49.3
250	30	10,090	-54.1		281	53.2
200	30	11,517	-54.4		278	48.2
175	30	12,374	-53.8		281	50.3
150	30	13,364	-54.1		281	39.4
125	30	14,530	-55.4		281	38.3
100	30	15,950	-56.4		281	35.0
80	30	17,364	-56.4		280	31.3
70	30	18,212	-55.8		279	28.6
60	30	19,196	-54.7		280	26.2
50	30	20,363	-54.1		282	23.3
40	29	21,801	-52.8		283	20.2
30	29	23,657	-52.6		287	21.8
25	27	24,833	-51.7		284	17.1
20	26	26,284	-51.7		288	18.5
15	21	28,134	-49.9		287	17.1
10	10	30,828	-46.6			
7						

ALBUQUERQUE, N. MEX.
836 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,619	1.4	54	130	1.2
1000	31	146				
950	31	567				
900	31	1,014				
850	31	1,482				
800	31	1,972	1.4	45	264	6.4
750	31	2,489	-1.9	47	269	10.3
700	31	3,034	-5.5	49	273	16.1
650	31	3,607	-9.8	48	270	21.0
600	31	4,225	-13.5	39	267	28.4
550	31	4,882	-17.4	35	267	34.2
500	31	5,591	-22.0	R33	266	40.4
450	31	6,355	-27.5	R32	265	46.0
400	31	7,196	-33.2	R33	266	52.6
350	31	8,122	-39.4	R35	265	60.4
300	31	9,162	-46.1		265	67.0
250	31	10,356	-53.0		264	77.5
200	30	11,778	-57.1		264	77.7
175	30	12,623	-57.0		263	73.6
150	30	13,597	-58.3		264	68.8
125	30	14,736	-61.3		264	59.2
100	30	16,111	-64.1		264	52.3
80	30	17,472	-64.7		266	49.0
70	28	18,285	-64.2		270	42.5
60	27	19,227	-63.1		269	36.3
50	25	20,366	-61.3		268	27.4
40	24	21,757	-59.5		265	27.2
30	18	23,595	-57.1		268	23.1
25	16	24,772	-55.7		278	18.6
20	13	26,183	-54.1		266	20.2
15	[illegible]	28,008	-52.3			
10						
7						

AMARILLO, TEXAS
891 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,095	-2.4	74	357	2.5
1000	31	167				
950	31	583				
900	31	1,021				
850	31	1,473	-.6	61	302	8.2
800	31	1,957	-.8	55	299	13.4
750	31	2,462	-1.5	46	290	18.1
700	31	3,016	-5.3	47	285	22.9
650	31	3,592	-8.7	46	279	27.4
600	31	4,210	-12.5	42	275	31.5
550	31	4,867	-16.8	R36	272	36.7
500	31	5,578	-21.6	R34	271	42.3
450	31	6,341	-27.2	R34	271	48.4
400	31	7,183	-33.2	R33	270	53.6
350	31	8,108	-40.0	R34	270	61.4
300	31	9,145	-46.7		268	72.1
250	31	10,335	-53.5		268	82.8
200	31	11,755	-57.2		268	82.4
175	31	12,600	-57.0		267	77.7
150	31	13,574	-58.3		268	75.4
125	31	14,713	-61.0		268	65.5
100	30	16,090	-62.5		269	57.3
80	29	17,466	-64.0		268	46.8
70	28	18,290	-63.4		268	35.7
60	27	19,236	-62.3		264	31.1
50	27	20,366	-60.3		264	28.7
40	25	21,762	-58.9		259	28.9
30	22	23,578	-54.5		257	28.7
25	21	24,751	-53.4		257	26.2
20	19	26,207	-52.3		269	19.4
15	7	28,106	-47.7			
10						
7						

ANCHORAGE, ALASKA
1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	29	1.3	71	179	1.2
1000	31	149	1.1	70	141	2.5
950	31	556	-.3	66	138	7.0
900	31	992	-2.4	68	141	10.5
850	31	1,444	-4.8	69	156	12.8
800	31	1,919	-7.1	69	169	14.4
750	31	2,420	-9.3	64	182	14.8
700	31	2,952	-12.0	60	194	16.9
650	31	3,513	-15.2	59	208	19.0
600	31	4,117	-18.5	55	218	22.7
550	31	4,756	-22.4	56	223	26.4
500	31	5,455	-26.9	53	226	28.9
450	31	6,200	-32.0	47	230	34.2
400	31	7,030	-38.1	42	229	36.5
350	31	7,936	-44.8		226	41.4
300	31	8,951	-51.8		231	42.9
250	31	10,117	-56.9		238	40.4
200	31	11,528	-56.3		239	31.1
175	31	12,379	-55.0		241	27.8
150	31	13,366	-54.0		247	24.7
125	31	14,537	-53.8		249	20.8
100	31	15,969	-54.4		262	20.4
80	30	17,402	-54.1		276	19.0
70	30	18,257	-54.0		285	20.4
60	30	19,249	-53.6		294	19.2
50	30	20,421	-53.3		303	20.8
40	30	21,860	-52.7		308	22.9
30	27	23,710	-52.8		323	28.0
25	25	24,900	-52.5		333	31.1
20	19	26,344	-52.8		335	32.4
15	10	28,268	-51.1			
10	5	30,999	-47.0			
7						

* ANNETTE, ALASKA
1020 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	37	1.0	66	30	2.9
1000	31	194	2.8	61	30	4.1
950	31	611	1.4	58	53	3.3
900	31	1,043	-.7	55	30	1.6
850	31	1,498	-2.7	52	315	3.9
800	31	1,977	-4.5	44	308	8.2
750	31	2,481	-6.6	42	307	12.2
700	31	3,020	-9.2	44	308	16.9
650	31	3,586	-12.1	44	308	19.8
600	31	4,199	-15.6	47	310	23.7
550	31	4,845	-19.5	50	312	25.8
500	31	5,554	-24.0	48	311	28.4
450	31	6,307	-29.3	48	307	30.9
400	31	7,149	-35.5	44	306	32.8
350	31	8,064	-42.5	46	304	35.2
300	31	9,087	-50.6		305	37.1
250	31	10,252	-58.7		305	40.8
200	30	11,641	-62.1		303	34.0
175	30	12,472	-59.1		306	33.2
150	30	13,441	-57.7		311	27.4
125	30	14,590	-58.1		315	25.1
100	29	15,992	-58.8		319	23.3
80	29	17,393	-58.6		318	23.9
70	29	18,231	-58.3		325	23.3
60	29	19,204	-57.7		329	24.1
50	29	20,355	-57.3		337	25.6
40	29	21,767	-56.9		335	27.2
30	27	23,595	-55.9		342	28.9
25	26	24,764	-55.4		344	28.0
20	24	26,195	-54.7		353	25.8
15	20	28,071	-52.7		346	26.8
10	18	30,727	-50.8		343	21.0
7	9	33,067	-44.4			

ATHENS, GA.
987 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	246	5.8	87	295	1.6
1000	31	141				
950	31	564	6.7	74	277	4.5
900	31	1,007	5.9	71	273	10.3
850	31	1,475	4.4	68	260	17.7
800	31	1,967	2.0	65	262	22.5
750	31	2,489	-.5	60	263	28.9
700	31	3,036	-3.2	57	266	34.2
650	31	3,616	-6.7	55	266	37.5
600	31	4,240	-10.0	41	264	45.6
550	31	4,903	-13.8	41	266	52.8
500	31	5,626	-18.1	41	266	59.2
450	30	6,396	-23.5	35	266	64.9
400	30	7,256	-29.5	32	266	71.7
350	30	8,196	-36.3	33	265	77.9
300	30	9,249	-43.4		266	89.2
250	30	10,455	-50.8		267	95.4
200	30	11,886	-57.1		266	102.6
175	30	12,727	-58.6		264	101.6
150	30	13,696	-59.3		264	92.5
125	30	14,830	-62.1		262	82.9
100	30	16,198	-64.7		262	68.8
80	30	17,561	-64.3		262	55.2
70	30	18,378	-63.4		264	47.8
60	30	19,330	-62.1		264	34.4
50	30	20,463	-59.2		261	28.9
40	30	21,870	-56.0		264	24.7
30	29	23,707	-53.8		261	23.1
25	28	24,881	-52.9		258	22.7
20	25	26,319	-52.1		266	23.9
15	14	28,191	-49.1		271	27.6
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* BARROW, ALASKA
1021 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	8	-23.7	71	116	4.3
1000	30	162	-20.3	78	120	3.5
950	30	554	-14.7	81	151	3.3
900	30	959	-12.9	73	211	3.1
850	30	1,394	-13.6	70	229	6.0
800	30	1,854	-15.0	64	246	8.0
750	30	2,344	-16.7	61	247	10.1
700	30	2,857	-19.2	57	246	13.8
650	30	3,408	-21.9	54	250	17.5
600	30	3,991	-25.4	53	249	19.6
550	30	4,616	-29.3	55	248	22.7
500	30	5,293	-33.6	53	245	26.8
450	30	6,019	-38.7	58	245	30.9
400	30	6,825	-44.4	54	246	35.9
350	30	7,708	-50.3		250	37.5
300	30	8,701	-55.7		250	41.4
250	30	9,855	-57.8		251	39.8
200	29	11,266	-55.1		254	38.7
175	29	12,119	-54.3		258	40.0
150	29	13,108	-53.9		260	39.0
125	29	14,279	-53.9		263	40.6
100	29	15,709	-54.3		268	44.7
80	29	17,138	-54.2		272	46.8
70	29	17,994	-53.9		275	50.1
60	29	18,983	-53.9		279	51.7
50	29	20,154	-53.3		283	55.8
40	29	21,591	-52.8		293	55.0
30	29	23,449	-52.0		301	66.6
25	29	24,631	-51.2		304	70.7
20	28	26,077	-50.0		309	72.1
15	26	27,982	-48.2		318	86.2
10	20	30,755	-45.6		323	89.6
7	10	33,348	-41.6			

BARTER IS., ALASKA
1020 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	15	-23.5	77	119	1.6
1000	28	162	-19.6	58	107	2.1
950	28	556	-12.1	53	240	1.4
900	28	965	-10.7	52	287	1.6
850	28	1,404	-11.2	48	283	4.9
800	28	1,868	-12.6	43	280	9.5
750	28	2,357	-14.5	43	275	10.5
700	28	2,879	-17.1	41	266	12.4
650	28	3,434	-20.2	42	271	14.8
600	28	4,021	-23.7	44	279	17.7
550	28	4,650	-27.5	43	276	23.5
500	28	5,331	-31.8	44	273	26.0
450	28	6,063	-37.0	44	272	29.9
400	28	6,872	-42.9	66	270	35.9
350	28	7,759	-49.2		270	40.0
300	28	8,756	-55.3		270	42.0
250	28	9,908	-58.4		272	42.7
200	27	11,322	-55.8		276	41.2
175	26	12,174	-55.0		278	41.2
150	23	13,153	-55.2		286	42.9
125	21	14,322	-55.5		285	42.9
100	20	15,739	-56.2		293	44.7
80	18	17,164	-55.8		295	46.0
70	18	18,013	-55.5		298	51.3
60	16	19,027	-54.5		305	49.5
50	16	20,197	-53.8		308	51.9
40	14	21,602	-53.0		316	61.2
30	12	23,548	-50.2			
25	10	24,790	-47.1			
20	6	26,354	-45.1			
15						
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BETHEL, ALASKA
1006 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	39	-4.1	90	85	4.3
1000	31	87			109	3.9
950	31	495	-1.5	71	151	12.2
900	31	925	-2.6	69	165	13.6
850	31	1,377	-4.7	71	177	15.2
800	31	1,852	-7.2	74	176	16.5
750	31	2,351	-10.0	74	175	15.9
700	31	2,882	-13.1	71	177	16.3
650	31	3,441	-16.4	66	180	17.1
600	31	4,041	-19.9	58	182	18.6
550	31	4,682	-23.8	51	186	20.0
500	31	5,372	-28.2	46	192	24.7
450	31	6,116	-33.4	48	194	26.4
400	31	6,939	-39.1	45	195	31.1
350	31	7,840	-45.8		194	34.2
300	31	8,852	-51.9		200	36.5
250	31	10,024	-54.2		206	33.6
200	31	11,460	-52.5		207	28.9
175	31	12,325	-51.3		211	25.4
150	31	13,328	-50.8		214	24.1
125	31	14,515	-50.8		223	21.0
100	31	15,968	-51.1		232	18.1
80	31	17,419	-50.8		245	17.7
70	31	18,288	-50.9		252	15.7
60	31	19,291	-50.7		257	15.2
50	31	20,478	-50.4		277	15.2
40	31	21,935	-49.9		290	15.2
30	31	23,816	-49.4		318	17.1
25	30	25,013	-49.3		328	22.1
20	28	26,465	-49.3		329	25.4
15	24	28,324	-49.6		338	25.3
10	13	31,071	-47.1		353	25.1
7	[illegible]	33,466	-45.4			

BISMARCK, N. DAK.
961 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	505	-11.8	70	337	4.3
1000	31	197				
950	31	593	-11.6	65	336	5.8
900	31	1,006	-12.3	65	332	9.5
850	31	1,442	-13.3	63	331	12.6
800	31	1,903	-14.1	58	325	13.8
750	31	2,387	-15.6	52	319	15.9
700	31	2,911	-17.8	50	310	17.1
650	31	3,457	-20.4	48	309	19.0
600	31	4,052	-23.9	44	304	21.8
550	31	4,674	-27.7	43	301	24.3
500	31	5,362	-31.6	40	297	27.4
450	31	6,092	-36.9	39	294	28.7
400	31	6,907	-42.2	R32	281	32.8
350	31	7,799	-48.0		281	37.3
300	31	8,801	-53.7		278	37.9
250	31	9,962	-57.0		280	39.2
200	31	11,378	-55.5		282	37.9
175	31	12,230	-55.1		282	38.1
150	31	13,213	-55.4		281	38.7
125	31	14,372	-56.6		277	36.3
100	30	15,778	-57.8		279	34.2
80	29	17,199	-58.4		279	31.1
70	29	18,038	-58.4		280	29.3
60	29	19,010	-58.0		280	26.8
50	29	20,161	-57.3		281	23.3
40	29	21,574	-56.6		273	22.1
30	28	23,409	-52.5		265	22.0
25	28	24,590	-51.7		258	21.4
20	26	26,036	-49.2		250	24.3
15	23	27,975	-48.0		260	28.9
10	9	30,571	-45.3			
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BOISE, IDAHO
917 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	868	-.9	65	138	3.7
1000	31	169				
950	31	584				
900	31	1,018	2.1	48	129	2.3
850	31	1,479	.9	41	333	3.1
800	31	1,964	-2.3	42	316	5.8
750	31	2,469	-5.7	43	313	8.5
700	31	3,010	-9.0	42	311	11.7
650	31	3,579	-12.0	40	312	14.2
600	31	4,190	-15.4	38	317	16.9
550	31	4,840	-19.4	R33	318	22.0
500	31	5,545	-24.1	R34	318	24.7
450	31	6,304	-29.5	R33	315	27.4
400	31	7,136	-35.7	R29	318	29.5
350	31	8,050	-42.9		321	31.1
300	31	9,072	-50.5		323	30.9
250	31	10,242	-57.4		318	32.6
200	31	11,644	-58.1		310	34.8
175	31	12,487	-56.9		304	33.4
150	31	13,464	-56.9		301	33.2
125	31	14,615	-58.2		302	32.1
100	31	16,014	-59.8		301	29.1
80	31	17,406	-60.4		300	25.8
70	31	18,237	-60.2		302	24.3
60	30	19,211	-59.9		306	20.4
50	30	20,351	-59.2		312	18.1
40	28	21,765	-58.3		316	14.6
30	23	23,641	-56.5		317	9.3
25	23	24,802	-55.1		313	8.5
20	19	26,204	-53.2		296	5.2
15	7	28,021	-50.8			
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* BOOTHVILLE, LA.
1017 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	27	1	13.6	92	61	2.5
1000	27	145	14.4	82	95	3.1
950	27	579	13.3	73	191	8.2
900	27	1,033	12.0	63	218	10.1
850	27	1,510	10.0	59	236	14.4
800	27	2,013	8.2	52	238	17.9
750	27	2,544	5.3	53	243	21.4
700	27	3,105	3.1	37	253	26.0
650	27	3,700	.1	35	267	30.9
600	27	4,339	-3.9	36	265	35.7
550	27	5,019	-8.3	33	264	42.2
500	26	5,758	-13.5	32	265	49.0
450	26	6,547	-19.1	31	266	54.2
400	26	7,419	-24.7	30	265	61.2
350	26	8,377	-31.7	33	265	70.7
300	26	9,449	-39.7	34	261	73.6
250	26	10,671	-48.8		257	82.2
200	25	12,115	-56.6		262	87.6
175	25	12,956	-59.6			
150	24	13,908	-62.7			
125	24	15,020	-66.9			
100	24	16,354	-70.3			
80	24	17,678	-70.0			
70	24	18,475	-68.0			
60	24	19,407	-64.7			
50	23	20,535	-60.3			
40	23	21,940	-56.4			
30	23	23,782	-52.4		267	17.7
25	23	24,964	-51.5		267	15.3
20	22	26,407	-50.7		265	19.0
15	22	28,294	-47.5		272	22.1
10	21	31,020	-39.7		259	26.6
7	11	33,506	-32.9			

* BROWNSVILLE, TEXAS
1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	7	14.4	84	39	1.4
1000	31	125	15.0	78	63	2.1
950	31	560	13.9	77	148	8.0
900	31	1,015	13.5	62	169	9.3
850	31	1,497	12.6	51	194	8.7
800	31	2,005	11.1	43	213	10.7
750	31	2,541	9.3	33	225	13.2
700	31	3,111	6.6	31	240	18.6
650	31	3,709	2.9	30	256	22.9
600	31	4,358	-2.0	32	257	27.6
550	31	5,036	-7.1	34	256	32.8
500	31	5,780	-12.3	34	259	39.8
450	31	6,571	-17.4	29	259	46.8
400	31	7,452	-23.4	27	258	54.2
350	31	8,415	-30.6	31	259	61.6
300	31	9,491	-39.1	26	256	69.2
250	31	10,716	-48.3		259	76.0
200	31	12,155	-56.8		255	82.0
175	31	12,993	-61.0		252	79.3
150	31	13,942	-64.8		253	76.9
125	30	15,041	-69.1		255	68.4
100	30	16,360	-73.1		253	53.2
80	30	17,660	-74.4		252	38.9
70	30	18,442	-71.7		253	28.7
60	29	19,358	-67.9		254	20.0
50	28	20,467	-62.0		254	14.6
40	28	21,865	-57.5		254	11.7
30	26	23,694	-53.9		256	9.3
25	26	24,868	-52.6		255	8.2
20	25	26,322	-50.1		261	10.5
15	24	28,216	-47.5		261	16.5
10	24	30,932	-41.0		258	23.9
7	13	33,407	-35.9			

BUFFALO, N. Y.
990 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	218	-2.8	80	254	1.9
1000	31	138				
950	31	543	-3.9	76	268	4.3
900	31	969	-6.0	74	278	7.2
850	31	1,415	-7.6	70	280	9.9
800	31	1,886	-9.1	62	281	14.4
750	31	2,383	-11.4	57	277	19.0
700	31	2,911	-13.4	51	277	22.3
650	31	3,475	-15.9	48	276	27.6
600	31	4,072	-18.8	44	277	32.1
550	31	4,716	-22.6	41	277	38.7
500	31	5,410	-27.0	39	277	43.5
450	31	6,159	-31.9	37	276	46.4
400	31	6,985	-37.7	40	276	52.3
350	31	7,893	-43.9	39	272	61.0
300	31	8,913	-50.2		271	64.5
250	31	10,089	-55.2		268	68.4
200	31	11,509	-55.7		270	68.8
175	31	12,361	-54.8		270	54.2
150	31	13,348	-54.4		273	50.3
125	31	14,513	-55.2		270	46.2
100	30	15,929	-56.3		273	38.9
80	28	17,344	-56.3		274	30.5
70	28	18,191	-56.0		271	24.3
60	27	19,171	-55.0		262	21.6
50	25	20,332	-54.0		268	26.6
40	25	21,775	-51.1		263	18.6
30	23	23,644	-51.6		285	16.3
25	21	24,829	-51.9		287	17.5
20	16	26,296	-50.1			
15	7	28,114	-51.0			
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*CANTON IS., PACIFIC AREA
+ 1009 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	4	29.1	70	70	12.6
1000	31	84	27.6	70	68	13.8
950	31	531	22.4	72	71	16.3
900	31	1,005	19.6	67	78	18.5
850	31	1,496	17.2	60	79	17.9
800	31	2,012	15.1	51	83	16.7
750	31	2,549	12.9	43	86	14.0
700	31	3,134	10.1	40	89	11.3
650	31	3,738	6.6	37	95	10.9
600	31	4,400	3.1	31	95	9.1
550	31	5,090	-.5	28	84	9.3
500	31	5,856	-4.9	27	93	8.2
450	31	6,667	-9.8	24	96	4.9
400	31	7,576	-15.7	20	100	2.3
350	31	8,570	-22.7	21	112	5.4
300	31	9,682	-31.1	20	124	8.9
250	31	10,947	-41.3		158	9.9
200	31	12,424	-53.2		214	6.2
175	31	13,271	-59.9		248	9.3
150	31	14,217	-67.2		267	13.6
125	31	15,296	-74.9		277	14.6
100	31	16,566	-82.1		263	9.5
80	30	17,825	-75.8		261	13.2
70	30	18,605	-71.5		265	17.7
60	30	19,524	-67.6		265	20.6
50	30	20,629	-64.5		265	24.7
40	29	22,004	-61.6		268	22.3
30	29	23,803	-58.4		95	8.4
25	28	24,955	-56.4		85	37.3
20	25	26,381	-52.0		88	55.2
15	17	28,266	-47.2		89	65.9
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See reference note at end of table

RAWINSONDE DATA

Average monthly values

CAPE HATTERAS, N. C.
1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	4	7.0	81	9	4.5
1000	31	132	8.2	73	6	5.4
950	31	553	6.9	66	313	8.9
900	31	998	5.0	62	288	13.6
850	31	1,463	2.8	59	272	16.9
800	31	1,952	.6	53	271	21.6
750	31	2,465	- 1.6	50	270	28.6
700	31	3,016	- 3.7	45	269	33.4
650	31	3,593	- 6.8	43	271	38.9
600	31	4,219	-10.5	42	269	45.1
550	31	4,875	-14.5	40	269	50.9
500	31	5,600	-18.9	R39	267	55.9
450	31	6,368	-24.1	R38	265	65.9
400	31	7,226	-29.9	R38	265	74.4
350	31	8,164	-36.7	R36	265	81.6
300	31	9,216	-43.6		268	87.4
250	31	10,423	-50.4		271	96.3
200	31	11,859	-55.9		271	92.1
175	31	12,708	-56.2		271	93.4
150	31	13,684	-57.6		273	82.0
125	31	14,828	-60.4		271	76.5
100	31	16,212	-62.1		267	63.1
80	31	17,587	-62.6		271	50.1
70	31	18,412	-61.8		272	42.5
60	31	19,368	-60.0		271	34.4
50	31	20,514	-57.3		268	28.4
40	30	21,934	-55.0		272	20.2
30	30	23,779	-52.7		275	13.0
25	30	24,956	-52.5		277	9.7
20	30	26,398	-51.8		299	7.8
15	29	28,276	-48.1		307	11.8
10	28	30,988	-40.5		274	27.0
7	19	33,438	-34.7			

CARIBOU, ME.
989 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	191	- 6.8	72	317	8.4
1000	31	102				
950	31	501	- 7.8	65	330	13.8
900	31	921	- 9.5	63	340	16.5
850	31	1,362	-10.6	60	339	16.3
800	31	1,827	-12.0	56	334	16.3
750	31	2,321	-14.2	51	327	15.9
700	31	2,841	-16.3	45	322	15.2
650	31	3,395	-18.4	39	308	14.8
600	31	3,991	-21.7	39	298	16.7
550	31	4,624	-25.7	41	289	19.4
500	31	5,312	-30.3	41	286	22.7
450	31	6,050	-35.6	37	286	23.3
400	31	6,864	-41.0	R32	282	28.4
350	31	7,761	-46.5		285	32.2
300	31	8,772	-51.5		277	36.7
250	31	9,949	-53.4		278	41.8
200	31	11,384	-52.9		272	41.6
175	31	12,246	-52.3		271	44.1
150	31	13,243	-52.4		275	41.8
125	31	14,421	-53.1		271	37.5
100	31	15,856	-53.6		266	35.7
80	31	17,289	-54.3		266	34.6
70	31	18,144	-54.2		268	31.9
60	31	19,134	-53.7		266	28.2
50	31	20,308	-52.7		266	25.3
40	31	21,752	-52.2		268	25.1
30	31	23,616	-52.3		270	17.5
25	29	24,808	-52.1		277	15.5
20	29	26,256	-51.3		283	17.7
15	27	28,140	-49.9		293	17.3
10	22	30,789	-46.8		291	33.6
7						

CHARLESTON, S. C.
1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	13	8.6	87	297	2.5
1000	31	139	9.8	79	287	2.3
950	31	566	9.1	70	279	6.4
900	31	1,011	7.0	68	264	11.1
850	31	1,480	5.2	66	260	17.7
800	31	1,974	3.4	59	266	23.3
750	31	2,495	.9	51	265	29.1
700	31	3,047	- 2.1	48	262	31.3
650	31	3,633	- 5.7	48	267	37.3
600	31	4,257	- 9.2	46	264	44.7
550	31	4,921	-13.4	39	265	50.9
500	31	5,644	-17.8	R36	267	56.9
450	31	6,420	-22.8	R36	267	60.6
400	31	7,281	-28.4	36	267	67.4
350	31	8,225	-34.8	R33	265	73.8
300	31	9,285	-41.8		267	79.4
250	31	10,499	-49.6		266	88.6
200	31	11,935	-56.5		267	97.1
175	31	12,779	-58.4		269	94.0
150	30	13,743	-60.5		269	86.8
125	30	14,871	-63.5		268	79.1
100	30	16,232	-65.6		267	63.9
80	30	17,584	-65.9		267	47.4
70	30	18,396	-64.9		267	40.4
60	29	19,334	-62.8		270	31.1
50	28	20,464	-59.2		269	22.7
40	26	21,870	-56.1		271	19.4
30	25	23,716	-53.7		267	15.3
25	24	24,888	-52.9		257	13.2
20	21	26,325	-52.1		267	13.8
15	9	28,173	-48.5			
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* COLD BAY, ALASKA
1002 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	30	1.3	88	162	7.2
1000	31	45			182	8.5
950	31	459	.2	82	156	11.7
900	31	890	- 1.6	82	156	12.4
850	31	1,344	- 3.3	77	160	13.8
800	31	1,822	- 5.5	72	164	15.2
750	31	2,330	- 7.9	68	173	16.3
700	31	2,861	-10.8	65	176	16.7
650	31	3,428	-14.0	64	179	16.9
600	31	4,031	-17.9	62	180	18.8
550	31	4,673	-22.3	58	181	21.2
500	31	5,370	-27.2	56	178	24.1
450	31	6,119	-32.6	55	179	26.6
400	31	6,941	-38.8	52	181	30.1
350	31	7,845	-45.0		180	33.4
300	31	8,862	-50.7		185	34.8
250	31	10,040	-53.3		195	35.5
200	31	11,479	-52.3		198	30.9
175	30	12,355	-51.0		196	27.2
150	30	13,360	-50.4		201	22.9
125	30	14,549	-50.6		204	20.4
100	30	16,000	-51.6		208	14.8
80	30	17,447	-51.6		201	9.5
70	30	18,314	-51.2		199	8.2
60	30	19,315	-51.4		211	6.4
50	30	20,499	-51.0		230	1.4
40	29	21,941	-50.8		8	1.9
30	26	23,819	-50.3		30	8.7
25	26	25,007	-50.3		32	12.4
20	23	26,478	-49.7		37	17.1
15	22	28,348	-49.9		36	18.5
10	19	31,017	-49.6		52	34.8
7	10	33,356	-46.8			

COLUMBIA, MO.
989 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	238	- 2.4	81	335	2.3
1000	31	145				
950	31	549	- 3.0	74	313	6.2
900	31	979	- 4.0	70	306	9.3
850	31	1,431	- 4.0	64	303	11.3
800	31	1,909	- 4.6	58	294	13.6
750	31	2,414	- 6.3	53	286	18.8
700	31	2,953	- 8.9	49	281	22.3
650	31	3,520	-12.0	48	280	26.0
600	31	4,133	-15.7	49	278	31.5
550	31	4,778	-19.5	49	272	34.2
500	31	5,486	-24.2	50	270	39.2
450	31	6,238	-29.6	45	268	43.5
400	31	7,077	-35.6	43	266	50.3
350	31	7,993	-41.9	40	264	55.2
300	31	9,023	-48.2		260	62.7
250	31	10,210	-53.3		256	66.6
200	31	11,636	-55.9		258	70.3
175	31	12,486	-55.7		261	61.0
150	31	13,466	-56.5		264	57.1
125	30	14,624	-57.8		264	49.7
100	30	16,026	-59.5		264	42.5
80	30	17,418	-60.7		267	37.9
70	30	18,249	-60.1		272	31.7
60	30	19,211	-59.2		274	24.3
50	30	20,357	-57.8		274	21.8
40	29	21,767	-55.5		270	21.6
30	28	23,608	-53.2		274	17.1
25	28	24,785	-52.2		276	14.2
20	25	26,235	-49.9		274	18.1
15	21	28,142	-46.3		259	13.0
10	7	30,888	-44.9			
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CORPUS CHRISTI, TEXAS
1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	23	6	13.6	83	22	5.2
1000	23	132	13.2	80		
950	23	556	11.7	79		
900	23	1,017	12.1	70		
850	23	1,494	10.4	61		
800	23	1,998	8.7	52		
750	23	2,525	7.5	40		
700	23	3,096	5.2	39		
650	23	3,688	1.3	39		
600	23	4,336	- 3.1	40		
550	23	5,009	- 8.0	44		
500	23	5,753	-12.9	42		
450	23	6,535	-18.4	43		
400	23	7,417	-24.4	38		
350	23	8,376	-31.7	39		
300	23	9,447	-39.8	37		
250	23	10,668	-48.9			
200	22	12,112	-56.7			
175	20	12,958	-59.8			
150	18	13,911	-63.3			
125	16	15,026	-67.0			
100	12	16,345	-68.8			
80	9	17,684	-69.5			
70	9	18,479	-69.2			
60	8	19,404	-67.9			
50	8	20,514	-62.3			
40	7	21,907	-57.9			
30	6	23,728	-52.6			
25	6	24,907	-52.0			
20	6	26,360	-50.2			
15	5	28,255	-46.6			
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DAYTON, OHIO
981 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	297	- 1.2	84	240	1.0
1000	31	139				
950	31	548	- 1.6	76	230	4.7
900	31	977	- 3.0	70	249	8.7
850	31	1,429	- 4.1	64	259	12.8
800	31	1,907	- 5.8	61	261	16.3
750	31	2,411	- 8.2	61	265	21.4
700	31	2,944	-10.3	54	264	25.8
650	31	3,513	-13.1	47	264	32.1
600	31	4,119	-16.4	44	266	39.4
550	31	4,768	-20.2	41	266	44.7
500	31	5,470	-24.7	39	266	48.4
450	31	6,226	-29.7	R36	264	49.9
400	31	7,061	-35.4	R30	263	57.3
350	31	7,978	-41.9	R28	264	64.9
300	31	9,007	-48.6		264	66.2
250	31	10,190	-54.1		261	70.7
200	31	11,611	-56.9		261	69.7
175	31	12,457	-56.4		264	61.6
150	31	13,435	-56.6		264	52.1
125	31	14,590	-57.6		269	42.9
100	31	15,995	-58.8		270	38.7
80	30	17,399	-59.4		274	32.6
70	30	18,235	-59.0		276	28.0
60	30	19,202	-58.2		275	22.5
50	30	20,353	-56.5		277	21.2
40	29	21,775	-54.4		280	17.1
30	27	23,625	-52.8		281	13.2
25	26	24,801	-52.3		273	15.9
20	25	26,241	-51.5		270	18.8
15	19	28,134	-49.3		277	14.4
10	6	30,877	-45.9			

DEL RIO, TEXAS
980 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	314	9.3	70	57	3.1
1000	31	143				
950	31	570	10.0	63	102	3.3
900	31	1,020	9.0	60	190	5.1
850	31	1,493	8.5	49	226	5.8
800	31	1,994	7.9	38	259	10.5
750	31	2,522	5.6	35	271	15.7
700	31	3,086	2.5	30	264	21.2
650	31	3,675	- 1.5	29	260	27.6
600	31	4,314	- 5.8	29	257	34.4
550	31	4,982	-10.4	28	256	42.2
500	31	5,718	-15.3	R31	258	48.2
450	31	6,499	-20.8	R30	258	54.4
400	31	7,368	-26.9	R31	259	63.9
350	31	8,318	-33.6	R28	259	70.9
300	31	9,382	-41.6	R29	259	79.3
250	31	10,597	-49.9		258	85.7
200	31	12,031	-56.6		259	91.3
175	31	12,874	-58.6		258	90.7
150	31	13,836	-61.5		259	86.8
125	31	14,957	-65.3		259	73.6
100	31	16,302	-69.3		259	58.7
80	31	17,633	-69.0		261	43.3
70	31	18,432	-67.2		259	37.5
60	30	19,370	-64.7		257	25.6
50	30	20,488	-62.0		257	19.4
40	30	21,883	-57.5		255	20.2
30	29	23,717	-53.6		249	23.1
25	28	24,893	-52.6		256	22.5
20	27	26,338	-50.9		266	26.8
15	24	28,223	-47.4		263	28.2
10	10	30,946	-41.1			

DENVER, COLO.
836 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,611	- 6.3	79	236	1.2
1000	31	183				
950	31	592				
900	31	1,022				
850	31	1,476				
800	31	1,952	- 5.9	60	295	3.1
750	31	2,456	- 8.0	57	311	7.0
700	31	2,990	-10.3	57	305	12.0
650	31	3,555	-13.5	57	294	20.0
600	31	4,162	-17.2	54	292	25.3
550	31	4,809	-21.2	44	290	27.2
500	31	5,506	-25.9	40	287	28.9
450	31	6,258	-31.1	R32	283	32.4
400	31	7,087	-37.1	R34	280	36.7
350	31	7,997	-43.7		280	37.9
300	31	9,016	-50.6		276	42.3
250	31	10,190	-55.3		272	50.3
200	31	11,608	-56.4		269	55.2
175	31	12,455	-56.4		270	56.1
150	31	13,432	-57.1		269	53.8
125	31	14,582	-58.5		271	50.9
100	31	15,977	-60.3		273	43.5
80	31	17,366	-61.4		272	40.8
70	31	18,193	-61.6		268	35.9
60	31	19,152	-60.9		268	32.4
50	31	20,289	-59.8		266	28.4
40	31	21,687	-58.6		262	25.3
30	30	23,504	-55.3		254	25.6
25	29	24,690	-52.9		246	18.3
20	26	26,151	-50.5		243	19.4
15	18	28,083	-45.1		235	20.2
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DODGE CITY, KANS.
926 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	792	- 4.7	76	4	4.1
1000	31	181				
950	31	590				
900	31	1,016	- 3.3	64	351	7.0
850	31	1,468	- 3.6	54	342	9.7
800	31	1,947	- 4.4	55	335	12.2
750	31	2,454	- 6.1	52	315	12.8
700	31	2,992	- 7.9	48	291	18.3
650	31	3,561	-11.3	44	280	22.9
600	31	4,175	-15.3	43	278	28.2
550	31	4,824	-19.7	38	275	29.7
500	31	5,529	-24.6	37	268	33.0
450	31	6,282	-29.8	35	268	39.2
400	31	7,118	-36.0	R34	266	43.3
350	31	8,033	-42.6	R36	265	52.4
300	31	9,058	-48.9		266	62.5
250	31	10,241	-54.3		263	74.0
200	31	11,663	-56.0		264	74.6
175	31	12,511	-56.2		265	71.3
150	31	13,489	-57.0		265	67.8
125	31	14,639	-59.1		266	61.2
100	31	16,030	-61.0		266	50.7
80	31	17,411	-62.2		265	45.8
70	31	18,235	-62.3		263	42.7
60	31	19,186	-61.7		265	36.5
50	31	20,320	-59.8		263	32.4
40	31	21,720	-58.3		255	30.7
30	29	23,545	-54.0		251	26.6
25	26	24,726	-52.1		247	24.3
20	24	26,175	-49.7		240	26.0
15	18	28,077	-46.3		228	21.8
10	7	30,714	-45.9			

EL PASO, TEXAS
882 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,193	6.2	44	253	2.3
1000	31	143				
950	31	571				
900	31	1,025				
850	31	1,493	7.0	37	268	5.2
800	31	1,989	4.2	38	263	9.7
750	31	2,508	1.2	37	259	17.7
700	31	3,063	- 2.0	32	260	23.5
650	31	3,644	- 5.7	31	260	26.0
600	31	4,272	- 9.8	R31	258	29.9
550	31	4,931	-14.0	R33	259	35.9
500	31	5,657	-18.8	R30	262	42.9
450	31	6,427	-24.3	R32	264	50.1
400	31	7,284	-30.2	R30	265	59.4
350	31	8,221	-36.9	R28	264	66.6
300	31	9,272	-44.2		263	73.8
250	31	10,475	-51.6		261	78.9
200	31	11,902	-57.4		262	80.6
175	31	12,742	-58.7		261	79.1
150	31	13,706	-60.7		262	72.1
125	31	14,834	-62.7		263	67.2
100	31	16,196	-66.7		265	52.1
80	31	17,542	-67.1		262	40.6
70	30	18,348	-65.7		267	34.8
60	30	19,285	-64.9		266	28.4
50	30	20,406	-61.7		263	19.2
40	29	21,802	-59.1		261	19.4
30	28	23,625	-56.0		264	22.9
25	27	24,790	-53.7		261	24.7
20	24	26,239	-51.9		268	25.3
15	16	28,105	-48.5		277	27.0
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ELY, NEV.
806 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,908	- 5.0	67	195	3.1
1000	31	175				
950	31	591				
900	31	1,029				
850	31	1,485				
800	31	1,967	- 3.1	57	203	2.3
750	31	2,480	- 3.5	50	310	2.7
700	31	3,020	- 7.2	50	308	6.8
650	31	3,592	-10.7	47	312	10.7
600	31	4,206	-13.9	42	311	15.2
550	31	4,859	-18.0	38	307	17.9
500	31	5,567	-22.9	R34	309	18.8
450	31	6,326	-28.7	R32	310	21.6
400	31	7,162	-35.3	R31	303	20.4
350	31	8,078	-42.6	R27	301	21.4
300	31	9,101	-50.0		297	25.4
250	31	10,274	-56.1		291	34.4
200	31	11,684	-58.3		281	38.7
175	31	12,524	-57.9		281	39.8
150	31	13,496	-58.2		280	39.8
125	31	14,639	-59.9		283	36.1
100	29	16,018	-61.2		281	32.8
80	29	17,398	-62.2		279	27.4
70	29	18,222	-62.5		282	24.5
60	29	19,172	-62.0		285	22.3
50	28	20,311	-61.4		289	18.6
40	26	21,727	-59.7		296	14.0
30	24	23,527	-58.4		293	14.2
25	22	24,678	-56.1		289	12.6
20	19	26,095	-53.1		301	6.4
15	10	28,028	-48.4			
10						

* FAIRBANKS, ALASKA
1001 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	135	- 6.9	81	334	1.7
1000	31	139			15	2.3
950	31	547	- 1.9	66	171	3.9
900	31	974	- 3.6	68	207	7.2
850	31	1,424	- 5.3	64	221	11.5
800	31	1,898	- 8.0	66	228	14.4
750	31	2,393	-10.6	67	231	15.9
700	31	2,925	-13.7	66	236	17.1
650	31	3,479	-17.3	67	239	17.5
600	31	4,081	-20.7	62	239	18.6
550	31	4,715	-24.3	56	246	20.4
500	31	5,408	-28.9	56	246	23.5
450	31	6,147	-34.1	54	247	26.0
400	31	6,969	-39.9	55	249	28.6
350	31	7,869	-46.4		252	29.3
300	31	8,879	-52.6		259	33.6
250	31	10,042	-57.4		266	38.9
200	31	11,453	-56.3		272	35.4
175	31	12,304	-54.7		274	33.4
150	31	13,292	-54.0		277	32.6
125	31	14,461	-54.3		283	35.7
100	30	15,894	-54.7		287	34.2
80	30	17,320	-54.5		295	37.1
70	30	18,175	-54.5		298	36.3
60	30	19,162	-54.3		307	35.5
50	30	20,330	-53.8		308	37.9
40	30	21,764	-53.4		316	42.2
30	27	23,595	-53.4		316	43.3
25	25	24,775	-53.6		320	47.0
20	24	26,201	-53.2		325	47.0
15	19	28,082	-51.9		332	58.7
10	10	30,813	-49.1			

FLINT, MICH.
988 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	234	- 4.6	77	228	.8
1000	31	140				
950	31	544	- 5.3	72	341	1.9
900	31	967	- 6.8	74	311	2.9
850	31	1,413	- 7.9	70	289	6.8
800	31	1,883	- 9.3	66	283	10.5
750	31	2,379	-11.1	61	273	14.8
700	31	2,909	-12.8	54	271	18.3
650	31	3,467	-15.6	50	271	21.2
600	31	4,071	-19.2	43	269	25.3
550	31	4,713	-23.2	43	265	28.4
500	31	5,405	-27.4	42	267	33.8
450	31	6,150	-32.5	40	263	40.0
400	31	6,977	-38.1	38	265	44.7
350	31	7,884	-44.2	R29	262	51.7
300	31	8,903	-50.4		262	58.1
250	31	10,078	-55.1		260	62.5
200	31	11,497	-55.8		262	67.8
175	30	12,346	-55.7		263	58.5
150	30	13,329	-55.2		265	56.7
125	30	14,491	-55.8		265	51.1
100	30	15,906	-56.9		265	47.2
80	29	17,327	-56.7		266	39.4
70	29	18,173	-56.8		264	36.3
60	29	19,151	-56.2		263	32.8
50	28	20,312	-54.6		263	29.5
40	28	21,746	-53.0		259	24.7
30	27	23,608	-51.6		251	24.3
25	25	24,787	-51.2		257	22.3
20	24	26,239	-50.9		252	19.6
15	20	28,106	-50.0		260	21.6
10	5	30,844	-46.0			

FORT WORTH, TEXAS
998 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	180	5.7	72	349	4.3
1000	31	158			359	6.2
950	31	584	4.5	71	339	4.9
900	31	1,018	4.8	70	290	6.8
850	31	1,486	5.4	54	280	11.8
800	31	1,981	3.7	49	284	15.5
750	31	2,503	1.1	43	280	20.0
700	31	3,056	- 1.8	38	275	26.0
650	31	3,641	- 5.3	39	268	34.0
600	31	4,267	- 9.4	40	266	40.8
550	31	4,928	-14.1	42	264	45.1
500	31	5,651	-19.1	39	262	49.9
450	31	6,425	-24.4	36	261	55.2
400	31	7,277	-30.0	37	262	64.3
350	31	8,215	-36.6	35	260	75.2
300	31	9,267	-43.6		259	84.1
250	31	10,470	-51.6		259	93.4
200	31	11,896	-56.8		259	92.7
175	31	12,741	-57.6		257	86.6
150	31	13,709	-59.7		258	85.5
125	31	14,840	-63.0		260	69.5
100	31	16,206	-64.9		261	59.8
80	30	17,558	-65.6		261	45.6
70	30	18,370	-65.0		261	40.0
60	30	19,314	-63.5		263	33.6
50	29	20,439	-60.2		259	24.7
40	29	21,842	-56.9		262	22.1
30	29	23,680	-53.2		255	22.9
25	29	24,858	-51.8		256	26.6
20	29	26,311	-49.8		262	19.8
15	25	28,215	-46.9		257	12.4
10						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

MARCH 1965

GLASGOW, MONT.
940 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	696	-14.7	72	47	2.1
1000	31	220				
950	31	607				
900	31	1,024	-10.5	65	334	8.5
850	31	1,463	-11.4	62	323	13.0
800	31	1,927	-13.1	59	320	15.5
750	31	2,414	-15.0	55	319	16.7
700	31	2,936	-17.6	52	324	17.5
650	31	3,484	-20.6	51	323	18.5
600	31	4,075	-24.2	50	319	22.0
550	31	4,698	-28.1	49	318	24.9
500	31	5,382	-32.5	45	313	27.0
450	31	6,110	-37.8	44	313	28.2
400	31	6,920	-43.2	41	308	30.1
350	31	7,808	-48.5		309	34.6
300	31	8,810	-53.3		308	35.7
250	31	9,975	-56.3		307	35.7
200	31	11,391	-55.9		309	33.4
175	31	12,240	-55.8		306	33.0
150	31	13,220	-56.1		305	32.8
125	31	14,376	-56.9		302	31.9
100	31	15,784	-58.2		302	28.0
80	31	17,185	-58.6		302	27.0
70	31	18,023	-58.5		303	25.8
60	31	18,991	-58.6		302	22.3
50	31	20,137	-58.0		297	19.6
40	27	21,574	-56.6		295	18.3
30	24	23,405	-52.7		276	16.9
25	23	24,583	-51.1		271	14.8
20	19	26,069	-48.3		256	23.9
15	10	27,964	-43.3			
10	5	30,872	-35.6			

***1/ GRAND JUNCTION, COLO.**
850 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	1,474	.4	62	109	2.7
1000	30	153				
950	30	573				
900	30	1,015				
850	30	1,477			102	3.9
800	30	1,963	- .7	52	173	1.4
750	30	2,472	- 4.3	54	275	3.9
700	30	3,016	- 8.3	58	279	8.4
650	30	3,581	-12.3	61	277	12.2
600	30	4,194	-16.3	55	280	17.3
550	30	4,843	-20.4	43	282	20.4
500	30	5,544	-24.9	R38	289	23.5
450	30	6,296	-30.1	R37	293	25.8
400	30	7,131	-36.3	R36	289	27.4
350	30	8,043	-43.3		288	30.9
300	30	9,064	-50.2		284	34.2
250	30	10,239	-55.1		279	46.8
200	30	11,655	-56.8		277	50.7
175	30	12,502	-55.8		275	47.2
150	30	13,481	-56.7		275	45.8
125	30	14,630	-58.9		273	42.7
100	30	16,023	-60.9		271	36.3
80	30	17,405	-62.1		272	33.6
70	30	18,228	-62.4		273	29.7
60	30	19,181	-62.3		274	25.8
50	29	20,319	-61.1		272	17.9
40	27	21,743	-58.1		276	13.8
30	24	23,588	-55.8		274	12.4
25	24	24,752	-54.6		279	9.9
20	21	26,185	-52.9		276	9.5
15	17	28,044	-51.4		285	9.9
10	[illegible]	30,682	-48.2			

GREAT FALLS, MONT.
891 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,123	- 8.9	71	274	4.1
1000	31	214				
950	31	619				
900	31	1,043				
850	31	1,484	- 8.6	55	309	6.8
800	31	1,952	-10.6	58	328	10.1
750	31	2,446	-13.1	58	323	12.0
700	31	2,969	-16.3	60	318	13.8
650	31	3,523	-19.3	58	315	16.9
600	31	4,116	-22.5	53	315	19.6
550	31	4,748	-26.4	48	312	24.1
500	31	5,433	-30.8	46	314	28.9
450	31	6,173	-35.6	41	315	31.3
400	31	6,985	-41.2	R31	319	35.7
350	31	7,880	-47.2		318	41.0
300	31	8,886	-52.9		319	42.9
250	31	10,050	-57.0		320	42.3
200	31	11,459	-57.0		314	36.7
175	31	12,306	-56.2		311	36.3
150	31	13,284	-56.9		310	35.9
125	31	14,436	-57.7		309	34.4
100	31	15,839	-59.3		309	31.7
80	30	17,235	-59.5		310	26.2
70	29	18,082	-59.5		307	24.5
60	29	19,046	-59.1		309	22.5
50	28	20,211	-57.9		310	18.6
40	27	21,640	-57.3		312	17.1
30	27	23,466	-55.4		307	15.0
25	26	24,639	-54.0		300	16.7
20	25	26,068	-52.1		285	17.3
15	20	27,956	-49.9		268	17.5
10	9	30,670	-47.8			

GREEN BAY, WIS.
991 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	210	- 6.5	80	4	4.5
1000	31	139				
950	31	536	- 7.0	70	12	5.6
900	31	960	- 8.9	69	17	3.9
850	31	1,401	-10.3	64	341	3.1
800	31	1,867	-11.5	58	297	6.6
750	31	2,357	-13.3	54	293	11.1
700	31	2,884	-15.5	51	289	13.2
650	31	3,438	-18.2	51	280	17.5
600	31	4,034	-21.3	49	277	22.7
550	31	4,666	-24.9	48	276	27.2
500	31	5,358	-29.1	47	269	30.5
450	31	6,095	-34.2	45	269	35.0
400	31	6,918	-39.5	44	270	39.8
350	31	7,820	-45.5		267	46.0
300	31	8,834	-51.4		265	50.3
250	31	10,007	-55.1		264	57.9
200	31	11,428	-55.3		265	57.5
175	31	12,282	-54.3		266	55.8
150	31	13,270	-54.5		267	51.3
125	31	14,435	-55.5		266	45.3
100	31	15,854	-56.6		267	44.3
80	31	17,267	-57.1		266	42.5
70	31	18,112	-56.7		263	37.5
60	30	19,099	-56.1		262	35.5
50	30	20,261	-54.8		258	30.7
40	30	21,692	-53.0		253	28.2
30	28	23,557	-51.1		249	24.7
25	28	24,744	-50.7		245	21.8
20	28	26,203	-49.4		242	20.0
15	21	28,090	-50.3		312	12.4

GREENSBORO, N. C.
984 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	273	2.7	83	354	1.9
1000	31	145				
950	31	563	4.1	64	310	4.7
900	31	1,001	2.9	63	285	8.0
850	31	1,463	1.1	60	276	13.2
800	31	1,949	- 1.1	59	269	18.3
750	31	2,459	- 3.4	55	268	23.7
700	31	3,006	- 6.1	52	266	28.4
650	31	3,582	- 9.0	45	265	33.0
600	31	4,200	-12.6	44	267	40.2
550	31	4,855	-16.6	46	267	45.8
500	31	5,571	-21.3	41	268	50.7
450	31	6,338	-26.3	R38	270	58.7
400	31	7,184	-31.7	R37	270	66.8
350	31	8,116	-37.8	R37	269	77.7
300	31	9,164	-44.7		268	84.9
250	31	10,364	-51.7		268	87.4
200	31	11,794	-56.7		267	90.5
175	31	12,641	-56.5		267	90.9
150	31	13,617	-57.7		267	78.7
125	31	14,761	-59.9		264	69.2
100	31	16,146	-62.1		264	60.2
80	31	17,521	-62.4		266	49.5
70	31	18,349	-61.7		267	41.4
60	31	19,307	-60.3		266	36.5
50	31	20,450	-57.6		269	29.9
40	31	21,864	-55.6		265	23.1
30	31	23,705	-53.1		268	22.5
25	31	24,880	-52.8		267	20.4
20	30	26,319	-52.1		264	22.1
15	17	28,180	-49.9			
10	[illegible]	30,935	-42.8			

GUAM, MARIANA IS.
1000 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	111	23.1	87	93	5.6
1000	31	108			93	6.0
950	31	554	21.6	80	89	16.3
900	31	1,024	18.7	73	92	16.9
850	31	1,513	16.4	60	88	13.2
800	31	2,029	15.4	43	85	10.7
750	31	2,571	12.9	37	77	8.0
700	31	3,150	9.9	36	82	5.6
650	31	3,761	6.7	28	95	3.3
600	31	4,415	3.1	25	120	4.3
550	31	5,114	- .7	21	115	7.2
500	31	5,869	- 5.5	25	119	5.6
450	31	6,686	-10.4	25	132	4.3
400	31	7,585	-16.1	R20	111	4.5
350	31	8,577	-22.6	R20	85	2.1
300	31	9,689	-31.3	R21	149	1.6
250	31	10,952	-41.7		223	5.2
200	31	12,424	-54.0		205	9.5
175	31	13,267	-61.0		189	10.3
150	31	14,207	-68.9		183	12.4
125	31	15,275	-76.9		169	13.8
100	30	16,533	-83.7		132	6.8
80	30	17,780	-79.6		74	1.6
70	29	18,547	-75.2		284	4.3
60	29	19,452	-70.8		241	6.2
50	27	20,545	-66.7		244	7.2
40	27	21,910	-61.4		213	2.7
30	27	23,725	-55.5		79	12.2
25	27	24,892	-53.5		[illegible]	20.6
20	26	26,335	-51.2		91	29.1
15	22	28,228	-46.8		84	37.1
10	13	30,928	-42.4		85	41.6
7	6	33,344	-39.2			
5	6	35,671	-34.5			

HILO, HAWAII
1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	11	18.4	87	239	4.5
1000	31	139	20.2	77	255	3.5
950	31	582	17.1	84	64	2.3
900	31	1,041	14.1	83	80	2.9
850	31	1,522	11.5	78	86	2.1
800	31	2,027	9.1	68	161	1.9
750	31	2,564	6.9	53	203	2.9
700	31	3,125	4.4	49	241	2.9
650	31	3,724	1.6	37	269	5.1
600	31	4,366	- 1.9	27	293	9.3
550	31	5,045	- 6.0	27	298	14.6
500	31	5,793	-10.9	30	291	20.0
450	31	6,587	-16.3	29	289	25.4
400	31	7,470	-22.3	32	292	32.6
350	31	8,438	-29.3	29	293	40.8
300	31	9,522	-36.8	28	293	51.9
250	31	10,761	-45.3		295	62.2
200	31	12,220	-54.5		296	67.4
175	31	13,065	-59.7		300	66.2
150	31	14,017	-64.9		297	64.1
125	31	15,115	-70.1		293	50.5
100	31	16,423	-74.9		288	39.2
80	31	17,716	-74.4		288	25.8
70	31	18,498	-71.0		286	18.1
60	31	19,421	-66.1		270	9.7
50	30	20,541	-62.3		258	5.6
40	30	21,931	-58.4		264	4.3
30	29	23,757	-54.7		334	1.4
25	29	24,929	-52.8		83	2.9
20	28	26,376	-50.5		69	3.1
15	24	28,261	-46.9		64	5.8
10	12	30,945	-44.3			

HUNTINGTON, W. VA.
987 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	246	1.7	78	225	1.2
1000	31	141				
950	31	554	1.5	69	234	5.6
900	31	989	- .3	67	252	9.9
850	31	1,445	- 2.2	60	261	13.2
800	31	1,926	- 4.1	55	268	17.7
750	31	2,433	- 6.5	57	264	21.6
700	31	2,971	- 8.3	49	265	27.2
650	31	3,540	-11.2	46	268	31.3
600	31	4,155	-14.5	49	267	34.6
550	31	4,807	-18.2	46	267	38.9
500	31	5,516	-23.0	47	266	46.2
450	31	6,276	-28.0	40	266	49.3
400	31	7,117	-33.9	37	267	55.0
350	31	8,040	-40.2	39	268	60.2
300	31	9,077	-46.7		265	72.8
250	31	10,268	-53.0		267	80.8
200	30	11,691	-56.7		267	79.8
175	30	12,537	-56.2		270	70.7
150	30	13,516	-56.8		270	59.8
125	30	14,668	-58.3		268	52.8
100	30	16,066	-59.6		268	50.1
80	29	17,456	-60.1		269	39.4
70	29	18,290	-59.2		272	32.8
60	29	19,258	-58.7		270	29.3
50	29	20,408	-57.1		269	24.9
40	29	21,829	-54.3		267	22.0
30	27	23,680	-53.0		268	21.0
25	23	24,863	-52.0		272	16.3
20	22	26,307	-51.2		267	17.1
15	18	28,184	-49.0		269	19.4
10	6	30,904	-43.3			

*** INTERNAT. FALLS, MINN.**
976 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	360	-14.8	73	337	3.5
1000	31	177				
950	31	565	-11.7	76	4	4.3
900	31	981	-12.7	78	15	4.1
850	31	1,416	-14.3	72	355	4.1
800	31	1,874	-16.0	68	354	5.4
750	31	2,355	-17.6	66	324	6.0
700	31	2,874	-20.1	60	305	8.5
650	31	3,414	-23.0	59	300	11.7
600	31	4,006	-25.9	56	289	13.8
550	31	4,625	-29.6	55	285	16.5
500	31	5,305	-34.1	57	280	18.6
450	31	6,031	-38.8	54	274	22.9
400	31	6,837	-44.0	54	273	27.8
350	31	7,723	-48.9		275	32.4
300	31	8,724	-54.0		274	35.0
250	31	9,885	-56.7		275	34.8
200	30	11,291	-55.3		276	32.4
175	30	12,144	-54.8		275	33.2
150	30	13,129	-55.2		276	34.4
125	30	14,291	-56.2		273	32.4
100	30	15,706	-57.2		276	30.1
80	30	17,117	-57.3		271	28.9
70	30	17,960	-57.1		268	28.9
60	29	18,931	-56.7		268	26.0
50	29	20,089	-55.6		265	25.3
40	29	21,514	-54.6		257	24.3
30	29	23,371	-51.2		254	26.6
25	29	24,559	-50.1		246	25.1
20	27	26,022	-48.1		241	26.8
15	27	27,926	-46.5		247	29.1
10	22	30,643	-44.9		261	18.3
7	11	33,042	-41.4			

JACKSON, MISS.
1006 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	94	7.1	85	2	1.6
1000	31	140			46	1.4
950	31	561	7.9	80	248	5.8
900	31	1,010	7.2	78	260	13.0
850	31	1,481	6.0	76	259	19.0
800	31	1,977	3.9	69	263	23.1
750	31	2,496	1.1	65	270	26.0
700	31	3,052	- 1.3	49	269	32.2
650	31	3,633	- 4.4	43	263	37.7
600	31	4,268	- 7.8	R39	262	43.9
550	31	4,927	-12.0	R39	262	50.1
500	31	5,663	-16.7	R34	261	57.5
450	31	6,433	-22.1	R34	263	63.3
400	31	7,303	-28.0	R35	263	69.0
350	31	8,249	-34.6	39	265	76.0
300	31	9,309	-42.1	42	264	86.1
250	31	10,520	-50.3		263	100.0
200	31	11,951	-57.2		262	110.3
175	31	12,792	-58.8		263	108.6
150	31	13,755	-61.0		265	100.0
125	31	14,880	-63.6		263	83.7
100	30	16,237	-66.6		262	66.0
80	28	17,583	-66.5		261	55.2
70	27	18,394	-65.6		262	45.6
60	27	19,338	-63.5		262	36.9
50	27	20,465	-60.4		261	31.1
40	27	21,873	-56.0		249	27.4
30	26	23,715	-53.7		256	24.1
25	25	24,885	-52.7		258	22.7
20	25	26,331	-51.2		258	20.0
15	21	28,211	-48.6		255	20.4
10	5	30,930	-45.4			

JACKSONVILLE, FLA.
1018 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	[illegible]	12.4	89	261	1.9
1000	31	152	13.0	79	252	3.5
950	31	585	12.3	70	242	9.7
900	31	1,036	10.7	64	252	15.9
850	31	1,511	8.6	58	260	19.8
800	31	2,011	6.1	55	262	24.3
750	31	2,535	3.4	50	264	29.5
700	31	3,094	.7	42	266	33.4
650	31	3,680	- 2.6	39	267	38.7
600	31	4,316	- 6.1	40	269	45.8
550	31	4,983	-10.2	38	269	51.7
500	31	5,720	-14.8	R33	270	57.3
450	31	6,503	-19.9	R31	270	64.9
400	31	7,374	-25.9	R31	269	76.5
350	31	8,328	-32.5	R30	271	79.4
300	31	9,398	-39.8	R28	269	84.7
250	31	10,622	-48.2		266	87.8
200	30	12,064	-56.0		263	100.0
175	30	12,905	-59.7		268	98.1
150	30	13,863	-62.3		267	88.2
125	30	14,976	-66.3		263	84.3
100	30	16,317	-69.4		266	58.5
[illegible]	29	17,645	-68.7		265	42.9
70	29	18,447	-66.8		271	29.7
60	29	19,385	-64.1		275	19.6
50	28	20,510	-60.2		271	17.7
40	28	21,915	-56.3		274	19.8
30	28	23,754	-53.6		286	6.2
25	28	24,930	-52.7		277	7.4
20	[illegible]	26,374	-51.7		276	5.4
15	26	28,263	-47.9		318	5.1
10	19	30,969	-39.3		273	20.6
7	5	33,520	-31.5			

JOHN F. KENNEDY INT. ARPT.NY
1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	[illegible]	.8	60	336	5.6
1000	31	135	.1	59	337	7.8
950	31	544	- 1.8	61	336	9.3
900	31	974	- 3.9	63	322	9.7
850	31	1,424	- 4.7	59	299	12.2
800	31	1,900	- 6.3	57	289	17.1
750	31	2,404	- 8.1	52	283	22.3
700	31	2,938	- 9.7	47	281	27.8
650	31	3,504	-12.7	47	281	32.2
600	31	4,114	-16.3	48	281	37.1
550	31	4,761	-20.4	43	280	40.2
500	31	5,463	-25.2	41	278	45.1
450	31	6,218	-30.6	40	277	49.5
400	31	7,046	-36.2	42	277	55.0
350	31	7,961	-42.4	35	277	63.5
300	31	8,989	-48.4		276	70.9
250	31	10,176	-53.2		275	76.5
200	31	11,605	-55.1		275	69.3
175	31	12,458	-54.4		274	62.7
150	31	13,445	-54.7		274	60.2
125	31	14,609	-56.1		274	50.7
100	31	16,023	-57.3		273	43.5
80	30	17,433	-57.9		272	40.4
70	30	18,275	-57.5		273	37.3
60	30	19,252	-55.8		275	34.4
50	30	20,415	-54.9		277	28.2
40	29	21,844	-53.5		278	24.3
30	28	23,699	-52.3		283	19.6
25	25	24,885	-52.0		287	18.1
20	22	26,334	-51.1		293	14.6
15	19	28,197	-49.0		288	17.5
10	10	30,780	-46.4			
7	[illegible]	33,184	-40.2			

JOHNSTON IS., PACIFIC AREA
1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	3	23.4	72	72	10.3
1000	31	134	22.5	73	69	13.0
950	31	579	18.7	77	69	14.2
900	31	1,041	15.3	79	76	12.0
850	31	1,525	12.7	73	75	10.3
800	31	2,033	11.3	50	65	9.3
750	31	2,573	9.7	32	49	7.8
700	31	3,142	8.1	R18	24	6.8
650	31	3,747	5.2	R17	357	7.4
600	31	4,400	1.6	R17	332	10.7
550	31	5,088	- 2.5	R17	319	14.4
500	31	5,846	- 7.0	R16	308	15.3
450	31	6,655	-12.6	R18	309	21.6
400	31	7,550	-19.3	R19	305	25.6
350	31	8,528	-26.4	R21	303	32.4
300	31	9,626	-33.5	R21	299	39.4
250	31	10,883	-42.3		292	44.3
200	31	12,354	-53.9		294	44.9
175	31	13,198	-60.5		297	43.1
150	31	14,142	-67.5		298	43.7
125	31	15,221	-74.5		299	38.7
100	30	16,504	-79.7		301	28.4
80	28	17,766	-78.8		300	14.6
70	28	18,531	-75.0		294	9.7
60	28	19,438	-69.0		272	6.8
50	28	20,545	-63.1		257	4.3
40	28	21,936	-58.3		151	1.2
30	28	23,761	-55.0		72	7.2
25	25	24,920	-53.0		84	13.6
20	23	26,364	-49.5		82	19.2
15	15	28,261	-46.1		80	26.0

KEY WEST, FLORIDA
1017 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	25	3	22.0	80	99	2.5
1000	25	150	20.9	81	103	6.0
950	25	588	18.1	81	131	8.2
900	25	1,055	15.5	74	163	6.2
850	25	1,540	13.3	66	192	5.2
800	25	2,049	11.5	57	235	9.5
750	25	2,583	9.5	49	251	10.7
700	25	3,158	7.1	40	253	14.2
650	25	3,760	4.1	39	260	17.3
600	25	4,411	.3	39	267	22.9
550	25	5,095	- 3.8	37	267	26.4
500	25	5,850	- 8.7	35	268	30.5
450	25	6,651	-14.5	35	265	32.6
400	25	7,542	-21.2	36	264	39.6
350	25	8,512	-28.7	36	268	45.1
300	25	9,595	-37.6	36	272	47.6
250	25	10,827	-47.1		273	52.8
200	24	12,274	-56.2		275	54.6
175	24	13,113	-60.8		273	54.0
150	24	14,063	-64.6		272	54.0
125	24	15,163	-69.8		270	49.3
100	24	16,475	-74.7		271	43.7
80	24	17,767	-75.5		269	39.6
70	24	18,543	-73.0		268	31.3
60	24	19,455	-69.1		268	21.6
50	24	20,562	-63.0		273	8.4
40	23	21,954	-57.4		330	2.7
30	19	23,791	-54.2		68	8.0
25	19	24,965	-52.5		92	9.1
20	17	26,408	-50.1		104	4.5
15	15	28,290	-47.0		255	5.6
10	8	31,021	-42.0			

KING SALMON, ALASKA
1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	15	- .3	87	120	7.0
1000	30	92			131	9.1
950	30	508	.3	70	153	15.2
900	30	936	- 1.5	67	164	16.3
850	30	1,390	- 3.6	65	176	16.9
800	30	1,867	- 5.9	65	186	19.4
750	30	2,374	- 8.5	62	190	20.8
700	30	2,903	-11.1	53	193	21.0
650	30	3,471	-14.4	50	195	22.3
600	30	4,071	-17.8	49	201	23.9
550	30	4,718	-22.1	54	203	24.1
500	30	5,410	-27.0	54	204	24.9
450	30	6,158	-32.4	48	203	28.6
400	30	6,981	-38.3	45	208	29.9
350	30	7,885	-45.1		208	33.4
300	30	8,900	-51.3		215	35.9
250	30	10,070	-55.8		218	35.0
200	30	11,492	-54.5		219	28.2
175	29	12,346	-52.6		223	23.3
150	29	13,342	-52.2		225	22.1
125	29	14,522	-52.3		235	19.2
100	29	15,963	-53.0		241	14.8
80	29	17,400	-52.8		254	13.6
70	29	18,261	-52.7		267	11.8
60	29	19,256	-52.7		281	10.9
50	28	20,431	-52.1		297	11.5
40	28	21,876	-51.8		312	11.7
30	28	23,740	-51.8		340	15.9
25	28	24,921	-51.8		347	17.1
20	26	26,356	-51.7		357	19.6
15	18	28,277	-50.5		1	24.9

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb.)	+ KOROR, CAROLINE IS. 1007 MB						KOTZEBUE, ALASKA 1015 MB						KWAJALEIN, MARSHALL IS. 1011 MB						LAKE CHARLES, LA. 1016 MB						LANDER, WYO. 827 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	30	26.3	87	88	6.6	31	5	-11.9	81	118	6.0	28	4	26.5	72	69	15.5	31	5	10.0	84	45	1.7	31	1,696	- 9.0	64	263	1.9
1000	31	94	25.7	84	87	7.6	31	119	-10.8	75	100	7.2	28	102	25.7	72	71	16.9	31	140	10.7	75	70	1.2	31	201				
950	31	543	22.4	81	82	13.2	31	516	- 9.1	72	133	8.9	28	552	21.9	79	73	20.4	31	570	10.5	69	231	4.7	31	604				
900	31	1,015	19.6	78	81	12.2	31	935	- 8.5	72	152	9.1	28	1,021	18.8	74	78	19.4	31	1,018	9.5	66	248	9.3	31	1,031				
850	31	1,506	17.3	69	83	10.9	31	1,378	- 9.3	71	172	10.5	28	1,510	16.2	65	78	15.5	31	1,492	8.4	57	257	12.6	31	1,485				
800	31	2,023	14.9	61	90	9.3	31	1,845	-10.9	67	181	11.3	28	2,025	15.7	42	84	11.7	31	1,992	6.2	48	264	17.1	31	1,956	- 7.6	48	291	1.9
750	31	2,566	12.4	57	91	8.7	31	2,342	-13.1	63	187	10.5	28	2,572	14.0	30	89	9.5	31	2,521	4.2	38	263	21.8	31	2,456	- 9.9	48	313	5.1
700	31	3,144	9.4	58	91	8.7	31	2,863	-16.0	61	188	12.4	28	3,149	10.5	29	88	10.1	31	3,079	1.7	31	264	28.0	31	2,987	-12.6	47	308	8.9
650	31	3,752	6.2	56	93	8.5	31	3,418	-19.1	58	195	14.8	28	3,762	7.2	22	86	12.4	31	3,675	- 1.3	R27	266	34.8	31	3,546	-15.3	43	305	15.3
600	31	4,408	2.3	56	90	8.7	31	4,010	-22.4	54	203	14.6	28	4,416	3.3	20	88	15.0	31	4,308	- 5.3	32	264	42.0	31	4,152	-19.1	38	303	19.8
550	31	5,103	- 1.5	55	89	9.3	31	4,643	-26.4	51	208	17.3	28	5,116	- .8	18	90	16.1	31	4,980	-10.0	37	261	48.4	31	4,789	-23.0	33	300	24.5
500	31	5,861	- 5.6	53	95	9.3	31	5,327	-31.0	49	206	19.6	28	5,870	- 5.4	15	90	17.1	31	5,715	-14.9	39	259	53.6	31	5,488	-27.5	R28	299	27.6
450	31	6,676	-10.2	48	95	10.9	31	6,065	-36.1	44	207	20.6	28	6,688	-10.7	21	86	15.9	31	6,501	-20.2	36	259	57.7	31	6,234	-32.8	R25	300	29.7
400	31	7,580	-15.9	43	99	13.8	31	6,874	-42.1	46	213	23.1	28	7,584	-16.1	19	82	15.0	31	7,368	-26.2	R35	258	62.9	31	7,059	-38.2	R27	300	34.8
350	31	8,573	-22.8	35	99	15.3	31	7,765	-48.5		213	24.1	28	8,580	-21.6	18	70	9.3	31	8,321	-33.1	R32	259	70.9	31	7,965	-44.8		301	37.7
300	31	9,684	-31.1	30	102	18.1	31	8,765	-54.1		215	27.8	28	9,696	-30.4	21	59	3.5	31	9,389	-40.6	R28	257	81.0	31	8,980	-51.7		300	41.0
250	31	10,950	-41.4		113	19.8	31	9,926	-56.6		221	32.1	28	10,963	-40.9	28	156	4.7	31	10,606	-49.3		255	90.7	31	10,149	-56.4		293	43.9
200	31	12,423	-54.0		115	26.6	31	11,348	-54.1		233	31.7	28	12,440	-53.4	33	178	5.4	31	12,044	-56.4		255	97.9	31	11,560	-56.8		290	43.7
175	31	13,266	-61.1		117	30.1	30	12,199	-52.5		235	31.9	28	13,286	-60.6	33	213	5.4	31	12,887	-59.0		254	95.2	31	12,409	-55.6		286	43.9
150	31	14,206	-68.6		120	33.6	30	13,196	-52.0		239	31.5	28	14,228	-68.3	28	241	3.5	31	13,848	-62.1		256	84.7	31	13,390	-56.2		284	43.3
125	31	15,278	-75.6		114	31.1	30	14,376	-52.1		244	31.9	26	15,299	-76.4		25	5.2	31	14,966	-65.6		257	74.6	31	14,544	-57.6		284	41.6
100	31	16,552	-80.3		94	14.2	30	15,819	-52.6		249	32.1	25	16,560	-82.1		85	11.7	31	16,315	-68.0		251	61.8	31	15,947	-59.4		283	37.7
80	31	17,821	-76.3		6	2.9	30	17,261	-52.3		254	33.6	19	17,818	-77.2		255	1.2	31	17,654	-68.4		257	49.9	31	17,341	-60.0		284	34.2
70	31	18,598	-72.2		301	8.4	30	18,124	-52.0		259	33.8	18	18,594	-74.0		270	8.2	31	18,456	-66.8		259	42.2	31	18,173	-60.3		283	29.7
60	31	19,511	-69.1		282	14.4	30	19,125	-51.5		263	33.0	18	19,500	-70.7		273	13.2	30	19,395	-64.6		257	29.7	31	19,136	-59.8		280	26.8
50	30	20,614	-64.5		276	16.3	30	20,309	-51.3		272	34.4	18	20,592	-66.4		274	17.5	30	20,521	-60.1		257	21.8	31	20,276	-59.2		279	21.4
40	30	21,990	-61.0		267	9.5	30	21,761	-50.8		276	36.3	17	21,959	-62.6		273	13.4	30	21,929	-56.4		248	20.4	29	21,694	-57.6		273	19.0
30	27	23,792	-57.2		97	14.0	30	23,636	-50.3		283	39.8	15	23,755	-57.6		90	14.8	30	23,772	-52.4		251	16.1	26	23,532	-54.4		269	14.2
25	23	24,947	-55.7		93	33.0	29	24,833	-50.1		296	41.2	15	24,910	-55.8		94	30.7	30	24,954	-51.7		250	13.6	25	24,702	-51.7		258	14.2
20	19	26,388	-52.5		92	47.4	26	26,308	-49.8		303	44.7	13	26,337	-51.4		90	44.5	29	26,407	-50.4		258	15.2	16	26,090	-47.4		227	20.6
15	11	28,258	-48.7				20	28,202	-49.3		311	51.7	11	28,229	-45.2		94	53.6	21	28,282	-47.7		268	16.1	10	28,001	-44.9			
10	5	30,946	-44.1				16	30,894	-46.9				9	30,973	-40.6															
7													9	33,429	-36.1															

Standard pressure surface (mb.)	LAS VEGAS, NEV. 938 MB						* LIHUE, HAWAII 1013 MB						LITTLE ROCK, ARK. 1008 MB						MCGRATH, ALASKA 1002 MB						+ MAJURO, MARSHALL IS. 1011 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	660	7.1	46	242	3.7	31	36	18.8	81	347	2.1	31	79	4.2	78	360	2.5	31	103	- 4.2	82	178	1.9	31	3	28.4	70	66	14.4
1000	31	126					31	146	19.9	77	14	4.5	31	145			16	2.9	31	121			129	1.7	31	99	26.8	63	64	15.9
950	31	549					31	589	16.5	81	32	6.0	31	560	2.3	69	291	3.1	31	528	- 3.1	72	158	6.2	31	545	22.1	66	62	20.2
900	31	1,001	9.0	36	241	.6	31	1,046	13.1	83	28	5.1	31	999	2.6	67	266	8.4	31	956	- 2.9	69	175	7.8	31	1,018	18.9	63	71	20.2
850	31	1,472	6.1	38	356	2.3	31	1,525	10.2	74	26	2.1	31	1,462	2.2	65	271	12.2	31	1,408	- 4.9	71	188	12.0	31	1,508	16.8	52	81	17.1
800	31	1,966	2.6	40	328	2.5	31	2,028	8.6	56	285	1.4	31	1,950	.5	63	272	19.0	31	1,882	- 7.6	73	190	15.2	31	2,024	16.3	31	91	11.3
750	31	2,482	- 1.0	41	324	3.7	31	2,560	7.3	34	286	3.7	31	2,465	- 1.7	58	272	26.2	31	2,377	-10.2	71	195	14.0	31	2,568	13.9	27	99	10.5
700	31	3,032	- 4.7	42	309	5.1	31	3,127	4.9	27	284	7.4	31	3,014	- 4.1	50	274	33.0	31	2,911	-13.1	71	201	13.6	31	3,149	10.6	25	101	10.9
650	31	3,604	- 8.0	37	295	8.0	31	3,725	1.4	27	285	10.7	31	3,589	- 7.4	42	275	35.5	31	3,467	-16.3	69	205	14.4	31	3,760	7.2	23	95	12.4
600	31	4,230	-11.9	34	290	12.4	31	4,367	- 2.6	25	292	15.3	31	4,215	-11.3	38	271	40.0	31	4,071	-19.9	62	202	14.0	31	4,417	3.8	23	91	15.9
550	31	4,884	-16.0	R32	282	14.6	31	5,046	- 7.3	30	288	19.6	31	4,871	-15.0	R34	269	44.9	31	4,705	-23.8	55	210	15.9	31	5,114	0.0	23	93	17.5
500	31	5,603	-21.3	33	280	18.5	31	5,788	-12.2	29	283	24.5	31	5,593	-19.8	R32	265	52.4	31	5,403	-28.2	49	215	17.5	31	5,877	- 4.4	21	89	18.6
450	31	6,364	-27.1	32	274	22.7	31	6,579	-17.8	30	283	30.9	30	6,362	-24.8	R32	268	58.1	31	6,140	-33.6	49	222	19.4	31	6,696	- 9.6	19	86	18.5
400	31	7,211	-33.3	R31	272	30.3	31	7,457	-24.0	29	287	39.8	30	7,217	-31.0	R29	269	65.1	31	6,969	-39.2	48	234	21.6	31	7,601	-14.8	20	81	17.5
350	31	8,137	-40.1	R29	270	36.3	31	8,417	-31.0	29	291	51.7	30	8,152	-37.1	R29	269	78.3	31	7,871	-45.6		233	23.5	31	8,599	-21.3	19	77	11.3
300	31	9,174	-46.9		268	44.7	31	9,494	-38.2	26	289	60.0	30	9,203	-44.0		268	91.1	31	8,884	-51.8		246	24.1	31	9,719	-29.6	19	84	4.7
250	31	10,364	-53.1		265	50.5	31	10,727	-46.3		288	67.6	30	10,401	-51.4		266	101.0	31	10,054	-55.8		246	26.2	31	10,993	-39.9	20	164	4.5
200	31	11,786	-57.4		265	50.1	31	12,183	-54.7		287	79.3	30	11,830	-57.0		265	103.3	31	11,486	-54.6		250	26.8	31	12,477	-52.3		183	5.1
175	30	12,633	-57.5		265	49.7	31	13,027	-59.7		287	78.9	30	12,673	-57.7		266	96.9	31	12,334	-53.1		255	26.0	30	13,326	-59.4		241	2.3
150	30	13,606	-58.1		267	48.6	31	13,977	-65.4		288	74.4	30	13,643	-59.1		269	83.5	31	13,330	-52.2		265	24.3	30	14,274	-67.3		319	2.9
125	30	14,750	-59.7		269	43.1	31	15,072	-70.4		285	61.4	30	14,774	-61.5		268	69.0	31	14,509	-52.3		269	25.1	30	15,352	-75.3		25	6.6
100	29	16,140	-61.6		268	38.3	31	16,382	-74.5		280	41.6	29	16,143	-63.3		265	54.0	31	15,951	-52.8		277	28.0	29	16,620	-81.6		78	11.3
80	29	17,517	-62.8		271	32.2	30	17,677	-73.6		276	23.1	29	17,512	-64.1		267	39.4	31	17,391	-52.6		291	30.7	29	17,880	-77.3		53	2.9
70	29	18,340	-62.2		271	28.6	30	18,463	-70.1		270	13.4	28	18,330	-63.5		265	31.5	31	18,252	-52.4		296	33.0	29	18,656	-72.0		274	9.3
60	29	19,292	-61.8		274	26.4	29	19,386	-66.1		271	6.8	28	19,281	-62.2		263	25.3	31	19,249	-52.2		300	35.7	28	19,573	-67.7		267	20.6
50	29	20,422	-61.1		277	23.1	28	20,498	-62.0		253	4.7	27	20,412	-59.7		260	20.0	30	20,433	-51.8		310	36.9	28	20,680	-64.5		273	22.3
40	29	21,812	-59.2		272	22.7	28	21,889	-58.9		274	1.6	26	21,817	-56.2		258	17.7	30	21,881	-51.1		316	39.6	24	22,057	-59.9		263	13.6
30	28	23,623	-55.9		268	22.3	26	23,716	-54.6		274	2.7	26	23,656	-53.7		260	17.9	29	23,767	-50.4		326	44.5	23	23,874	-56.1		88	14.6
25	28	24,790	-53.1		263	23.1	25	24,888	-52.6		265	3.9	25	24,833	-53.0		260	19.4	27	24,960	-50.2		333	49.3	23	25,038	-54.3		89	32.1
20	24	26,242	-49.2		252	23.7	24	26,336	-50.7		305	3.9	21	26,288	-50.4		252	28.6	26	26,404	-50.4		337	58.7	19	26,475	-51.5		91	46.2
15	18	28,151	-45.0		239	21.0	23	28,224	-47.5		334	3.1	13	28,177	-47.7				18	28,275	-49.8				12	28,356	-46.7			
10	6	30,895	-42.0				20	30,944	-42.0		195	5.6																		
7							10	33,371	-37.5																					

Standard pressure surface (mb.)	MARCUS IS., N. PACIFIC 1015 MB						MEDFORD, OREG. 971 MB						* MIAMI, FLA. 1017 MB						* MIDLAND, TEXAS 916 MB						MONTGOMERY, ALA. 1010 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	29	9	21.8	66	9	2.7	31	401	2.5	79	286	.8	30	4	19.3	85	144	1.4	31	874	3.3	65	26	1.7	31	61	8.6	81	6	1.2
1000	29	135	19.9	66	20	2.5	31	159					30	152	19.6	80	157	2.5	31	152					31	144	9.1	76	329	1.0
950	29	572	15.9	68	318	2.1	31	579	5.4	65	312	1.2	30	590	16.7	79	196	5.4	31	572					31	571	8.9	70	269	6.0
900	29	1,032	12.7	71	260	4.7	31	1,019	5.3	56	109	1.0	30	1,053	14.3	70	233	7.8	31	1,016	4.9	60	266	1.0	31	1,017	7.7	67	265	12.4
850	29	1,510	9.9	70	252	10.1	31	1,485	3.0	53	81	3.1	30	1,535	12.3	60	241	11.3	31	1,484	6.7	49	259	7.0	31	1,488	6.4	64	266	18.3
800	29	2,013	8.4	55	252	15.2	31	1,973	.5	46	58	2.9	30	2,042	10.4	48	247	13.2	31	1,981	4.8	46	276	12.2	31	1,984	4.4	63	263	24.7
750	29	2,541	7.2	46	255	22.0	31	2,486	- 2.3	42	4	2.9	30	2,576	8.3	38	259	16.9	31	2,502	1.8	44	275	17.1	31	2,512	1.6	60	264	28.2
700	29	3,110	4.7	39	257	29.3	31	3,034	- 5.1	37	340	6.4	30	3,146	5.6	31	259	21.0	31	3,058	- 1.1	41	269	23.9	31	3,061	- 1.2	52	264	34.0
650	29	3,705	1.7	38	259	32.1	31	3,608	- 8.4	35	342	10.7	30	3,746	2.5	27	259	24.5	31	3,642	- 4.8	41	265	28.7	31	3,650	- 3.8	37	264	39.4
600	29	4,353	- 1.8	35	261	39.4	31	4,230	-12.3	37	339	13.0	30	4,391	- 1.3	27	267	28.9	31	4,271	- 8.9	40	261	35.2	31	4,278	- 7.4	37	262	44.9
550	29	5,032	- 5.1	32	263	45.6	31	4,885	-16.7	38	337	15.0	29	5,071	- 5.5	26	267	35.2	31	4,935	-13.3	37	263	41.0	31	4,948	-11.5	39	260	49.1
500	29	5,785	- 9.3	30	261	51.3	31	5,599	-21.8	37	341	16.1	29	5,821	- 9.9	23	266	41.4	31	5,659	-18.3	39	262	47.8	31	5,675	-16.3	R37	260	55.6
450	29	6,582	-13.9	26	260	57.5	30	6,357	-27.7	35	343	16.5	29	6,617	-15.5	23	266	45.1	31	6,433	-23.4	39	263	56.7	31	6,457	-21.7	R35	261	62.7
400	29	7,479	-19.5	R22	262	64.1	30	7,202	-34.2	R33	348	19.6	29	7,506	-22.0	26	265	49.9	31	7,290	-29.3	37	263	65.5	31	7,317	-27.9	R35	263	67.4
350	29	8,458	-25.9	R21	264	71.1	30	8,123	-41.3	R31	353	23.1	29	8,474	-29.5	25	266	55.8	31	8,231	-36.0	34	263	73.2	31	8,263	-34.6	R33	263	74.8
300	29	9,558	-33.5	R21	266	75.8	30	9,152	-49.1		360	24.5	29	9,555	-38.1	25	270	59.4	31	9,285	-43.3	32	261	81.0	31	9,323	-42.0	36	266	85.3
250	29	10,815	-42.3		267	83.5	30	10,327	-56.6		350	27.6	29	10,785	-47.4		274	64.7	31	10,490	-51.4		256	83.3	31	10,535	-49.9		266	98.1
200	29	12,290	-53.1		268	83.1	30	11,727	-59.8		332	29.1	29	12,229	-56.9		273	68.8	31	11,918	-56.9		253	85.1	31	11,969	-56.9		265	103.5
175	29	13,138	-59.6		266	85.3	30	12,564	-58.6		317	26.8	29	13,066	-60.8		275	68.4	31	12,761	-58.2		251	87.4	31	12,812	-58.3		266	102.4
150	29	14,087	-66.2		266	82.9	30	13,534	-58.4		310	25.8	29	14,018	-64.5		273	63.1	31	13,728	-59.8		252	83.7	31	13,776	-60.8		265	94.0
125	29	15,172	-73.4		265	71.3	30	14,679	-59.1		307	23.9	29	15,117	-69.9		271	58.3	31	14,858	-63.3		253	74.0	31	14,902	-63.8		263	82.0
100	29	16,460	-77.6		264	54.6	30	16,073	-60.7		309	21.6	29	16,430	-74.1		270	50.1	31	16,218	-66.3		252	61.2	31	16,260	-66.4		263	67.2
80	29	17,743	-75.5		264	35.9	29	17,460	-61.1		305	21.0	28	17,726	-74.4		272	33.8	31	17,567	-66.5		253	48.8	31	17,610	-66.3		262	49.1
70	29	18,521	-72.3		265	27.0	29	18,289	-60.8		315	19.2	28	18,506	-71.8		267	23.1	30	18,381	-65.1		255	41.4	31	18,420	-65.0		264	38.5
60	29	19,439	-67.3		265	14.8	29	19,248	-60.4		323	17.5	28	19,428	-66.7		263	14.0	29	19,324	-64.4		259	34.2	31	19,366	-62.8		263	32.1
50	28	20,556	-61.9		233	4.3	29	20,385	-59.9		323	15.2	28	20,547	-61.0		279	8.5	29	20,443	-62.4		254	28.6	31	20,498	-59.5		260	25.4
40	28	21,954	-56.8		27	1.7	29	21,779	-59.2		332	14.2	28	21,947	-56.3		298	6.8	26	21,835	-59.2		247	26.4	31	21,905	-56.3		254	21.2
30	28	23,792	-53.3		258	.6	28	23,605	-56.9		338	13.0	28	23,791	-53.1		360	1.7	26	23,655	-55.1		252	30.9	30	23,741	-53.3		260	19.6
25	26	24,970	-51.1		169	2.5	28	24,762	-55.3		331	12.4	28	24,968	-52.2		2	.6	25	24,818	-53.4		250	31.3	30	24,918	-52.5		260	21.6
20	26	26,429	-48.5		221	5.8	26	26,198	-52.6		325	8.4	28	26,418	-50.2		274	1.9	22	26,261	-51.7		256	26.0	28	26,362	-51.1		257	19.4
15	24	28,341	-44.4		254	11.1	24	28,053	-49.5		309	8.9	28	28,310	-47.3		268	10.5	21	28,139	-48.5		267	20.6	26	28,244	-48.5		260	15.0
10	15	31,090	-39.4		262	33.2	20	30,721	-44.1		294	13.0	26	31,022	-40.4		257	28.0	16	30,836	-42.5				16	30,928	-43.5		283	10.5
7	[illegible]	33,591	-33.5				5	32,926	-37.5				17	33,457	-36.8		259	31.3	7	33,273	-37.1				5	33,338	-39.8			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb.)	NANTUCKET, MASS. 1013 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	14	-.2	76	339	7.2
1000	31	113	-.5	69	326	7.6
950	31	521	-1.9	63	320	10.7
900	31	952	-3.9	60	313	13.8
850	31	1,402	-5.3	57	298	15.3
800	31	1,877	-6.6	50	288	18.5
750	31	2,378	-8.5	46	287	22.7
700	31	2,913	-10.8	40	285	27.6
650	31	3,476	-13.8	38	282	31.7
600	31	4,085	-17.4	38	281	36.3
550	31	4,727	-21.4	R36	279	38.5
500	31	5,429	-25.6	R33	277	42.2
450	31	6,177	-30.7	R31	278	49.1
400	31	7,012	-36.9	R32	277	57.9
350	31	7,924	-43.2	R34	275	65.3
300	31	8,948	-48.8		275	68.0
250	31	10,136	-52.6		275	70.9
200	31	11,570	-53.9		272	72.8
175	30	12,418	-53.5		275	64.9
150	29	13,406	-53.9		273	61.8
125	29	14,573	-55.1		271	53.8
100	29	15,994	-56.2		270	46.8
80	29	17,410	-56.6		269	37.5
70	29	18,256	-56.4		268	33.0
60	28	19,237	-56.3		266	28.7
50	28	20,400	-54.6		270	26.2
40	28	21,831	-53.7		271	21.8
30	27	23,680	-53.0		270	16.1
25	27	24,857	-52.9		276	17.3
20	27	26,300	-52.0		286	16.3
15	27	28,169	-49.9		292	17.9
10	17	30,834	-43.5		277	32.6
7	5	33,278	-40.4			
5						

Standard pressure surface (mb.)	NASHVILLE, TENN. 996 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	177	2.4	81	299	1.2
1000	31	147				
950	31	560	1.6	71	242	2.9
900	31	997	1.4	67	263	11.1
850	31	1,457	.2	68	264	16.1
800	31	1,942	-2.0	64	264	21.0
750	31	2,451	-4.0	63	267	25.1
700	31	2,996	-6.7	64	266	29.9
650	31	3,567	-9.6	56	265	35.2
600	31	4,187	-12.9	47	263	44.9
550	31	4,840	-16.7	41	262	50.5
500	31	5,556	-21.3	40	262	55.8
450	31	6,318	-26.3	40	262	63.5
400	31	7,169	-31.6	38	262	71.5
350	31	8,101	-38.1	R40	260	81.8
300	31	9,145	-45.4		257	81.2
250	31	10,342	-52.5		253	82.9
200	30	11,771	-57.3		253	88.0
175	30	12,615	-57.2		252	82.4
150	30	13,587	-58.3		259	73.0
125	29	14,724	-60.0		261	62.2
100	29	16,109	-62.2		259	59.8
80	29	17,488	-62.1		262	42.9
70	28	18,312	-61.8		269	36.9
60	28	19,268	-60.6		265	34.4
50	28	20,406	-58.7		265	26.4
40	28	21,818	-56.1		269	23.9
30	27	23,655	-53.9		271	25.1
25	27	24,827	-53.6		270	21.8
20	27	26,267	-51.9		269	25.4
15	27	28,138	-50.0		266	22.5
10	26	30,802	-46.1		275	30.7
7	16	33,213	-42.0			
5	[illegible]	35,373	-39.4			

Standard pressure surface (mb.)	NOME, ALASKA 1012 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	7	-7.6	83	93	7.6
1000	31	97			91	11.5
950	31	501	-6.0	74	130	10.9
900	31	921	-6.5	76	147	9.9
850	31	1,368	-7.6	78	158	10.1
800	31	1,838	-9.6	75	170	10.7
750	30	2,331	-12.4	70	178	13.4
700	30	2,856	-15.4	66	180	13.8
650	30	3,410	-18.3	64	185	15.3
600	30	4,007	-22.0	60	185	17.7
550	30	4,639	-25.9	54	188	18.3
500	30	5,325	-30.5	48	193	20.8
450	30	6,059	-36.0	44	195	21.6
400	30	6,874	-42.0	52	195	23.1
350	30	7,765	-48.3		194	26.4
300	30	8,767	-53.4		201	29.5
250	30	9,934	-55.1		205	29.9
200	30	11,367	-52.5		216	30.1
175	30	12,232	-51.5		219	27.4
150	30	13,234	-51.0		225	26.2
125	30	14,420	-51.1		235	25.3
100	30	15,870	-51.4		241	24.7
80	29	17,321	-51.2		257	25.3
70	29	18,189	-50.6		260	25.4
60	29	19,194	-50.7		268	24.5
50	29	20,383	-50.2		280	24.3
40	29	21,840	-50.1		291	27.6
30	28	23,731	-49.5		302	29.9
25	28	24,925	-49.8		312	32.2
20	25	26,403	-49.4		321	35.4
15	20	28,295	-48.7		338	42.2
10	8	31,038	-46.3			
7						
5						

Standard pressure surface (mb.)	NORFOLK, VA. 1016 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	9	3.9	73	356	2.7
1000	30	137	4.0	64	332	3.7
950	30	553	3.2	59	312	8.5
900	30	992	2.1	59	288	13.6
850	30	1,452	.5	55	281	17.3
800	30	1,937	-1.8	51	275	22.0
750	30	2,446	-4.1	44	273	24.9
700	30	2,991	-6.6	36	271	30.3
650	30	3,565	-9.1	32	272	35.2
600	30	4,183	-12.6	31	272	40.8
550	30	4,838	-16.8	32	271	45.5
500	30	5,551	-21.5	R31	269	50.7
450	30	6,314	-26.8	R30	266	56.3
400	30	7,160	-32.6	R31	267	62.4
350	29	8,093	-38.7	R28	266	71.5
300	29	9,136	-45.3		263	77.1
250	29	10,336	-51.2		267	84.9
200	29	11,767	-56.1		270	87.4
175	29	12,616	-56.2		270	79.3
150	29	13,593	-57.3		271	76.3
125	28	14,742	-59.2		271	71.1
100	26	16,132	-60.8		270	57.5
80	25	17,515	-61.1		272	49.3
70	25	18,344	-60.3		267	37.7
60	24	19,310	-58.4		269	35.4
50	23	20,459	-56.4		271	37.3
40	23	21,885	-53.6		266	27.6
30	22	23,744	-52.4		261	19.4
25	19	24,925	-52.1		267	15.0
20	16	26,360	-51.8		265	17.9
15	9	28,231	-49.1			
10						
7						
5						

Standard pressure surface (mb.)	* NORTH PLATTE, NEBR. 919 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	848	-8.7	79	346	4.5
1000	31	187				
950	31	591				
900	31	1,009	-8.0	70	328	5.4
850	31	1,454	-7.6	59	318	11.8
800	31	1,925	-8.4	54	318	13.8
750	31	2,425	-10.1	52	308	16.9
700	31	2,955	-12.3	50	304	22.1
650	31	3,519	-15.0	46	296	25.8
600	31	4,119	-18.6	46	293	28.7
550	31	4,764	-22.6	43	288	33.4
500	31	5,456	-26.9	39	283	37.3
450	31	6,205	-32.1	40	280	40.4
400	31	7,031	-38.0	36	277	42.3
350	31	7,937	-44.9		276	44.1
300	31	8,952	-51.5		277	49.3
250	31	10,122	-55.5		273	55.8
200	31	11,540	-55.9		271	58.1
175	31	12,391	-55.6		271	57.9
150	31	13,372	-56.1		272	54.8
125	31	14,526	-57.7		272	52.4
100	31	15,929	-59.2		271	48.2
80	28	17,324	-60.1		272	44.9
70	26	18,150	-60.5		268	39.6
60	26	19,112	-59.8		265	34.4
50	26	20,252	-59.4		264	33.4
40	26	21,659	-56.5		261	29.1
30	25	23,488	-53.0		251	25.4
25	25	24,667	-51.7		244	25.3
20	24	26,118	-50.8		248	26.4
15	21	27,984	-47.2		254	26.0
10	16	30,651	-43.8		250	41.2
7	9	33,044	-42.0			
5						

Standard pressure surface (mb.)	* OAKLAND, CALIF. 1016 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	6	10.4	77	211	1.9
1000	31	134	9.7	71	222	2.5
950	31	556	7.8	71	242	3.5
900	31	1,004	6.3	62	276	2.5
850	31	1,471	4.6	51	297	3.5
800	31	1,964	2.2	48	288	3.9
750	31	2,479	-.4	44	298	4.5
700	31	3,031	-3.8	45	307	6.8
650	31	3,606	-7.7	47	306	8.4
600	31	4,231	-11.7	43	312	9.5
550	31	4,888	-16.3	43	315	10.9
500	31	5,602	-21.6	37	317	12.8
450	31	6,368	-27.4	37	317	13.8
400	31	7,207	-34.1	42	323	14.2
350	31	8,128	-41.3	41	320	16.1
300	31	9,161	-47.9		322	21.0
250	31	10,344	-54.4		313	24.7
200	29	11,771	-56.9		298	25.8
175	29	12,616	-57.2		291	28.4
150	29	13,589	-57.9		291	28.6
125	29	14,733	-60.1		289	26.4
100	29	16,119	-62.2		289	23.7
80	29	17,496	-62.5		290	21.4
70	29	18,319	-62.7		292	20.6
60	29	19,273	-61.8		298	18.1
50	29	20,403	-61.2		301	15.5
40	28	21,799	-60.2		304	15.2
30	27	23,601	-58.1		304	14.4
25	26	24,752	-56.1		295	13.8
20	25	26,175	-53.1		281	15.5
15	25	28,044	-49.6		272	17.9
10	20	30,717	-43.4		262	25.4
7						
5						

Standard pressure surface (mb.)	OKLAHOMA CITY, OKLA. 972 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	392	.2	74	3	6.4
1000	31	164				
950	31	580	.5	70	11	5.8
900	31	1,011	-.3	69	337	7.2
850	31	1,469	.2	63	317	10.9
800	31	1,954	-.6	55	286	15.2
750	31	2,470	-2.4	49	276	20.2
700	31	3,014	-5.2	46	275	25.1
650	31	3,589	-8.5	46	272	29.7
600	31	4,209	-12.5	45	272	37.3
550	31	4,863	-16.9	44	267	43.1
500	31	5,577	-22.0	45	267	50.1
450	31	6,336	-27.2	39	266	54.6
400	30	7,193	-32.8	38	263	66.8
350	30	8,120	-39.4	42	263	77.1
300	30	9,159	-46.6		262	88.2
250	30	10,351	-53.0		261	98.3
200	30	11,774	-56.7		262	95.6
175	30	12,620	-56.8		262	92.7
150	30	13,594	-58.5		264	86.2
125	30	14,733	-60.8		263	75.6
100	30	16,113	-62.8		264	64.7
80	29	17,486	-63.8		266	51.3
70	28	18,311	-62.8		265	43.9
60	28	19,263	-61.9		265	36.5
50	28	20,396	-60.1		263	27.2
40	28	21,795	-57.8		259	27.4
30	28	23,621	-54.7		255	28.2
25	26	24,791	-52.3		256	25.3
20	24	26,243	-49.9		257	27.2
15	20	28,125	-47.7		270	20.0
10	[illegible]	30,849	-42.4			
7						
5						

Standard pressure surface (mb.)	OMAHA, NEBR. 971 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	403	-6.7	81	348	7.8
1000	31	169				
950	31	567	-6.9	75	346	9.7
900	31	992	-7.5	68	339	15.3
850	31	1,436	-7.7	61	331	16.3
800	31	1,908	-8.2	54	313	15.2
750	31	2,405	-9.9	52	300	17.3
700	31	2,938	-12.2	49	299	21.0
650	31	3,496	-15.0	47	295	22.9
600	31	4,103	-18.3	49	286	26.0
550	31	4,744	-21.9	47	280	31.1
500	31	5,444	-26.4	45	274	34.2
450	31	6,194	-31.7	42	270	38.5
400	31	7,021	-37.9	41	270	43.1
350	31	7,928	-44.4		265	46.4
300	31	8,946	-51.2		265	49.1
250	30	10,117	-55.1		264	57.3
200	30	11,536	-56.0		265	59.1
175	30	12,386	-55.4		267	60.0
150	30	13,370	-55.5		268	56.5
125	29	14,533	-56.7		268	51.7
100	28	15,940	-58.7		270	49.0
80	28	17,336	-59.7		267	43.7
70	28	18,169	-60.0		267	39.8
60	26	19,129	-59.0		267	33.6
50	25	20,270	-58.4		259	34.8
40	24	21,679	-55.8		255	35.2
30	24	23,528	-52.4		247	26.4
25	23	24,710	-50.1		243	28.7
20	20	26,165	-47.0		238	33.4
15	16	28,112	-44.3		224	23.3
10	8	30,895	-42.2			
7						
5						

Standard pressure surface (mb.)	* PEORIA, ILL. 993 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	200	-4.6	87	349	2.7
1000	30	144	-			
950	30	550	-4.4	75	346	5.1
900	30	974	-5.2	69	317	6.0
850	30	1,423	-5.2	65	303	8.7
800	30	1,899	-6.5	58	290	12.4
750	30	2,400	-8.5	52	282	16.7
700	30	2,934	-11.1	51	281	21.0
650	30	3,497	-13.6	47	279	25.8
600	30	4,106	-17.2	45	277	28.9
550	30	4,750	-21.1	43	275	36.3
500	30	5,451	-25.5	39	269	44.1
450	30	6,204	-30.6	39	266	48.2
400	30	7,034	-36.4	35	264	55.0
350	30	7,948	-42.8	32	262	60.4
300	30	8,973	-49.2		258	69.2
250	30	10,153	-54.4		259	75.4
200	30	11,573	-56.5		262	74.2
175	30	12,420	-56.2		263	73.0
150	30	13,400	-56.0		266	68.0
125	30	14,557	-57.2		265	62.0
100	30	15,963	-58.3		266	54.6
80	30	17,363	-59.5		265	45.6
70	30	18,198	-59.2		263	42.5
60	30	19,167	-58.2		260	37.1
50	28	20,319	-56.5		260	32.8
40	28	21,742	-54.6		251	28.9
30	28	23,594	-52.3		248	24.5
25	27	24,775	-51.0		247	24.1
20	26	26,227	-49.8		244	22.3
15	25	28,120	-48.0		245	17.3
10	18	30,848	-44.2		274	18.6
7	[illegible]	33,163	-43.4			
5						

Standard pressure surface (mb.)	* PITTSBURGH, PA. 974 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	353	-1.7	78	260	1.9
1000	31	144				
950	31	554	-2.1	75	260	4.3
900	31	981	-3.7	75	276	10.3
850	31	1,432	-5.2	70	279	14.6
800	31	1,907	-6.6	63	279	18.6
750	31	2,408	-8.3	56	275	22.0
700	31	2,942	-10.9	53	276	23.7
650	31	3,509	-14.1	52	272	28.9
600	31	4,112	-17.2	44	275	32.2
550	31	4,758	-21.0	40	273	36.9
500	31	5,458	-25.1	38	272	42.5
450	31	6,211	-30.3	37	269	47.8
400	31	7,045	-36.1	R33	273	57.3
350	31	7,959	-42.7	R34	273	62.5
300	31	8,985	-49.2		270	70.5
250	31	10,166	-54.2		270	74.0
200	31	11,588	-56.2		271	74.0
175	31	12,438	-55.7		270	63.9
150	31	13,420	-55.8		267	62.9
125	31	14,577	-57.0		268	57.9
100	31	15,984	-58.1		267	50.3
80	31	17,389	-57.7		266	42.3
70	31	18,230	-57.5		262	37.3
60	31	19,203	-57.3		261	34.6
50	31	20,361	-55.0		261	30.1
40	31	21,791	-53.6		253	23.9
30	31	23,643	-52.7		258	22.5
25	29	24,818	-52.0		259	21.6
20	28	26,267	-50.9		255	17.9
15	27	28,137	-49.3		274	15.2
10	24	30,812	-45.8		291	20.6
7	18	33,198	-42.6		287	28.0
5	5	35,604	-35.9			

Standard pressure surface (mb.)	PONAPE, CAROLINE IS. + 1006 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	39	27.8	76	67	8.9
1000	31	90	27.0	71	69	10.3
950	31	537	22.8	73	75	17.1
900	31	1,012	19.6	71	79	19.0
850	31	1,503	16.9	64	80	16.9
800	31	2,020	15.3	47	83	11.5
750	31	2,565	13.1	36	92	9.5
700	31	3,142	10.0	36	96	11.3
650	31	3,754	6.8	34	94	13.2
600	31	4,408	3.0	37	91	16.3
550	31	5,105	-.7	34	95	17.7
500	31	5,865	-4.9	35	98	19.0
450	31	6,685	-9.5	31	98	19.6
400	31	7,590	-14.8	26	94	17.9
350	31	8,588	-21.6	24	88	15.2
300	31	9,705	-30.0	23	94	12.4
250	31	10,977	-40.4	22	107	12.6
200	31	12,457	-52.9		124	14.4
175	31	13,305	-59.9		118	14.2
150	31	14,250	-67.7		105	12.8
125	31	15,325	-75.9		88	17.1
100	31	16,591	-82.3		97	18.6
80	31	17,855	-76.8		357	1.4
70	30	18,631	-72.0		286	7.6
60	30	19,546	-68.1		271	14.0
50	29	20,651	-64.4		271	18.6
40	29	22,029	-60.7		276	13.6
30	29	23,837	-56.9		84	13.8
25	26	25,000	-55.1		88	32.6
20	21	26,433	-51.5		92	51.1
15	12	28,306	-47.5		92	55.9
10	5	31,026	-42.0			

Standard pressure surface (mb.)	PORTLAND, ME. 1013 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	20	-2.0	65	314	3.5
1000	31	118	-2.2	54	312	6.2
950	31	523	-4.0	53	333	12.0
900	31	950	-6.4	55	337	11.8
850	31	1,395	-8.4	56	325	13.8
800	31	1,864	-9.6	54	310	16.3
750	31	2,355	-11.5	51	299	18.8
700	31	2,888	-13.8	50	295	20.8
650	31	3,443	-16.5	48	286	25.6
600	31	4,046	-19.7	42	282	29.5
550	31	4,686	-23.5	40	279	33.8
500	31	5,379	-27.9	39	277	37.7
450	31	6,121	-33.0	37	278	41.8
400	31	6,948	-38.6	34	278	45.8
350	31	7,854	-44.5		281	50.5
300	31	8,874	-49.9		280	55.6
250	31	10,056	-53.2		281	55.2
200	31	11,491	-53.4		275	50.7
175	31	12,352	-52.9		273	51.1
150	31	13,346	-53.0		274	45.8
125	31	14,519	-53.8		271	40.8
100	31	15,950	-54.9		267	38.7
80	31	17,376	-55.4		267	31.5
70	31	18,225	-55.4		268	30.5
60	31	19,211	-54.9		266	24.9
50	31	20,380	-53.5		267	20.6
40	31	21,917	-52.9		268	17.9
30	30	23,674	-52.4		276	19.8
25	27	24,848	-52.6		281	16.1
20	22	26,260	-54.0		278	21.2
15	10	28,111	-52.2			
10						

Standard pressure surface (mb.)	RAPID CITY, S. DAK. 906 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	966	-9.7	75	339	7.0
1000	31	198				
950	31	596				
900	31	1,019			335	8.7
850	31	1,462	-9.0	54	327	16.3
800	31	1,930	-10.6	56	323	19.0
750	31	2,420	-12.5	54	321	19.6
700	31	2,950	-15.1	51	317	20.2
650	31	3,501	-17.9	46	312	22.0
600	31	4,102	-21.0	43	304	22.9
550	31	4,735	-24.8	39	300	25.1
500	31	5,427	-29.6	37	297	28.4
450	31	6,165	-34.8	34	292	32.4
400	31	6,983	-40.5	R33	291	34.6
350	31	7,880	-46.7		291	36.9
300	31	8,889	-52.3		288	41.2
250	31	10,056	-56.1		286	44.7
200	31	11,472	-55.6		283	43.7
175	31	12,324	-54.8		281	42.7
150	31	13,308	-55.6		278	42.3
125	31	14,466	-56.9		278	40.8
100	30	15,869	-58.6		276	38.3
80	29	17,280	-59.4		281	33.6
70	29	18,114	-59.7		280	28.6
60	29	19,079	-59.3		279	26.4
50	28	20,239	-58.2		278	23.5
40	28	21,647	-57.2		272	17.9
30	25	23,482	-55.3		269	15.3
25	23	24,635	-54.2		261	19.6
20	16	26,156	-51.4		279	9.9
15	11	28,003	-47.0			
10						

Standard pressure surface (mb.)	ST. CLOUD, MINN. 981 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	316	-12.0	78	358	4.5
1000	31	166				
950	31	560	-9.9	73	355	8.2
900	31	978	-10.5	72	359	10.1
850	31	1,417	-11.7	66	344	8.9
800	31	1,880	-13.2	62	327	8.7
750	31	2,370	-14.4	56	311	10.7
700	31	2,892	-16.9	55	302	13.6
650	31	3,444	-19.4	54	296	16.5
600	31	4,038	-22.4	50	289	18.5
550	31	4,667	-26.0	46	286	22.7
500	31	5,357	-30.7	46	282	27.6
450	31	6,091	-35.9	46	279	31.3
400	31	6,906	-41.6	43	275	37.1
350	31	7,800	-47.6		273	40.2
300	31	8,803	-53.7		272	42.2
250	31	9,962	-57.4		271	46.0
200	31	11,377	-55.4		274	44.5
175	31	12,229	-55.2		275	43.1
150	31	13,211	-55.5		274	42.9
125	31	14,371	-56.3		276	40.6
100	31	15,784	-57.5		274	38.5
80	30	17,184	-58.1		274	37.1
70	29	18,029	-58.2		267	34.0
60	29	19,001	-57.9		266	34.2
50	29	20,155	-56.5		267	31.7
40	28	21,599	-54.9		264	27.0
30	27	23,447	-51.7		253	25.1
25	26	24,637	-49.4		249	25.8
20	26	26,102	-48.5		253	24.1
15	14	28,043	-47.3		294	5.4
10						

Standard pressure surface (mb.)	ST. PAUL IS., ALASKA 1004 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	10	-4.1	94	44	7.2
1000	31	41			68	7.0
950	31	449	-3.5	84	96	7.2
900	31	874	-3.8	80	136	4.9
850	31	1,325	-5.7	75	145	6.2
800	31	1,798	-8.1	70	148	6.8
750	31	2,300	-10.7	65	160	7.0
700	31	2,825	-13.8	59	169	8.7
650	31	3,383	-17.2	54	178	9.7
600	31	3,981	-21.1	52	181	11.3
550	31	4,616	-25.0	49	185	14.4
500	31	5,306	-29.6	44	187	15.2
450	31	6,048	-34.9	45	186	18.1
400	31	6,864	-40.7	44	182	21.8
350	31	7,760	-47.0		181	26.8
300	31	8,770	-51.8		184	30.9
250	31	9,946	-53.1		187	33.2
200	31	11,389	-51.2		189	28.6
175	30	12,257	-49.4		189	24.7
150	30	13,268	-48.8		189	23.5
125	30	14,465	-48.9		194	19.0
100	30	15,930	-49.4		194	16.5
80	29	17,392	-49.6		203	12.4
70	29	18,265	-49.6		203	9.7
60	29	19,275	-49.4		205	8.0
50	29	20,471	-48.9		211	4.7
40	29	21,937	-48.6		159	1.4
30	26	23,844	-48.2		44	8.2
25	25	25,051	-48.1		37	13.8
20	25	26,521	-48.3		42	20.2
15	22	28,438	-48.0		43	29.1
10	12	31,135	-46.8		37	35.9

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SALEM, OREG. 1012 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	61	2.8	83	239	1.2
1000	31	159	5.5	66	4	2.3
950	31	580	6.3	51	23	4.9
900	31	1,021	4.1	50	21	3.5
850	31	1,484	2.1	48	357	2.1
800	31	1,971	- .7	48	325	3.5
750	31	2,482	- 3.4	40	333	7.4
700	31	3,027	- 6.1	38	332	11.3
650	31	3,597	- 9.3	35	329	15.2
600	31	4,218	-13.1	36	335	17.7
550	31	4,870	-17.1	34	335	19.4
500	31	5,584	-22.2	36	337	21.8
450	31	6,341	-27.8	34	340	22.7
400	31	7,185	-34.2	R32	338	26.2
350	31	8,104	-41.5	R27	341	28.9
300	31	9,131	-49.7		339	33.0
250	31	10,302	-57.9		337	36.9
200	31	11,693	-60.9		329	34.6
175	31	12,526	-59.0		321	32.4
150	31	13,495	-58.6		320	32.4
125	31	14,637	-59.5		314	29.5
100	31	16,030	-60.5		317	25.8
80	31	17,419	-60.7		321	22.1
70	31	18,249	-60.7		322	21.4
60	31	19,209	-60.5		324	21.6
50	31	20,346	-59.8		332	20.8
40	30	21,742	-59.6		340	17.9
30	26	23,572	-57.4		346	12.2
25	24	24,733	-56.0		337	13.0
20	22	26,154	-54.3		352	10.1
15	18	28,040	-51.0		359	6.8
10	5	30,553	-47.5			

SALT LAKE CITY, UTAH 871 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,288	- 1.6	60	157	3.7
1000	31	170				
950	31	582				
900	31	1,023				
850	31	1,480	.9	48	160	4.5
800	31	1,966	- 1.6	43	209	3.1
750	31	2,473	- 5.4	47	270	5.2
700	31	3,014	- 9.4	53	288	9.1
650	31	3,576	-13.1	48	287	14.6
600	31	4,188	-16.6	39	292	16.5
550	31	4,835	-20.5	R37	296	20.0
500	31	5,536	-24.7	37	300	26.4
450	31	6,289	-30.3	38	298	28.0
400	31	7,122	-36.6	R37	301	30.3
350	31	8,033	-43.6		303	32.4
300	31	9,053	-51.0		304	34.8
250	31	10,222	-56.8		301	37.1
200	31	11,630	-57.1		288	42.7
175	31	12,477	-56.4		286	40.2
150	31	13,454	-57.2		282	40.0
125	31	14,602	-59.4		285	38.5
100	31	15,993	-61.0		284	36.5
80	31	17,378	-61.5		283	32.8
70	31	18,205	-61.4		282	30.1
60	30	19,156	-61.6		285	27.8
50	29	20,284	-60.0		281	26.2
40	29	21,682	-58.8		277	21.0
30	28	23,497	-58.0		278	18.8
25	24	24,712	-55.3		280	14.8
20	19	26,148	-51.1		262	11.5
15	9	28,084	-46.3			
10						

SAN ANTONIO, TEXAS 989 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	243	8.3	75	9	4.1
1000	31	147				
950	31	571	8.6	69	13	2.9
900	31	1,020	8.7	65	226	3.3
850	31	1,493	8.0	60	243	8.0
800	31	1,992	6.7	43	250	12.2
750	31	2,519	4.9	37	260	16.7
700	31	3,082	2.2	35	263	24.3
650	31	3,671	- 1.3	34	266	31.5
600	31	4,311	- 5.8	35	259	37.7
550	31	4,978	-10.4	36	259	43.5
500	31	5,715	-15.5	36	258	52.3
450	31	6,498	-20.7	R30	256	60.4
400	31	7,366	-26.7	R30	258	68.0
350	31	8,318	-33.6	R28	260	74.2
300	31	9,382	-41.4	R30	258	82.8
250	31	10,597	-49.8		255	89.6
200	31	12,030	-57.1		256	98.5
175	31	12,871	-59.4		256	98.1
150	30	13,835	-62.1		257	89.2
125	29	14,953	-66.5		258	76.9
100	28	16,288	-69.5		257	63.5
80	26	17,614	-69.5		260	45.3
70	26	18,412	-68.0		259	37.9
60	26	19,345	-65.8		255	26.8
50	26	20,459	-62.8		255	21.4
40	26	21,847	-58.6		252	21.8
30	25	23,673	-54.4		251	27.0
25	24	24,845	-52.6		258	29.9
20	19	26,284	-51.3		263	31.9
15	16	28,156	-49.2			
10						

SAN DIEGO, CALIF. 1002 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	124	10.3	83	65	1.7
1000	31	137			42	1.4
950	31	564	9.8	65	241	1.9
900	31	1,013	7.1	63	247	1.7
850	31	1,481	4.9	55	272	3.7
800	31	1,974	2.8	46	272	6.8
750	31	2,493	.2	36	275	10.3
700	31	3,045	- 2.5	28	276	14.0
650	31	3,625	- 5.5	R26	271	17.5
600	31	4,254	- 9.4	R25	271	20.0
550	31	4,913	-14.0	R23	269	24.9
500	31	5,639	-19.0	R26	270	28.7
450	31	6,407	-24.6	R28	267	34.4
400	31	7,264	-30.7	R27	267	39.4
350	31	8,199	-37.8	R27	264	44.5
300	31	9,246	-45.0		265	52.8
250	31	10,444	-52.2		262	61.0
200	30	11,869	-57.3		265	64.5
175	30	12,712	-58.1		267	62.7
150	30	13,681	-59.3		268	59.1
125	30	14,817	-61.4		268	51.1
100	30	16,193	-63.3		267	40.8
80	30	17,560	-64.2		268	28.2
70	30	18,376	-63.9		267	28.6
60	30	19,323	-62.5		267	25.3
50	29	20,453	-61.2		272	16.3
40	28	21,849	-59.3		274	16.1
30	27	23,663	-55.3		265	19.0
25	25	24,831	-53.8		263	22.0
20	23	26,272	-51.1		264	24.5
15	19	28,160	-48.0		271	21.2
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* SAN JUAN, P. R. 1018 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	6	22.5	79	102	4.7
1000	31	159	22.7	76	101	11.7
950	31	601	19.3	76	95	16.5
900	31	1,069	16.3	70	96	15.7
850	31	1,553	13.4	65	94	15.3
800	31	2,063	11.6	48	93	13.2
750	31	2,598	9.5	34	89	11.1
700	31	3,172	7.9	26	91	9.9
650	31	3,776	5.3	17	88	10.1
600	31	4,430	2.1	17	82	7.4
550	31	5,120	- 1.7	17	55	6.2
500	31	5,880	- 6.4	17	17	6.4
450	31	6,687	-12.3	17	347	9.7
400	31	7,585	-19.3	17	327	12.0
350	31	8,562	-27.2	18	329	16.7
300	31	9,653	-36.0	19	317	21.4
250	31	10,894	-45.1		297	24.9
200	31	12,350	-55.4		286	31.5
175	31	13,191	-60.9		280	32.1
150	31	14,138	-66.3		281	28.7
125	31	15,227	-71.9		292	24.5
100	31	16,524	-77.3		303	20.0
80	30	17,799	-77.9		317	12.0
70	30	18,565	-75.4		314	7.4
60	30	19,469	-69.9		315	4.9
50	28	20,574	-62.0		40	6.0
40	28	21,972	-56.7		75	12.4
30	26	23,812	-52.9		78	21.4
25	26	24,993	-51.1		83	25.4
20	24	26,448	-48.7		95	27.6
15	16	28,366	-46.3		104	31.3
10	6	31,092	-38.7			

SAN NICOLAS, CALIF. 995 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	174	10.4	84	295	5.6
1000	30	132				
950	30	554	9.8	62	300	5.8
900	30	1,006	7.5	52	292	3.9
850	30	1,476	5.9	46	288	4.7
800	30	1,970	3.3	43	279	7.2
750	30	2,488	.7	40	281	8.7
700	30	3,042	- 2.4	34	276	11.3
650	30	3,624	- 5.5	32	279	15.2
600	30	4,250	- 9.4	30	273	18.1
550	30	4,909	-14.0	29	276	22.1
500	30	5,633	-19.1	32	275	26.2
450	30	6,402	-25.0	33	274	28.0
400	29	7,255	-31.3	34	275	31.3
350	29	8,187	-38.5	34	270	36.7
300	29	9,230	-45.6		267	42.9
250	29	10,426	-52.6		269	50.5
200	29	11,851	-56.9		271	55.4
175	29	12,694	-58.1		269	55.4
150	29	13,664	-59.4		268	50.7
125	29	14,801	-61.3		270	45.8
100	29	16,177	-63.6		271	40.0
80	28	17,546	-64.2		272	28.9
70	28	18,363	-63.8		275	24.7
60	28	19,311	-63.2		273	21.4
50	26	20,449	-61.0		280	16.5
40	25	21,838	-59.8		281	16.9
30	22	23,641	-57.4		277	17.7
25	21	24,800	-55.2		274	17.9
20	20	26,231	-52.3		268	22.5
15	20	28,109	-47.8		267	24.9
10	17	30,834	-43.0		267	28.2
7	8	33,245	-38.5			

SANTA MONICA, CALIF. 1011 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	38	11.8	74	37	4.3
1000	31	132	11.7	73	47	3.3
950	31	560	9.6	68	125	2.5
900	31	1,008	7.2	64	154	3.3
850	31	1,476	5.1	56	225	2.3
800	31	1,969	2.7	47	277	4.3
750	31	2,488	- .2	40	279	6.8
700	31	3,038	- 3.5	38	279	9.1
650	31	3,618	- 6.8	34	276	11.8
600	31	4,241	-11.0	35	276	16.1
550	31	4,898	-15.5	R32	275	20.0
500	31	5,617	-20.4	R31	273	24.1
450	31	6,380	-25.9	R30	271	29.1
400	31	7,232	-32.0	R31	268	34.8
350	31	8,162	-39.2	R31	268	40.0
300	31	9,202	-46.3		266	46.4
250	31	10,395	-53.2		264	51.7
200	31	11,815	-57.4		269	50.9
175	31	12,657	-58.5		269	51.7
150	31	13,624	-59.5		268	49.7
125	31	14,759	-61.4		269	43.1
100	31	16,134	-64.0		272	36.7
80	30	17,499	-63.9		274	27.8
70	29	18,320	-63.6		271	22.5
60	29	19,269	-62.7		274	20.0
50	29	20,396	-61.3		277	16.7
40	29	21,787	-59.5		281	17.7
30	28	23,594	-57.4		275	17.3
25	28	24,753	-54.4		272	18.6
20	25	26,189	-50.8		265	20.8
15	18	28,110	-46.7		270	12.6
10	8	30,869	-38.9			
7						

* SAULT STE. MARIE, MICH. 990 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	221	- 9.0	82	50	3.7
1000	31	143				
950	31	541	- 8.0	67	74	6.0
900	31	960	- 9.2	60	81	4.7
850	31	1,401	-11.4	59	44	1.6
800	31	1,864	-13.6	57	307	3.5
750	31	2,355	-15.6	51	289	6.6
700	31	2,871	-17.7	49	280	10.3
650	31	3,425	-20.5	46	271	13.4
600	31	4,011	-23.6	44	271	18.5
550	31	4,642	-26.8	42	270	23.9
500	31	5,325	-31.1	40	273	30.7
450	31	6,061	-36.1	38	274	36.5
400	31	6,873	-41.6	36	269	42.0
350	31	7,766	-48.0		266	47.4
300	31	8,769	-53.5		266	52.4
250	31	9,931	-56.6		265	51.5
200	30	11,359	-55.5		267	46.8
175	30	12,212	-54.6		266	45.8
150	30	13,198	-54.7		266	43.9
125	30	14,362	-55.5		266	42.0
100	30	15,781	-56.6		265	40.4
80	30	17,198	-56.2		266	35.9
70	30	18,045	-56.1		264	33.2
60	30	19,026	-55.5		262	31.7
50	30	20,191	-54.0		257	31.7
40	30	21,633	-51.4		255	28.4
30	30	23,505	-50.6		248	25.1
25	29	24,685	-50.2		250	25.6
20	28	26,144	-49.0		254	23.9
15	25	28,054	-46.9		250	24.7
10	18	30,769	-44.6		259	33.6
7						

SHEMYA, ALASKA 998 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	38	.1	84	39	3.3
1000	31	19			71	12.2
950	31	424	- 2.7	77	54	5.6
900	31	855	- 5.8	80	85	4.9
850	31	1,301	- 8.5	72	84	6.6
800	31	1,770	-10.9	60	94	5.4
750	31	2,262	-13.4	52	101	5.1
700	31	2,786	-16.4	47	133	4.3
650	31	3,336	-19.8	45	140	4.9
600	31	3,930	-23.9	45	142	5.8
550	31	4,554	-28.1	44	155	6.0
500	31	5,238	-32.8	44	170	6.6
450	31	5,967	-38.0	46	190	6.8
400	31	6,773	-44.0	55	196	8.5
350	31	7,658	-49.5		204	12.2
300	31	8,659	-53.0		205	14.8
250	30	9,840	-52.6		202	13.8
200	30	11,295	-48.9		201	13.8
175	30	12,174	-47.9		202	14.6
150	30	13,193	-47.2		208	14.2
125	30	14,399	-47.3		200	15.3
100	30	15,873	-47.6		198	13.4
80	30	17,346	-47.8		190	12.2
70	29	18,232	-47.8		180	11.8
60	29	19,250	-47.8		176	9.9
50	29	20,452	-48.0		158	8.5
40	29	21,923	-47.7		125	10.1
30	29	23,823	-47.3		106	13.4
25	29	25,029	-47.3		97	16.5
20	26	26,521	-46.9		90	25.3
15	23	28,456	-46.7		83	35.5
10	13	31,184	-45.9		76	46.8
7						

* SHREVEPORT, LA. 1008 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	79	6.4	88	37	2.7
1000	31	143	5.7	82	38	3.1
950	31	567	5.7	77	256	3.5
900	31	1,007	5.8	75	263	12.0
850	31	1,475	4.9	66	268	17.1
800	31	1,969	3.4	56	281	20.8
750	31	2,492	.9	51	280	24.5
700	31	3,043	- 2.2	45	275	29.3
650	31	3,630	- 5.2	40	271	35.9
600	31	4,254	- 8.8	38	266	43.5
550	31	4,922	-13.1	38	265	48.2
500	31	5,642	-18.1	37	261	53.8
450	31	6,418	-23.5	36	259	61.0
400	31	7,275	-29.3	35	261	66.6
350	31	8,215	-36.2	38	262	79.1
300	31	9,269	-43.1	30	262	88.4
250	31	10,476	-51.2		262	97.1
200	31	11,904	-57.3		261	95.6
175	31	12,745	-58.3		260	98.7
150	31	13,710	-60.6		258	87.8
125	31	14,837	-63.7		261	70.5
100	30	16,200	-66.3		262	64.1
80	30	17,548	-66.7		260	51.9
70	30	18,356	-66.0		267	43.9
60	30	19,296	-63.2		268	31.3
50	30	20,422	-61.3		263	28.7
40	29	21,820	-56.5		264	21.6
30	29	23,655	-54.2		257	28.6
25	29	24,827	-52.7		262	27.8
20	27	26,276	-51.4		262	26.4
15	25	28,167	-47.9		249	16.5
10	20	30,876	-42.2		276	22.9
7						

SPOKANE, WASH. 935 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	722	- 2.6	64	87	2.5
1000	31	180				
950	31	587				
900	31	1,024	.3	51	52	3.3
850	31	1,480	- 1.9	45	27	3.5
800	31	1,960	- 5.2	45	356	5.4
750	31	2,460	- 8.2	46	336	6.8
700	31	2,997	-11.3	46	325	8.4
650	31	3,556	-14.0	44	324	11.8
600	31	4,165	-17.7	38	324	19.2
550	31	4,805	-21.7	R37	320	25.3
500	31	5,508	-26.1	R31	322	29.5
450	31	6,252	-31.3	R32	321	35.4
400	31	7,087	-37.3	R34	325	40.2
350	31	7,997	-44.0		324	46.2
300	31	9,015	-51.2		328	48.2
250	31	10,181	-57.8		331	47.0
200	31	11,583	-57.9		327	42.5
175	31	12,429	-56.1		324	41.2
150	31	13,408	-56.8		322	38.1
125	31	14,559	-58.3		318	35.0
100	31	15,962	-58.9		317	30.1
80	31	17,361	-59.5		319	26.4
70	31	18,195	-59.5		322	26.0
60	31	19,159	-58.9		327	21.8
50	31	20,304	-58.5		325	19.8
40	28	21,754	-56.7		334	13.0
30	27	23,573	-55.4		336	13.6
25	27	24,740	-53.6		346	8.7
20	25	26,184	-51.4		338	4.1
15	9	28,057	-47.7			
10						
7						
5						

SWAN ISLAND, W. I. 1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	10	24.8	79	102	9.5
1000	31	126	24.0	79	102	11.8
950	31	572	20.7	79	113	16.3
900	31	1,039	17.5	74	115	16.7
850	31	1,526	14.6	65	112	13.8
800	31	2,036	12.4	50	114	11.5
750	31	2,577	11.1	33	120	11.8
700	31	3,149	9.2	R26	119	10.7
650	31	3,760	7.2	R18	120	8.9
600	31	4,414	3.5	R14	129	5.6
550	31	5,107	- .8	R14	166	3.9
500	31	5,869	- 5.7	R15	199	4.9
450	31	6,679	-11.8	R16	212	5.8
400	31	7,576	-18.8	R18	231	6.8
350	31	8,556	-26.4	R19	274	11.1
300	31	9,650	-35.2	R22	277	17.5
250	31	10,894	-44.9		270	24.1
200	31	12,348	-56.0		269	32.1
175	31	13,186	-61.6		270	33.0
150	31	14,128	-66.8		271	28.4
125	31	15,216	-72.0		273	21.4
100	31	16,514	-77.1		260	12.6
80	30	17,786	-79.0		260	5.6
70	29	18,550	-76.4		271	3.9
60	29	19,453	-70.6		307	3.9
50	28	20,547	-64.9		40	4.1
40	28	21,934	-57.7		87	10.1
30	27	23,764	-53.7		88	16.7
25	25	24,943	-51.5		86	21.0
20	20	26,402	-48.8		86	25.4
15	12	28,306	-45.5			
10	6	31,047	-42.3			
7						
5						

TAMPA, FLA. 1017 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	8	16.0	90	114	.8
1000	31	148	16.5	82	144	2.9
950	31	583	15.5	74	213	8.4
900	31	1,043	13.4	67	226	11.1
850	31	1,523	10.8	63	245	14.8
800	31	2,027	8.3	58	252	20.0
750	31	2,553	5.5	52	258	24.7
700	31	3,120	3.8	38	259	31.1
650	31	3,715	.6	33	260	35.9
600	31	4,358	- 3.1	31	264	39.6
550	31	5,035	- 7.4	29	265	46.0
500	31	5,778	-11.9	R28	265	52.1
450	31	6,569	-17.0	R25	264	57.5
400	31	7,451	-23.2	R24	263	63.1
350	31	8,415	-30.2	R24	265	67.4
300	31	9,493	-38.4	R25	265	72.7
250	31	10,722	-47.4		266	79.6
200	31	12,168	-55.6		269	88.8
175	31	13,011	-59.5		270	85.7
150	31	13,967	-63.1		269	81.8
125	31	15,077	-67.5		267	74.2
100	31	16,406	-71.3		266	64.3
80	31	17,720	-71.5		265	47.0
70	31	18,512	-69.0		262	31.5
60	31	19,443	-65.5		260	19.4
50	31	20,562	-61.1		263	13.8
40	30	21,966	-55.7		290	8.4
30	29	23,809	-52.8		262	4.5
25	29	24,988	-51.6		222	3.5
20	28	26,439	-50.3		260	5.4
15	18	28,325	-46.5		265	17.1
10						
7						
5						

* TATOOSH IS., WASH 1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	31	6.1	77	62	11.1
1000	31	160	6.7	67	73	11.3
950	31	576	5.8	60	79	6.6
900	31	1,022	3.4	58	56	1.9
850	31	1,484	.8	57	335	2.9
800	31	1,969	- 1.8	55	323	7.4
750	31	2,475	- 4.6	53	324	10.5
700	31	3,021	- 7.1	45	328	13.0
650	31	3,588	-10.3	46	326	16.5
600	31	4,208	-13.9	44	326	20.6
550	31	4,856	-18.1	44	326	24.1
500	31	5,570	-23.1	44	327	26.2
450	31	6,324	-28.6	45	326	29.1
400	31	7,167	-35.0	45	322	31.5
350	31	8,084	-42.4	44	319	30.7
300	31	9,107	-50.6		315	29.7
250	31	10,272	-58.9		319	30.9
200	31	11,656	-61.7		312	34.2
175	31	12,488	-59.3		309	29.1
150	31	13,454	-59.0		311	27.4
125	31	14,597	-59.2		308	24.7
100	29	15,999	-60.3		317	22.9
80	28	17,393	-60.3		323	21.4
70	28	18,224	-60.2		328	19.4
60	28	19,186	-60.0		332	20.6
50	28	20,327	-59.2		339	21.6
40	27	21,740	-58.7		353	20.4
30	26	23,558	-57.4		13	19.6
25	25	24,717	-56.6		15	22.1
20	23	26,161	-54.9		19	16.5
15	21	28,077	-51.7		37	10.1
10	16	30,734	-48.0		42	7.4
7						
5						

TOPEKA, KANS. 987 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	269	- 3.1	78	333	6.2
1000	31	164				
950	31	570	- 3.7	68	329	7.8
900	31	997	- 4.8	65	325	11.5
850	31	1,448	- 4.8	57	324	13.8
800	31	1,925	- 5.5	55	311	14.8
750	31	2,428	- 6.9	51	300	17.7
700	31	2,967	- 9.3	47	289	22.7
650	31	3,533	-12.5	49	286	28.0
600	31	4,144	-16.1	50	278	30.9
550	31	4,791	-20.4	50	276	35.5
500	31	5,495	-24.8	44	271	39.0
450	31	6,251	-30.2	40	272	42.9
400	31	7,082	-36.4	37	268	49.5
350	31	7,994	-43.3	R26	265	50.7
300	31	9,016	-49.9		262	60.2
250	31	10,195	-54.2		263	65.3
200	31	11,618	-55.9		264	71.1
175	31	12,468	-55.7		266	71.3
150	31	13,448	-56.4		266	63.3
125	30	14,601	-58.1		266	56.5
100	30	16,001	-59.8		268	50.9
80	30	17,391	-61.0		266	44.7
70	30	18,220	-60.6		267	37.9
60	29	19,180	-59.8		265	34.2
50	28	20,318	-58.7		264	28.4
40	27	21,727	-56.2		259	23.9
30	27	23,568	-53.4		254	22.9
25	26	24,748	-51.2		245	19.0
20	26	26,203	-49.7		246	18.8
15	23	28,101	-48.3		249	19.0
10	11	30,764	-48.0		285	12.8
7	9	33,152	-43.2			
5	7	35,449	-37.7			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

+ TRUK, CAROLINE IS.
1011 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	2	27.5	76	46	9.9
1000	31	95	26.6	73	57	12.2
950	31	541	22.9	72	78	16.9
900	31	1,017	20.0	68	87	15.5
850	31	1,509	17.4	64	90	14.2
800	30	2,025	15.5	54	95	11.7
750	30	2,571	13.2	45	101	10.7
700	30	3,149	10.4	41	98	10.5
650	30	3,761	6.9	42	100	12.4
600	30	4,416	3.3	41	106	13.2
550	30	5,112	- .3	36	108	14.0
500	29	5,876	- 4.5	33	107	15.2
450	28	6,696	- 9.2	31	109	17.7
400	28	7,603	-14.8	24	105	16.7
350	28	8,600	-21.4	23	105	15.0
300	28	9,718	-30.0	22	105	14.4
250	28	10,989	-40.3	25	126	15.2
200	28	12,471	-52.6		132	17.3
175	28	13,320	-59.6		125	18.8
150	28	14,267	-67.3		115	19.2
125	28	15,344	-75.5		108	21.2
100	28	16,612	-81.4		101	18.1
80	28	17,878	-76.1		56	1.7
70	28	18,658	-71.0		295	4.9
60	28	19,581	-67.3		275	8.0
50	26	20,689	-64.1		276	12.4
40	26	22,066	-60.7		282	7.2
30	24	23,882	-56.2		85	17.1
25	20	25,046	-54.0		94	32.2
20	15	26,492	-50.6		96	47.8
15						
10						
7						

TUCSON, ARIZ.
924 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	789	6.6	51	152	5.8
1000	31	128				
950	31	554				
900	31	1,004	10.8	38	178	4.9
850	31	1,478	8.4	37	203	4.5
800	31	1,976	4.7	39	218	7.4
750	31	2,494	1.1	35	241	11.7
700	31	3,050	- 1.9	30	251	16.1
650	31	3,626	- 5.2	R27	257	20.8
600	31	4,260	- 9.1	R24	263	25.8
550	31	4,918	-13.4	R22	265	32.2
500	31	5,647	-18.3	R25	265	36.9
450	31	6,414	-23.9	R30	264	44.1
400	31	7,276	-30.1	R30	263	51.1
350	31	8,213	-36.9	R28	263	60.4
300	31	9,263	-44.2		264	66.4
250	31	10,464	-51.8		264	72.8
200	31	11,891	-57.3		260	78.7
175	31	12,732	-58.1		262	74.8
150	31	13,700	-59.4		262	64.3
125	31	14,834	-62.1		262	59.6
100	31	16,200	-65.7		264	47.6
80	31	17,555	-65.4		262	34.0
70	31	18,368	-64.9		264	30.1
60	31	19,310	-64.0		270	23.5
50	31	20,431	-61.9		266	19.2
40	30	21,821	-59.0		266	18.3
30	29	23,636	-55.4		264	26.6
25	29	24,806	-52.5		261	28.7
20	29	26,257	-49.7		261	30.7
15	26	28,148	-47.9		260	31.1
10	11	30,904	-41.5			
7						

* VANDENBERG AFB, CALIF.
1003 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	113	8.8	90	13	1.9
1000	31	140	9.1	86	1	1.4
950	31	567	8.8	74	355	2.9
900	31	1,011	6.5	70	4	2.7
850	31	1,479	4.9	57	326	2.7
800	31	1,972	2.4	51	305	4.5
750	31	2,490	- .3	44	297	6.8
700	31	3,040	- 3.3	38	296	9.3
650	31	3,619	- 6.8	36	294	10.3
600	31	4,243	-10.8	38	283	13.2
550	31	4,901	-15.3	40	284	17.3
500	31	5,620	-20.2	35	284	20.0
450	31	6,386	-26.3	34	276	24.7
400	31	7,232	-33.0	36	275	29.3
350	31	8,159	-39.6	34	273	35.5
300	31	9,197	-46.6		273	38.7
250	31	10,389	-52.7		270	43.1
200	31	11,814	-56.6		273	47.4
175	31	12,659	-57.8		275	46.8
150	31	13,629	-58.9		272	46.2
125	31	14,769	-60.7		272	40.4
100	31	16,150	-63.1		274	34.0
80	31	17,519	-63.6		276	27.0
70	31	18,337	-63.6		278	24.1
60	30	19,287	-62.8		281	20.8
50	30	20,413	-61.5		284	19.2
40	30	21,800	-60.1		284	17.1
30	30	23,601	-57.5		279	19.6
25	30	24,758	-54.8		278	22.1
20	29	26,194	-51.4		270	24.1
15	26	28,085	-48.0		261	21.8
10	24	30,788	-42.5		248	17.3
7	14	33,261	-38.6			

* WAKE IS., PACIFIC AREA
1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	5	23.6	77	72	6.2
1000	31	138	22.8	77	79	7.6
950	31	580	19.4	81	93	7.6
900	31	1,048	16.2	80	90	7.0
850	31	1,533	13.7	69	85	5.4
800	31	2,043	12.0	58	96	2.7
750	31	2,584	10.9	32	266	1.4
700	31	3,156	9.0	24	277	5.6
650	31	3,765	6.6	18	267	8.4
600	31	4,420	2.6	18	268	12.0
550	31	5,114	- 1.8	19	268	15.0
500	31	5,870	- 6.6	19	272	18.5
450	31	6,683	-11.8	19	271	22.3
400	31	7,580	-17.8	23	273	24.3
350	31	8,566	-24.3	20	278	29.5
300	31	9,672	-32.0	19	282	32.8
250	31	10,935	-41.6		282	36.5
200	31	12,409	-53.5		284	38.5
175	31	13,255	-60.2		282	37.3
150	31	14,201	-67.3		279	35.9
125	31	15,279	-75.0		277	33.0
100	31	16,550	-81.8		270	27.2
80	30	17,802	-79.7		262	13.6
70	30	18,565	-75.5		273	7.8
60	26	19,468	-70.3		278	6.0
50	23	20,563	-64.5		229	1.6
40	20	21,944	-59.1		58	1.6
30	19	23,765	-54.7		98	4.9
25	19	24,936	-52.6		69	8.0
20	19	26,388	-49.4		84	5.8
15	18	28,287	-46.4		71	10.7
10	15	31,007	-41.5		87	10.3
7	7	33,521	-37.6			

* WALLOPS IS. VA. NASA
1018 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	23	3	2.9	78	333	2.9
1000	23	146	3.5	66	339	4.5
950	23	562	2.5	64	299	8.9
900	23	999	1.5	67	293	15.5
850	23	1,459	.9	56	284	21.2
800	23	1,945	- 1.3	56	278	23.9
750	23	2,457	- 3.6	50	279	27.2
700	23	3,000	- 6.6	45	280	30.9
650	23	3,573	- 9.3	42	278	35.7
600	23	4,192	-12.7	38	277	42.0
550	23	4,845	-16.6	39	276	47.0
500	23	5,562	-21.2	39	276	54.0
450	23	6,321	-26.6	37	277	58.1
400	23	7,173	-32.7	38	276	63.5
350	23	8,100	-39.4	36	273	67.0
300	23	9,140	-46.7		271	81.4
250	23	10,332	-52.7		275	89.7
200	23	11,758	-56.5		274	91.9
175	23	12,607	-55.4		273	81.2
150	23	13,587	-56.8		270	76.1
125	23	14,738	-58.3		272	64.7
100	23	16,136	-60.1		272	57.5
80	23	17,527	-60.1		275	48.4
70	22	18,359	-59.8		274	45.1
60	22	19,327	-58.0		275	40.2
50	22	20,480	-56.1		276	27.8
40	22	21,903	-54.2		273	30.5
30	21	23,753	-53.1		274	31.1
25	21	24,928	-52.6		272	30.9
20	20	26,371	-51.9		265	28.9
15	18	28,246	-50.1		286	27.8
10	14	30,928	-44.9		307	20.2
7	6	33,297	-40.9			

WASHINGTON, D. C.
1007 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	84	.1	76	311	2.3
1000	31	141			313	2.5
950	31	556	- .2	62	300	8.0
900	31	984	- 1.9	65	298	13.6
850	31	1,438	- 3.2	64	292	17.7
800	31	1,917	- 4.6	60	288	20.4
750	31	2,425	- 6.1	52	284	22.9
700	31	2,962	- 8.8	45	280	26.2
650	31	3,533	-11.8	43	275	29.7
600	31	4,142	-15.1	41	274	34.6
550	31	4,792	-18.8	41	272	37.1
500	31	5,500	-23.4	42	273	46.0
450	31	6,258	-28.7	40	271	49.9
400	31	7,096	-34.6	38	271	56.3
350	31	8,016	-41.0	R32	269	61.6
300	31	9,047	-48.0		269	68.6
250	31	10,234	-53.0		269	79.1
200	31	11,660	-56.6		272	82.6
175	31	12,509	-55.5		273	76.3
150	31	13,491	-56.0		272	71.5
125	30	14,651	-57.9		270	62.2
100	30	16,051	-59.6		271	54.0
80	30	17,444	-60.1		272	44.9
70	30	18,278	-59.2		271	39.2
60	29	19,245	-58.5		270	34.4
50	29	20,396	-56.7		271	30.5
40	29	21,818	-54.4		269	27.2
30	29	23,666	-53.2		266	22.9
25	29	24,841	-53.1		266	15.5
20	27	26,280	-51.8		271	13.6
15	17	28,162	-50.1		277	12.4
10	17	30,838	-44.8		277	19.2
7	15	33,255	-40.4		279	33.8
5	11	35,577	-36.9			

WINNEMUCCA, NEV.
868 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,310	- 3.3	59	86	1.7
1000	31	171				
950	31	587				
900	31	1,023				
850	31	1,478	2.0	46	35	1.9
800	31	1,966	.2	44	340	2.1
750	31	2,476	- 3.3	47	299	6.0
700	31	3,023	- 6.5	47	300	8.7
650	31	3,594	- 9.7	42	308	10.7
600	31	4,214	-13.4	39	309	13.0
550	31	4,865	-17.6	39	313	14.8
500	31	5,578	-22.6	36	313	17.9
450	31	6,336	-28.3	34	314	17.9
400	31	7,177	-34.8	R32	317	19.2
350	31	8,094	-42.2	R32	319	20.0
300	31	9,119	-49.8		323	22.7
250	31	10,293	-56.1		315	28.0
200	31	11,703	-57.9		303	34.0
175	31	12,546	-57.0		297	32.1
150	31	13,521	-57.3		293	32.1
125	31	14,669	-59.1		295	30.3
100	31	16,063	-60.4		294	29.5
80	31	17,452	-61.0		295	23.7
70	31	18,280	-61.3		298	22.3
60	31	19,236	-60.7		299	20.4
50	31	20,371	-60.2		298	17.7
40	30	21,761	-59.3		297	17.9
30	27	23,579	-57.0		310	13.6
25	25	24,729	-54.6		299	13.4
20	23	26,160	-51.2		273	15.7
15	18	28,058	-46.8		274	17.3
10	8	30,832	-41.4			
7						
5						

WINSLOW, ARIZ.
849 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,492	- .5	63	222	4.3
1000	31	160				
950	31	579				
900	31	1,018				
850	31	1,482			222	2.7
800	31	1,971	2.1	42	253	7.8
750	31	2,489	- 1.2	42	258	9.5
700	31	3,036	- 4.9	41	265	14.2
650	31	3,610	- 8.4	40	271	18.5
600	31	4,232	-12.1	37	273	21.8
550	31	4,887	-16.4	R35	273	25.3
500	31	5,604	-21.0	R34	274	30.3
450	31	6,366	-26.8	R34	276	36.5
400	31	7,212	-33.2	R35	275	43.9
350	31	8,138	-39.6	R36	273	52.4
300	31	9,177	-46.4		271	62.9
250	31	10,370	-52.9		270	71.5
200	31	11,791	-57.8		267	68.2
175	31	12,632	-57.7		266	67.6
150	31	13,602	-58.6		267	63.7
125	31	14,743	-60.7		265	54.4
100	31	16,121	-63.4		264	45.6
80	31	17,490	-64.1		267	37.9
70	31	18,306	-64.0		268	34.0
60	31	19,252	-63.4		270	29.7
50	30	20,378	-61.9		273	25.6
40	30	21,765	-60.2		272	23.3
30	30	23,574	-56.6		258	26.6
25	28	24,742	-53.9		265	20.4
20	26	26,190	-51.5		272	12.8
15	20	28,099	-48.1		262	14.6
10	5	30,747	-43.8			
7						
5						

YAKUTAT, ALASKA
1022 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	12	- 1.0	95	98	4.1
1000	31	185	.8	82	108	6.4
950	31	595	- .6	78	131	10.1
900	31	1,028	- 2.6	76	157	9.9
850	31	1,480	- 4.9	75	184	8.5
800	31	1,955	- 6.8	71	206	8.5
750	31	2,458	- 8.5	66	227	11.3
700	30	2,988	-10.8	61	248	14.4
650	30	3,552	-13.7	56	253	18.6
600	30	4,161	-17.3	53	259	20.2
550	30	4,805	-21.5	55	267	25.1
500	30	5,505	-25.9	54	269	30.3
450	30	6,256	-31.0	50	268	34.8
400	30	7,087	-37.1	49	269	38.1
350	30	7,996	-44.1		277	41.8
300	30	9,014	-51.3		283	46.2
250	30	10,179	-58.3		293	49.5
200	30	11,577	-58.7		293	40.8
175	30	12,418	-57.3		291	33.8
150	29	13,402	-56.1		299	36.7
125	29	14,562	-55.8		308	30.3
100	29	15,980	-56.5		307	28.9
80	29	17,398	-56.3		312	27.8
70	29	18,245	-55.9		318	26.2
60	29	19,228	-55.4		324	28.7
50	29	20,391	-55.1		327	28.9
40	28	21,819	-54.6		332	31.1
30	28	23,664	-53.7		340	31.3
25	28	24,835	-54.2		342	34.8
20	26	26,282	-53.8		342	35.7
15	16	28,127	-51.4		351	43.9
10	11	30,735	-50.7			
7						
5						

YAP, CAROLINE IS.
+ 1009 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	17	27.1	81	65	8.9
1000	31	93	26.1	79	69	10.9
950	31	534	22.2	80	77	15.3
900	31	1,014	19.4	75	86	15.5
850	31	1,505	17.4	59	88	14.6
800	31	2,021	15.4	50	87	12.6
750	31	2,562	12.7	47	85	12.2
700	31	3,143	9.6	47	91	10.5
650	31	3,751	6.3	47	93	10.7
600	31	4,408	2.6	48	96	10.7
550	31	5,101	- 1.3	45	98	10.7
500	31	5,861	- 5.5	40	99	11.7
450	31	6,678	-10.3	36	95	11.5
400	31	7,580	-15.7	31	96	10.5
350	31	8,574	-22.7	31	96	11.5
300	31	9,686	-31.2	29	106	11.1
250	31	10,951	-41.5		115	14.6
200	31	12,424	-54.3		124	20.2
175	31	13,265	-61.6		121	20.2
150	31	14,203	-69.1		123	22.1
125	31	15,271	-76.5		115	17.5
100	31	16,535	-81.8		108	11.1
80	31	17,794	-77.3		298	1.6
70	31	18,566	-73.4		280	7.4
60	31	19,475	-69.6		275	8.5
50	31	20,572	-65.8		274	9.3
40	30	21,945	-61.0		303	1.0
30	29	23,751	-57.1		95	15.3
25	26	24,910	-54.8		91	27.8
20	22	26,347	-51.9		91	38.9
15	8	28,241	-47.6			
10						
7						
5						

YUCCA FLAT, NEV.
880 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,196	- .8	49	312	.8
1000	31	149				
950	31	566				
900	31	1,007				
850	31	1,472	4.9	41	346	2.9
800	31	1,965	2.1	40	327	3.1
750	31	2,479	- 1.4	42	342	5.1
700	31	3,029	- 4.9	42	336	5.1
650	31	3,602	- 8.5	42	309	5.4
600	31	4,224	-12.6	42	302	9.1
550	31	4,877	-17.1	39	293	12.8
500	31	5,591	-22.0	R34	289	15.0
450	31	6,350	-27.8	R34	290	18.6
400	31	7,192	-34.5	R34	285	22.7
350	31	8,112	-41.4	R31	284	27.0
300	30	9,143	-48.1		277	33.4
250	30	10,329	-53.8		275	40.8
200	30	11,748	-57.6		277	42.2
175	30	12,589	-58.0		274	42.2
150	30	13,561	-58.1		272	39.6
125	30	14,705	-59.8		274	35.4
100	30	16,092	-61.7		273	30.9
80	30	17,469	-62.7		275	25.1
70	30	18,291	-62.7		272	22.3
60	30	19,241	-62.3		277	20.0
50	30	20,369	-61.2		283	16.1
40	30	21,758	-59.5		282	12.4
30	28	23,565	-57.5		288	13.8
25	27	24,734	-54.8		280	18.5
20	23	26,155	-51.8		277	23.3
15	21	28,039	-47.1		268	16.5
10	12	30,780	-43.9			

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record corrected to the height of the floors of the instruments shelters used for rawinsonde purposes "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations Relative humidity averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind Relative humidity data are not published for standard pressure surfaces for which less than 5 observations are available

Relative humidity data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from lithium chloride hygristors

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature in degrees Celsius, relative humidity in percent, and resultant winds in degrees and knots

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb They were also equipped with carbon hygristors These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes

+ Observations for these stations are scheduled at 0000 G C T.

R More than half of the observations are from statistical values

1/ began December 17, 1964

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun.

ALBUQUERQUE, N. MEX.

Date	Sun's zenith distance A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
Air mass	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Mar. 1-----	0.90	0.99	1.08	1.27	1.37	----	(0.89)	----	----
2-----	----	----	----	----	----	1.22	1.06	0.94	0.81
3-----	----	----	----	----	----	----	1.09	.99	.87
4-----	.93	1.02	1.16	1.33	1.46	1.33	1.17	1.05	.95
5-----	.95	1.07	1.18	1.33	1.48	1.29	1.16	.88	.77
6-----	.85	.97	1.10	1.26	1.38	1.28	1.11	1.00	.89
8-----	.83	.91	1.04	1.19	----	----	----	----	----
13----	----	----	----	----	1.35	----	----	.75	.63
14----	.51	.59	.73	.93	1.18	.87	.66	.52	.44
15-19-	Equipment inoperative due to relocation								
20----	.98	1.28	1.19	1.35	1.47	1.28	1.12	.96	.81
21----	.97	1.07	1.17	1.34	1.41	----	----	----	----
23----	----	----	(1.12)	1.24	----	----	----	----	----
24----	.65	.77	.92	----	----	----	----	----	----
26----	----	----	----	----	1.30	----	----	----	.61
27----	.83	.95	1.08	1.26	1.43	----	----	----	----
29----	----	----	----	----	1.31	1.12	.99	.82	.66
30----	.62	.82	.96	(1.07)	(1.33)	----	(.61)	(.46)	----
31----	.65	.77	.90	1.09	1.30	----	----	----	----
Averages	0.76	0.93	1.04	1.05	1.37	1.20	1.05	0.77	0.74

BLUE HILL OBS., MASS.

Date	Sun's zenith distance A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
Air mass	4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
Mar. 2-----	0.88	1.00	1.10	1.27	1.33	1.24	1.07	0.94	0.83
3-----	.78	.90	----	----	----	----	----	----	----
4-----	.87	.96	1.08	1.23	1.35	1.22	1.05	.93	.79
11----	.62	.67	.84	1.08	1.28	1.16	.94	.77	.72
12----	.89	1.00	1.12	1.28	1.41	1.28	1.11	.99	.88
13----	.79	.98	1.11	1.28	1.39	1.23	1.04	.88	.81
17----	.86	.96	1.10	1.24	1.41	----	----	----	----
21----	.75	.83	.98	1.21	----	----	----	----	----
22----	.76	.86	.99	1.20	----	----	----	----	----
27----	----	----	----	----	1.40	1.23	1.04	.90	.79
31----	.77	.87	1.04	1.21	1.37	1.21	1.03	.89	.77
Averages	0.80	0.90	1.03	1.22	1.37	1.22	1.04	0.90	0.80

OMAHA, NEBR.

Date	Sun's zenith distance A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
Air mass	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Mar. 7-----	HS0.78	HS0.86	HS1.08	HS1.23	HS1.35	HS1.27	HS1.05	HS0.89	HS0.76
14----	HS .60	HS .94	HS1.09	HS1.25	----	----	----	----	----
15----	HS .78	HS .90	HS1.10	HS1.27	HS1.38	----	----	----	----
19----	----	----	HM1.14	HM1.24	HS1.37	HS1.00	HM .59	HM .39	HM .27
23----	----	----	----	HS1.19	HS1.34	HS1.10	HS .80	----	----
26----	----	----	HM .68	HM1.04	HM1.31	----	----	----	----
30----	----	----	----	HM1.04	HI1.09	----	----	HM .46	HM .34
31----	HM .58	HM .71	HM .82	----	----	----	----	----	----
Averages	0.69	0.85	0.98	1.18	1.31	1.12	0.81	0.58	0.46

GUAM, M. I.

Date	Sun's zenith distance A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
Air mass	4.92	3.93	2.95	1.97	*	1.97	2.95	3.93	4.92
Mar. 14	H	M	M 1.08	S 1.26	S 1.48	----	----	----	----

MADISON, WIS.

Date	Sun's zenith distance A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
Air mass	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Mar. 16----	----	----	----	1.26	----	----	----	----	----
21----	----	----	----	M 1.35	----	----	----	----	----
30----	----	----	----	----	H 1.14	----	----	----	----
Averages	----	----	----	1.31	1.14	----	----	----	----

TUCSON, ARIZ.

Date	Sun's zenith distance A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
Air mass	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Mar. 2-----	0.77	----	----	----	----	----	----	----	0.69
4-----	.93	----	----	----	----	----	----	----	----
5-----	.92	----	----	----	----	----	----	----	----
6-----	.87	0.96	1.09	----	----	----	----	----	----
7-----	.88	.97	----	----	----	----	----	----	.88
13----	----	----	----	----	----	----	----	0.92	.81
17----	.74	----	.98	----	----	----	----	----	----
18----	----	----	----	----	----	----	----	----	.71
19----	.82	.93	----	----	----	----	----	.88	.75
23----	.84	----	----	----	----	----	----	.94	.82
24----	.69	.82	----	----	----	----	----	----	----
25----	.73	.86	----	----	----	----	----	----	.76
26----	.84	.95	1.01	----	----	----	----	.93	.82
28----	----	----	----	----	----	----	----	.85	.76
29----	.76	.86	----	----	----	----	----	----	.94
31----	.73	.84	----	----	----	----	----	----	----
Averages	0.81	0.89	1.02	----	----	----	----	0.90	0.79

MAUNA LOA OBS., HAWAII

Date	Sun's zenith distance A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
Air mass	3.36	2.69	2.01	1.34	*	1.34	2.01	2.69	3.36
Mar. 1-----	1.12	1.21	1.33	1.48	1.59	----	----	----	----
2-----	1.10	1.20	1.33	1.47	----	----	----	----	----
4-----	1.18	1.26	1.38	1.50	1.60	1.46	1.33	1.24	1.16
5‡----	1.15	1.24	1.34	1.47	(1.57)	----	----	----	----
6-----	1.15	1.25	1.35	1.47	1.58	----	----	----	----
7-----	1.13	1.23	1.34	1.46	1.58	1.41	1.28	H 1.18	H 1.10
8-----	1.09	1.19	1.30	1.43	1.59	1.43	1.31	1.20	1.11
9-----	1.18	1.27	1.38	1.49	----	----	----	----	----
10----	H 1.09	H 1.19	1.30	1.44	----	----	----	----	----
11----	HS1.09	HS1.18	HS1.29	HS1.42	----	----	----	----	----
13----	----	----	----	HM1.39	----	----	----	----	----
14----	----	----	----	----	HS1.55	HS1.39	HS1.24	HS1.11	HS1.05
15----	HS1.08	HS1.17	HS1.27	HS1.40	----	----	----	----	----
16----	HS1.08	HS1.17	HS1.27	HS1.39	HS1.55	----	----	HS1.13	HS1.05
17----	1.08	1.17	1.27	1.40	(1.55)	(1.35)	(1.24)	1.14	1.05
18----	1.13	1.21	1.32	1.44	(1.55)	----	----	----	----
19----	----	HS1.18	HS1.29	HS1.42	HS1.56	----	----	----	----
20----	HS1.09	HS1.18	HS1.29	HS1.43	----	----	----	----	----
21----	1.12	1.20	1.30	1.42	----	----	----	----	----
22----	HS1.05	HS1.15	HS1.24	----	----	----	----	----	----
24----	H 1.03	H 1.14	H 1.25	H 1.40	----	----	----	----	----
25----	1.11	1.21	1.31	1.44	1.59	----	----	(1.12)	----
26----	----	----	1.28	1.42	1.58	1.42	1.28	1.18	1.10
Averages	1.11	1.20	1.31	1.44	1.58	1.42	1.29	1.17	1.09

H	Haze	S	Slight haze - indeterminable
HS	Slight haze	M	Moderate haze - indeterminable
HM	Moderate haze	*	Values corresponding to true solar noon
HI	Intense haze	‡	Smoke and haze present from 5th thru 26th from Makaopuhi Crater volcanic eruption
( )	Clouds present		

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February, 1957 issue, Vol. 8, No. 2, page 93, of this publication.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	473	474	381	531	528	518	435	476	436	375	160	330	503	557	---	---	---	---	---	596	582	213	526	491	282	519	580	494	593	585	587	470
AMES IOWA	55	148	354	101	171	281	414	202	449	449	363	439	199	468	454	290	217	358	494	520	479	372	513	419	462	471	226	110	330	499	376	345
ANNETTE ALASKA	24	14	41	189	270	280	323	254	309	343	353	346	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	300	179	---
APALACHICOLA FLORIDA	118	454	248	281	410	525	439	582	556	408	347	418	151	444	560	413	504	178	219	---	604	---	---	436	203	159	210	495	549	589	215	383
ARGONNE NAT. LAB.	---	---	---	---	148	158	113	435	164	350	320	219	405	330	164	385	67	380	470	379	546	386	346	272	188	539	516	274	403	388	527	329
ASTORIA OREGON	356	367	360	378	352	378	395	389	361	394	407	426	435	419	334	---	---	455	455	111	172	---	---	475	---	290	294	140	277	430	277	351
ATLANTA GEORGIA	264	221	157	154	176	202	190	215	536	---	---	---	---	---	---	---	164	482	523	617	621	629	174	159	289	110	571	391	186	432	57	313
BARROW ALASKA	90	114	120	77	73	79	100	97	86	149	172	174	195	188	208	208	206	117	120	221	100	117	160	208	181	229	251	192	261	255	197	160
BETHEL ALASKA	202	175	232	218	177	251	176	147	163	208	267	348	349	379	228	202	236	237	243	172	182	228	186	275	246	221	260	353	238	273	217	235
BISMARCK N.DAK.	354	350	161	426	411	416	355	257	427	266	320	87	209	213	175	172	413	514	490	487	423	491	523	508	448	452	322*	463	448	396	311	364
BLUE HILL MASS.	95	425	273	428	164	74	66	148	150	237	463	513	499	436	325	318	459	64	94	127	522	430	159	333	514	81	520	542	71	426	607	309
BOISE IDAHO	419	428	429	427	424	429	439	440	431	451	279	336	471	403	488	427	411	508	522	395	457	394	487	524	415	97	372	425	422	369	410	417
BOSTON MASSACHUSETTS	115	407	262	405	134	46	64	113	139	277	455	485	475	396	278	326	433	61	124	130	435	410	128	312	514	55	540	504	60	539	592	297
BROWNSVILLE TEXAS	389	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
BURLINGTON VERMONT	161	277	365	380	446	51	114	314	251	236	422	322	392	413	447	310	404	93	367	236	325	334	272	500	897	58	476	466	127	481	549	338
CAPE HATTERAS N.C.	452	85	382	104	496	151	475	177	437	471	526	97	511	513	551	546	180	283	158	126	549	581	438	169	149	340	338	425	461	327	246	347
CARIBOU MAINE	207	147	258	240	335*	177	261	454	450	371	383	460	471	498	502	472	498	341	156	419*	386	433	458	505	525	159	340	566	565	520	578	391
CHARLESTON S.C.	463	90	161	142	505	268	454	374	542	399	557	38	297	572	434	537	348	159	529	279	635	616	140	216	411	457	225	132	483	387	39	351
CLEVELAND OHIO	235	192	110	43	---	---	52	93	79	---	---	---	---	---	---	---	81	464	346	355	261	411	86	418	217	76	561	473	76	524	552	259
COLUMBIA MISSOURI	71	135	362	200	148	174	202	---	375	505	374	455	473	369	445	382	101	511	425	424	475	346	197	207	164	530	537	203	221	524	550	336
DAVIS CALIFORNIA	427	422	378	349	242	233	393	398	111	137	417	88	354	442	455	184	260	492	489	475	459	485	388	277	442	240	362	471	190*	204	225	338
DODGE CITY KANSAS	171	420	433	344	410	213	456	451	401	252	211	177	114	391	457	113	349	493	382	477	497	244	296	265	366	511	511	427	333	521	494	361
E. LANSING MICHIGAN	379	306	79	36	118	82	166	185	124	161	443	265	214	185	236	483	52	330	356	417	456	364	317	346	282	408	601	500	229	472	594	296
EL CENTRO CALIF. NPF	---	---	---	---	---	---	---	---	---	---	---	---	486	494	324	502	525	508	415	489	444	493	494	527	524	516	413	532	495	460	531	---
EL PASO TEXAS	555	204	372	589	589	591	576	564	417	173	351	534	611	610	619	594	637	578	633	646	580	573	597	603	639	671	578*	549	663	635	633	554
ELY NEVADA	478	502	498	462	497	388	387	460	463	311	461	287	258	554	549	563	492	566	595	575	549	329	387	262	401	337	291	584	506	539	491	452
EPPLEY.NEWPORT R.I.	259	399	291	404	188	198	110	253	97	237	442	473	468	434	240	287	421	79	142	157	493	412	288	235	428	90	535	518	78	445	563	312
FAIRBANKS ALASKA	71	67	112	120	143	97	138	85	115	159	69	162	160	241	275	256	193	260	178	261	166	188	199	269	162	110	201	127	115	220	283	168
FLAMING GORGE UTAH	449	264	477	469	---	489	465	526	226	494	536	316	392	412	553	567	388	578	300	561	527	259	325	216	369	356	413	543	586	599	581	441
FORT WORTH TEXAS	69	437	475	555	552	566	576	524	345	140	202	165	169	560	549	229	592	568	291	630	598	187	397	118	92	643	514	114	171	99	478	374
FRESNO CALIFORNIA	437	448	459	430	442	296	372	442	461	223	219	116	468	513	386	479	225	451	503	509	514	513	517	328	551	479	212	565	554	456	156	410
GAINESVILLE FLORIDA	569	348	278	316	456	510	525	545	537	262	225	493	176	334	488	421	435	396	410	376	312	501	316	458	485	477	306	349	452	366	343	402
GLASGOW MONTANA	415	374	406	426	420	302	404	368	310	284	383	355	448	448	396	377	519	519	534	523	467	525	573	555	522	494	478	526	551	516	571	451
GREAT FALLS MONTANA	376	277	360	348	280	381	349	229	305	226	98	164	358	181	344	329	440	462	467	483	200	389	480	510	462	447	393	437	492	403	471	359
GREENSBORO N.C.	444	44	162	62	384	248	447	353	426	495	503	102	506	464	559	554	30	454	526	210	606	578	118	133	76	162	609	491	142	625	429	353
GRIFFIN EXP.STA.GA.	303	366	181	212	226	190	305	245	604	561	563	92	204	537	438	419	184	547	597	694	712	705	72	378	313	162	597	414	244	563	97	378
INDIANAPOLIS INDIANA	332	42	76	---	205	109	82	68	109	311	432	471	350	301	507	535	189	487	364	526	418	525	36	260	164	174	598	281	92	527	612	306
ITHACA NEW YORK	359	396	337	281	60	127	47	61	45	75	391	455	397	219	106	203	182	350	454	133	271	266	30	442	303	38	316	472	9	297	493	246
LAKE CHARLES LA.	295	437	302	562	555	540	577	554	495	281	206	---	231	482	525	206	402	572	339	594	590	496	394	150	128	128	115	280	433	59	313	375
LAKELAND FLORIDA	510	180	238	240	538	252	620	651	646	603	619	629	226	220	267	506	640	527	422	242	282	380	399	555	543	427	166	302	399	623	556	433
LANDER WYOMING	465	319	393	466	466	478	476	475	365	341	492	215	517	398	528	510	393	598	443	583	541	185	457	453	480	569	519	584	584	516	513	462
LARAMIE WYOMING	431	519	320	384	563	499	577	574	362	547	626	299	442	398	622	605	525	633*	385	515	421	287	295	300	476	480	342	537	537	552	470	468
LAS VEGAS NEVADA	472	512	511	382	501	435	485	493	462	449	86	188	519	559	377	547	544	577	592	585	554	343	481	406	573	600	493	622	593	574	562	486
LITTLE ROCK ARKANSAS	95	144	82	---	91	453	212	508	464	---	149	269	463	404	521	398	---	---	246	---	599	416	58	---	---	---	---	---	---	---	---	---
LOS ANGELES CALIF.WB	467	500	485	492	481	383	374	461	436	444	199	342	378	482	314	420	518	467	464	527	410	497	453	416	484	462	161	461	565	553	81	425
MADISON WISCONSIN	115	109	32	47	89	173	348	477	247	501	207	385	188	287	229	438	106	552	589	590	579	461	571	487	395	579	359	342	590	585	408	357
MANHATTAN KANSAS	202	453	430	---	229	195	457	303	319	384	326	417	256	378	387	200	344	459	491	395	436	369	466	289	343	489	523	211	337	520	522	371
MATANUSKA ALASKA	81	81	105	49	95	67	84	121	62	44	73	212	264	128	248	181	149	142	139	179	189	196	261	119	92	110	93	125	87	311	308	142
MAUNA LOA OB.HAWAII	599	526	336	753	673	672	742	741	756	471	720	674	746	749	773	708	764	762	646	589	769	630	---	640	798	799	725	282	236	503	300	636
MEDFORD OREGON	388	427	421	140	272	370	392	438	391	442	452	305	465	468	457	476	419	413	395	446	488	477	485	456	183	150	339	430	429	234	264	384
MIAMI FLORIDA	382	343	293	203	252	336	369*	---	543	524	---	350	312	349	281	---	---	---	430	478	119	221	404	423	531	402	401	465	535	416	418	376
MIDLAND TEXAS	244	197	468	524	502	510	483	492	406	243	231	496	521	536	460	517	548	426	556	597	468	418	267	414	148	611	544	478	252	291	136	419
NASHVILLE TENNESSEE	163	166	72	97	161	84	172	98	509	514	354	242	507	221	530	392	228	383	482	577	597	563	110	74	80	81	589	173	54	338	591	297
NEW YORK N.Y.U	428	433	296	340	62	137	251	165	326	226	507	517	506	428	226	369	277	54	376	81	544	387	181	156	288	74	591	513	36	472	619	318
NORTH OMAHA NEBRASKA	298	319	455	217	315	255	516	309	479	497	449	370	188	500	534	250	401	528	611	580	413	381	618	506	561	620	545	84	352	585	545	428

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

MARCH 1965

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
OAK RIDGE TENNESSEE	289	83	240	55	129	96	111	115	338	446	334	143	324	188	464	402	50	439	412	428	498	471	169	58	82	144	498	280	67	335	391	261
OKLAHOMA CITY OKLA.	65	423	342	367	245	465	493	443	375	300	42	53	329	296	452	263	249	474	216	566	547	466	302	199	283	580	553	446	225	308	420	348
PAGE ARIZONA	427	423	437	411	430	408	385	410	412	382	165	308	319	465	449	452	393	488	509	501	492	339	386	293	519	396	410	232	460	509	452	408
PHOENIX ARIZONA	469	507	515	353	495	489	494	443	355	208	343	259	491	522	451	262	511	520	547	522	429	338	529	477	547	553	476	539	561	557	558	462
PORTLAND MAINE	140	394	355	410	139	63	135	164	169	208	428	471	411	440	407	481	484	101	154	237	437	476	118	538	530	68	534	518	138	537	584	331
PULLMAN WASHINGTON	375	363	406	380	402	389	399	392	408	394	78	451	444	440	433	196	484	489	472	413	194	491	433	522	269	196	350	435	460	237	478	383
RAPID CITY S.DAK.	393	397	218	392	---	---	---	---	289	222	409	225	385	374	386	114	433	487	384	437	341	294	499	460	472	450	290	452	400	463	343	371
RIVERSIDE CALIFORNIA	522	541	537	484	467	406	409	468	421	364	241	116	316	511	135	226	321	480	492	536	492	460	449	330	329	398	229	436	569	545	98	398
SAINT CLOUD MINN.	97	162	158	318	295	326	488	290	489	492	412	452	253	495	309	382	135	436	563	476	530	549	572	522	565	557	297	239	588	550	241	395
SALT LAKE CITY UTAH	381	475	477	466	475	251*	344	491	239	497	498	187	279	508	539	449	183	548	552	271	566	115	378	384	385	264	204	504	584	583	582	408
SAN ANTONIO TEXAS	390	275	528	580	581	584	594	508	439	512	138	517	291	529	263	263	619	622	515	604	560	239	236	146	157	628	341	84	137	20	272	393
SANTA MARIA CALIF.	466	467	469	402	416	301	476	467	333	363	111	114	281	251	476	146	528	528	534	506	503	501	320	384	569	563	358	582	482	413	444	411
SAULT STE MARIE MICH	407	397	274	155	364	118	458	342	148	407	424	486	382	---	390	244	205	346	454	---	423	375	536	581	362	510	455	425	401	612	542	387
SEATTLE WASH. UNIV.	332	335	357	361	353	352	375	343	305	353	410	391	390	392	127	204	405	440	414	216	79	358	470	425	123	474	128	269	379	342	---	330
SEATTLE TACOMA WASH.	343	352	377	379	383	375	393	377	326	379	409	417	432	425	211	100	405	452	441	280	109	323	490	465	154	169	409	142	264	379	372	340
SHREVEPORT LOUISIANA	306	237	135	533	441	544	531	546	291	142	142	158	483	554	498	186	553	585	345	625	563	455	170	220	62	239	173	258	57	63	398	338
SPOKANE WASHINGTON	382	398	404	395	411	413	425	376	403	425	247	462	473	456	454	276	513	513	502	452	222	514	296	546	333	273	270	270	413	231	478	394
STATE COLLEGE PENN.	461	418	68	119	32	233	274	166	177	302	497	532	535	378	250	428	114	469	566	273	459	407	95	341	105	133	532	610	49	584	629	330
STERLING VIRGINA	313	308	96	216	50	291	398	187	296	307	492	457	534	340	386	499	81	220	475	176	519	406	281	220	28	189	477	531	228	543	587	327
STILLWATER OKLAHOMA	57	447	380	312	230	421	509	451	461	354	89	110	354	285	503	109	---	436	302	570	554	377	210	309	263	572	544	386	124	274	475	349
SWAN ISLAND W.I.	496	605	602	590	198	559	645	618	660	607	552	620	617	655	654	615	662	633	587	694	---	657	664	507	610	---	691	371	697	693	388	591
TAMPA FLORIDA	478	214	194	245	399	136	554	547	594	582	563	559	105	249	245	501	581	511	528	236	175	350	460	623	600	588	261	305	606	603	627	426
TUCSON ARIZONA	470	434	504	439	494	496	503	413	233	81	333	154	520	490	---	---	521	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WAKE ISLAND,PACIFIC	301	381	451	499	486	418	491	391	391	479	480	508	461	512	511	515	523	520	446	366	500	519	528	276	529	507	513	510	545	506	511	470

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (midnight to midnight) at Huntley, Mont.

MARCH 1965

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	89	126	137	138	130	137	166	80	77	116	-11	67	151	92	101	15	3	89	111	182	7	-12	40	61	152	147	26	-10	9	178	305	94

The measurement is made with a Beckman and Whitley net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Huntley Exp. Station. The instrument with which they were measured has not been checked by the Weather Bureau.

TOTAL OZONE DATA

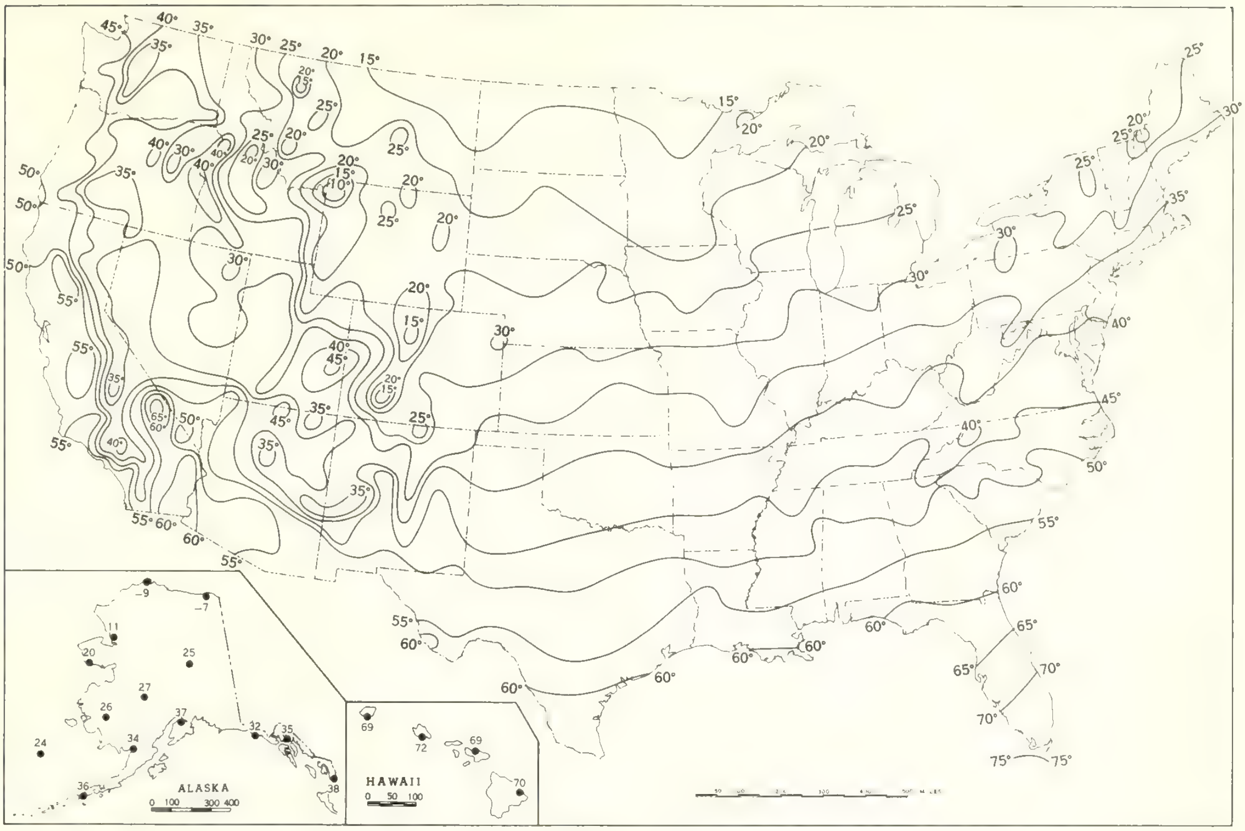
These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λ s Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

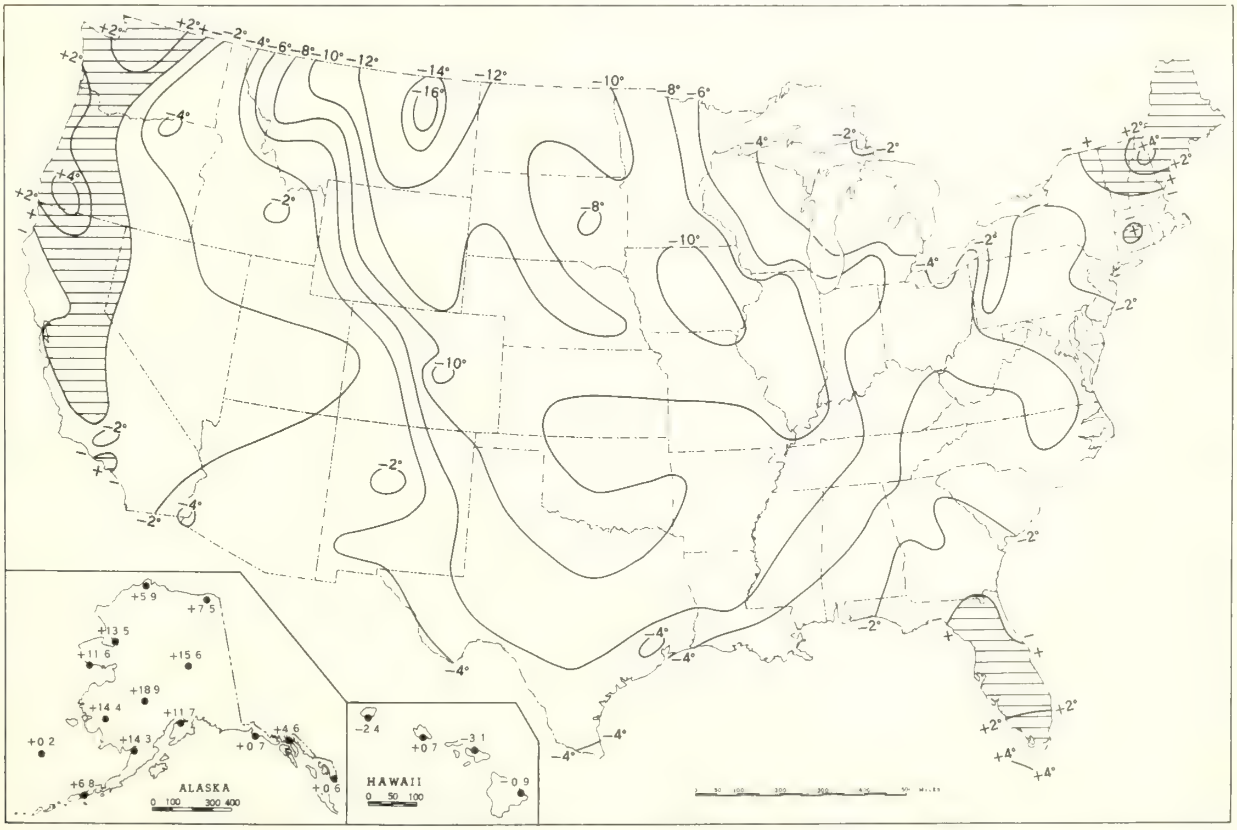
Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3
															Data will be delayed																	

The spectrophotometer measures the total amount of ozone in the atmosphere, i. e., the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e. g., 350 milli-atmo-cm ozone implies an ozone layer 0.350 centimeter thick. The code λ s designates the type of measurement made.

Chart I. A. Average Temperature (°F.) at Surface, March 1965.



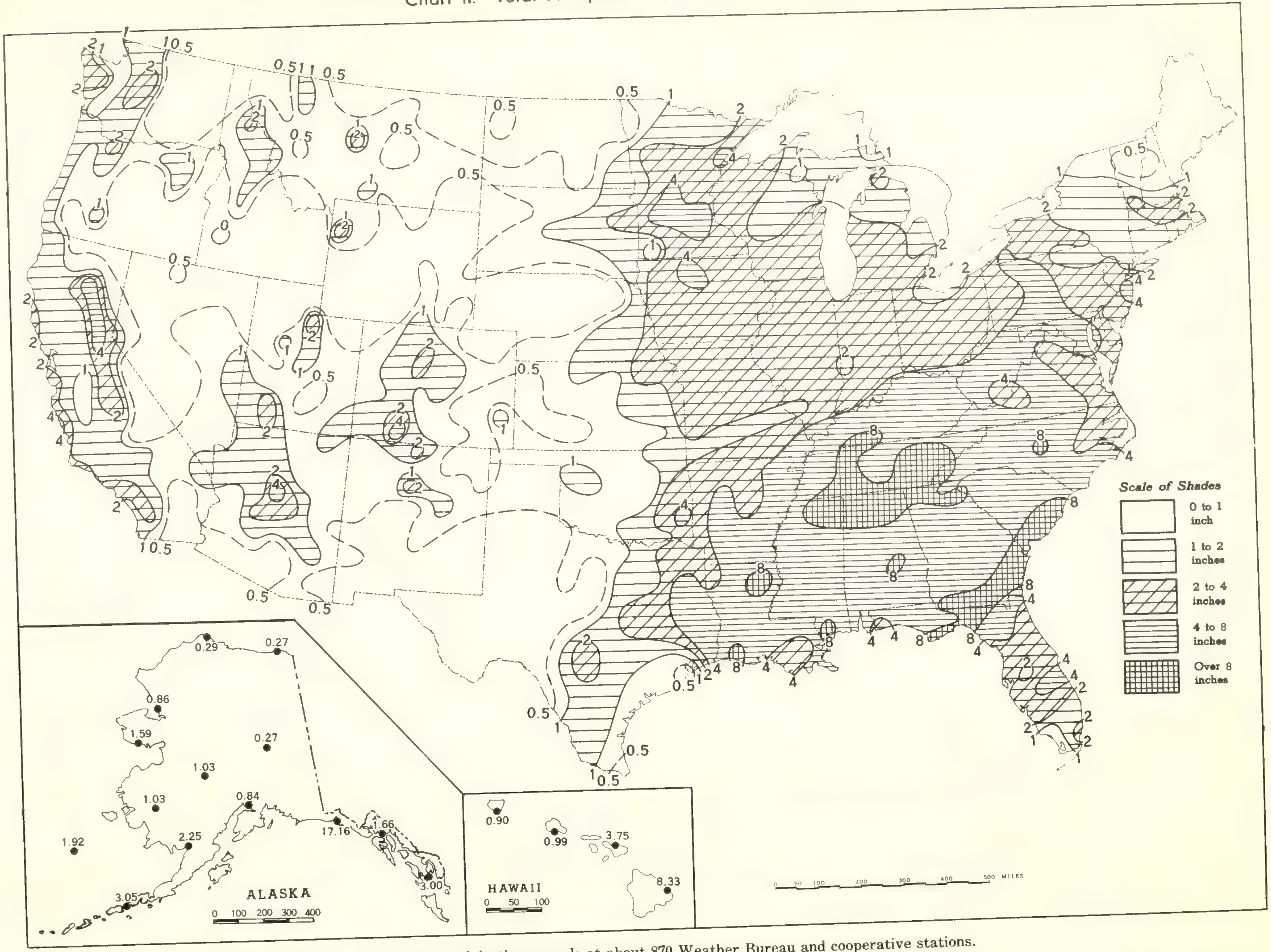
B. Departure of Average Temperature from Normal (°F.), March 1965.



A. Based on reports from over 870 Weather Bureau and cooperative stations. The monthly average is half the sum of the monthly average maximum and monthly average minimum, which are the average of the daily maxima and daily minima, respectively.

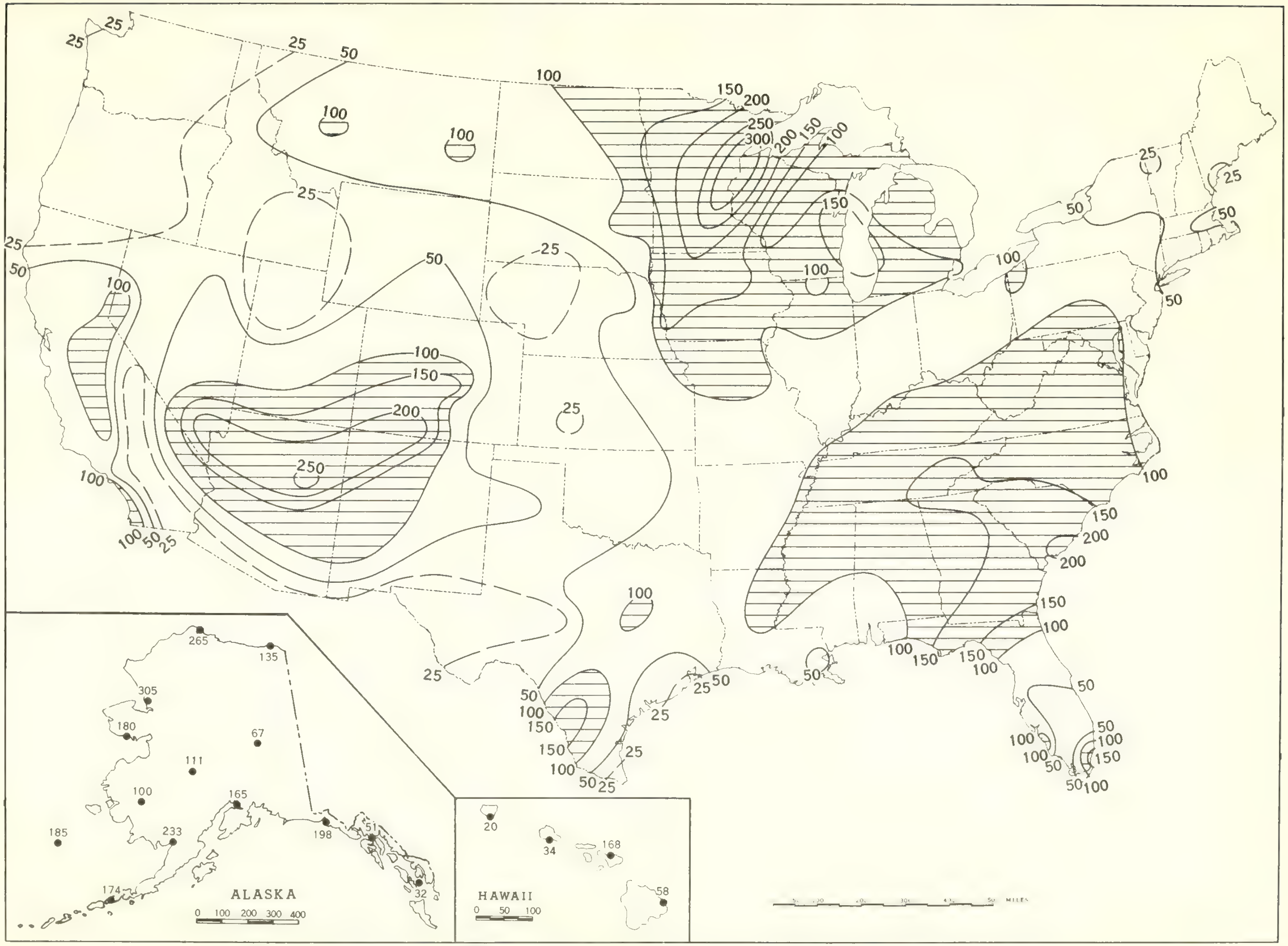
B. Departures from normal are based on the 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart II. Total Precipitation (Inches), March 1965.



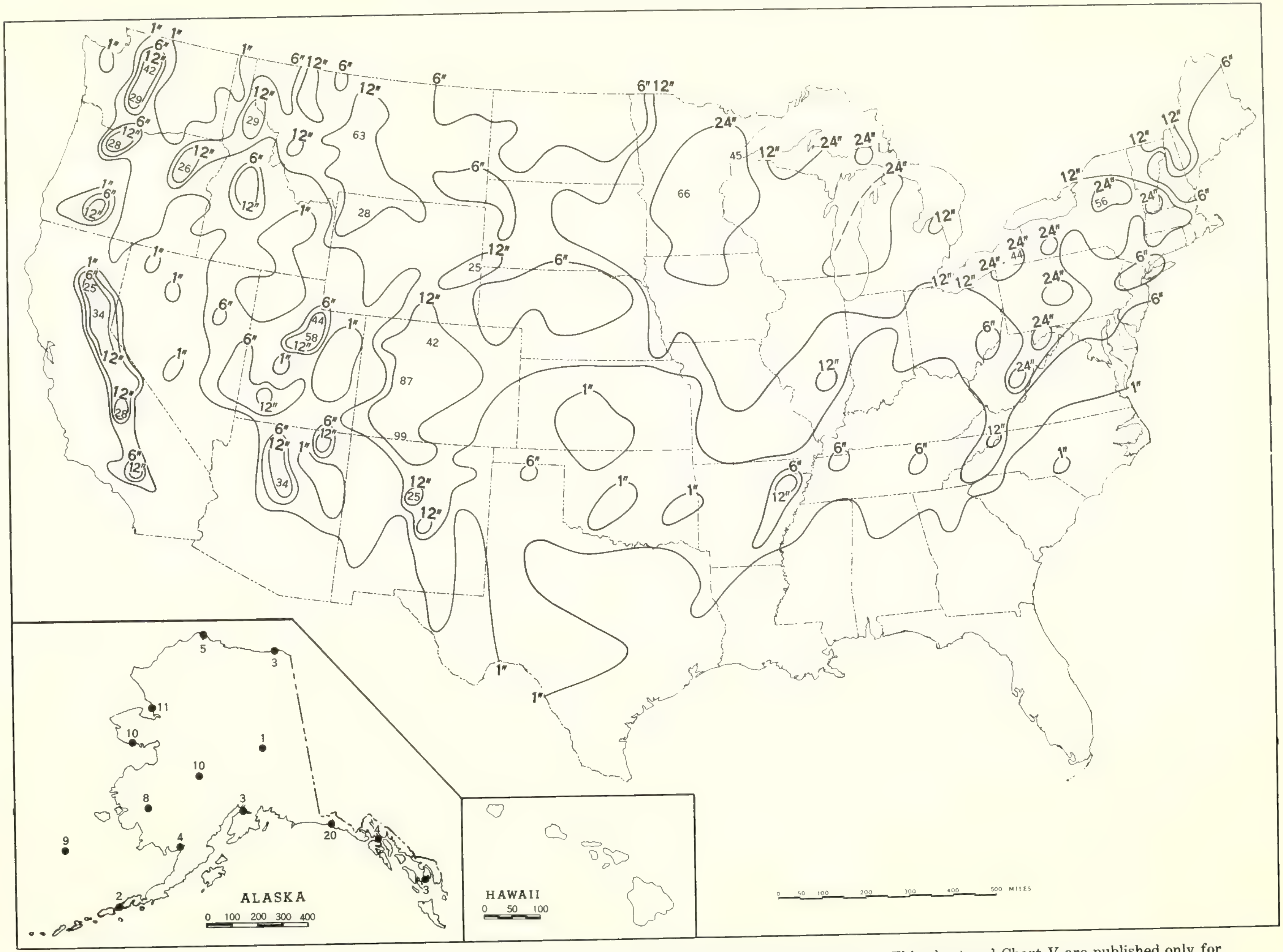
Based on daily precipitation records at about 870 Weather Bureau and cooperative stations.

Chart III. Percentage of Normal Precipitation, March 1965.



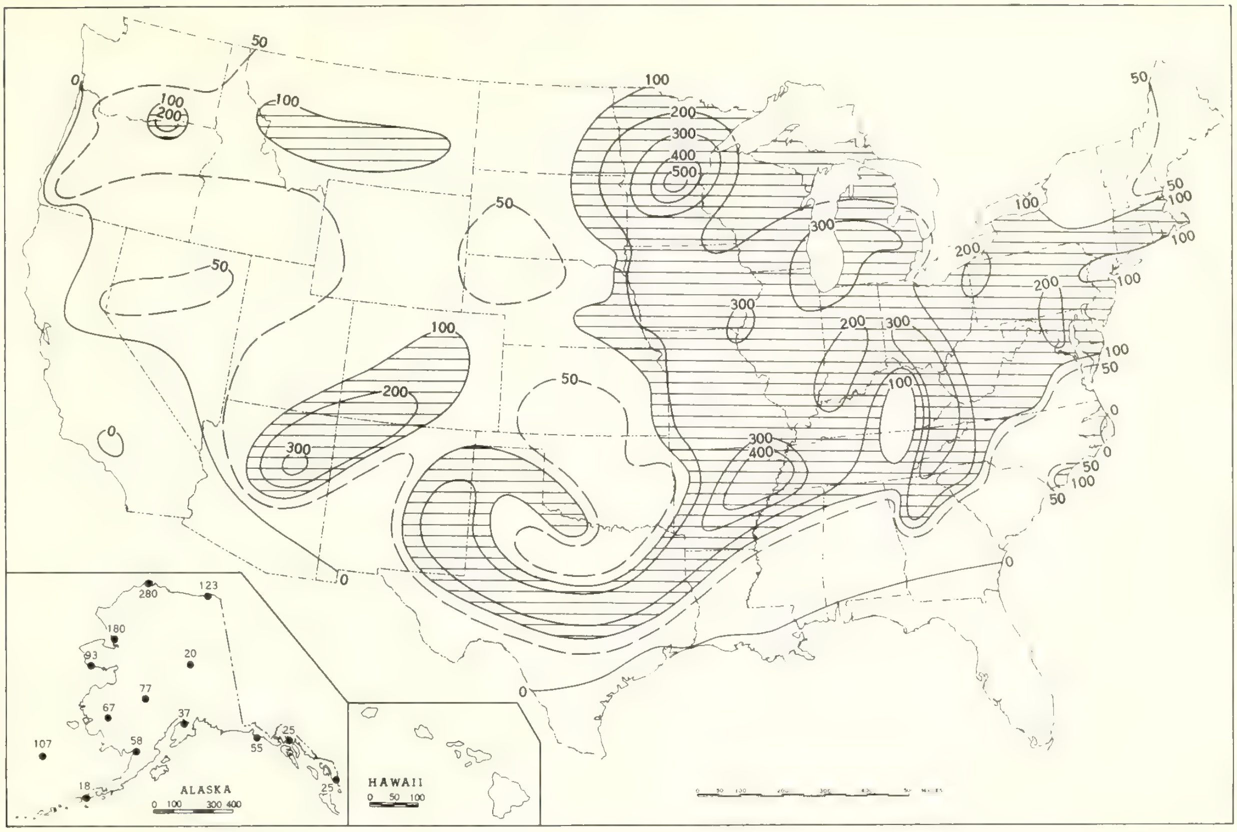
Normal monthly precipitation amounts are computed from 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart IV. Total Snowfall (Inches), March 1965.

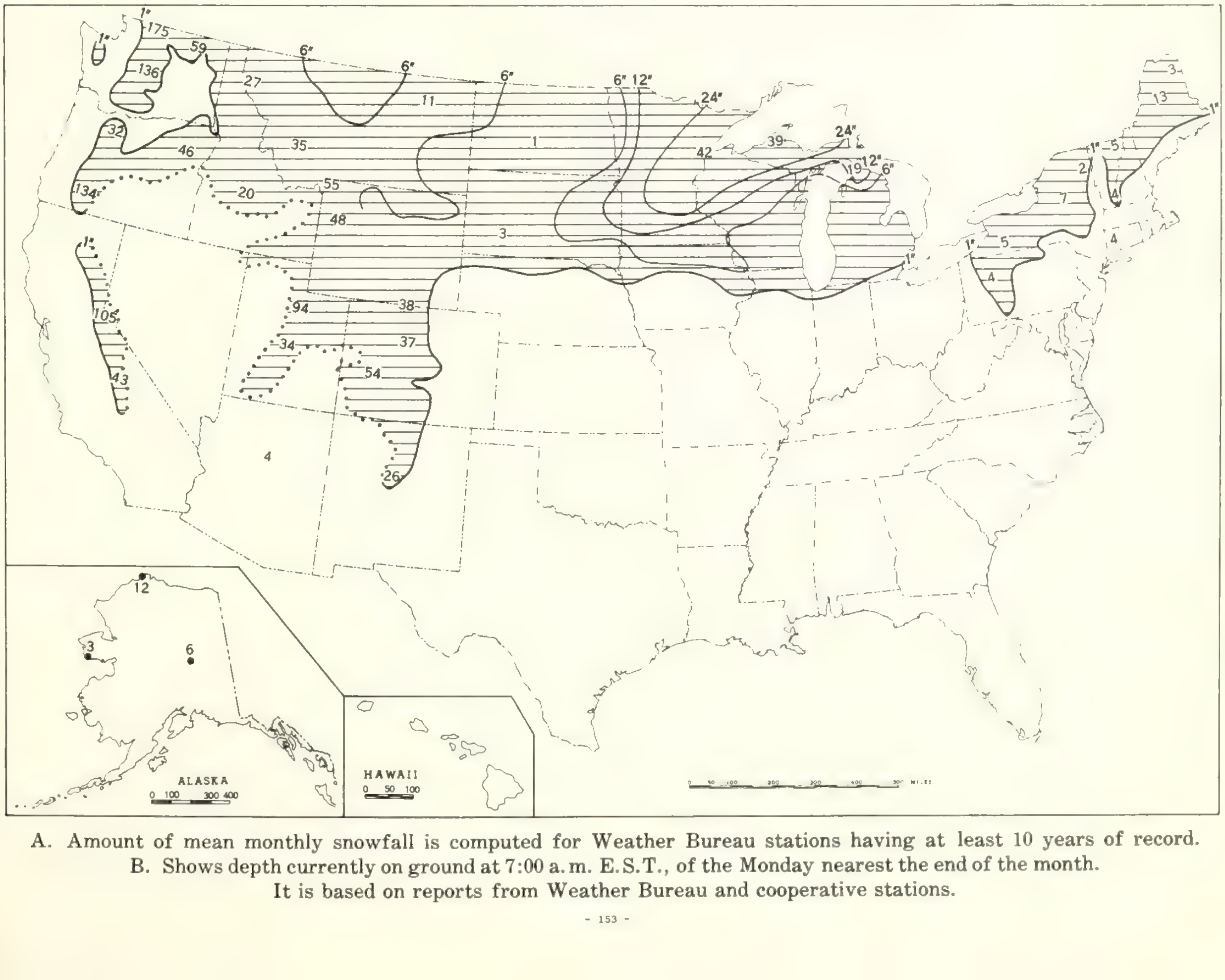


This is the total of unmelted snowfall recorded during the month at Weather Bureau and cooperative stations. This chart and Chart V are published only for the months of November through April although of course there is some snow at higher elevations, particularly in the far West, earlier and later in the year.

Chart V. A. Percentage of Mean Monthly Snowfall, March 1965.

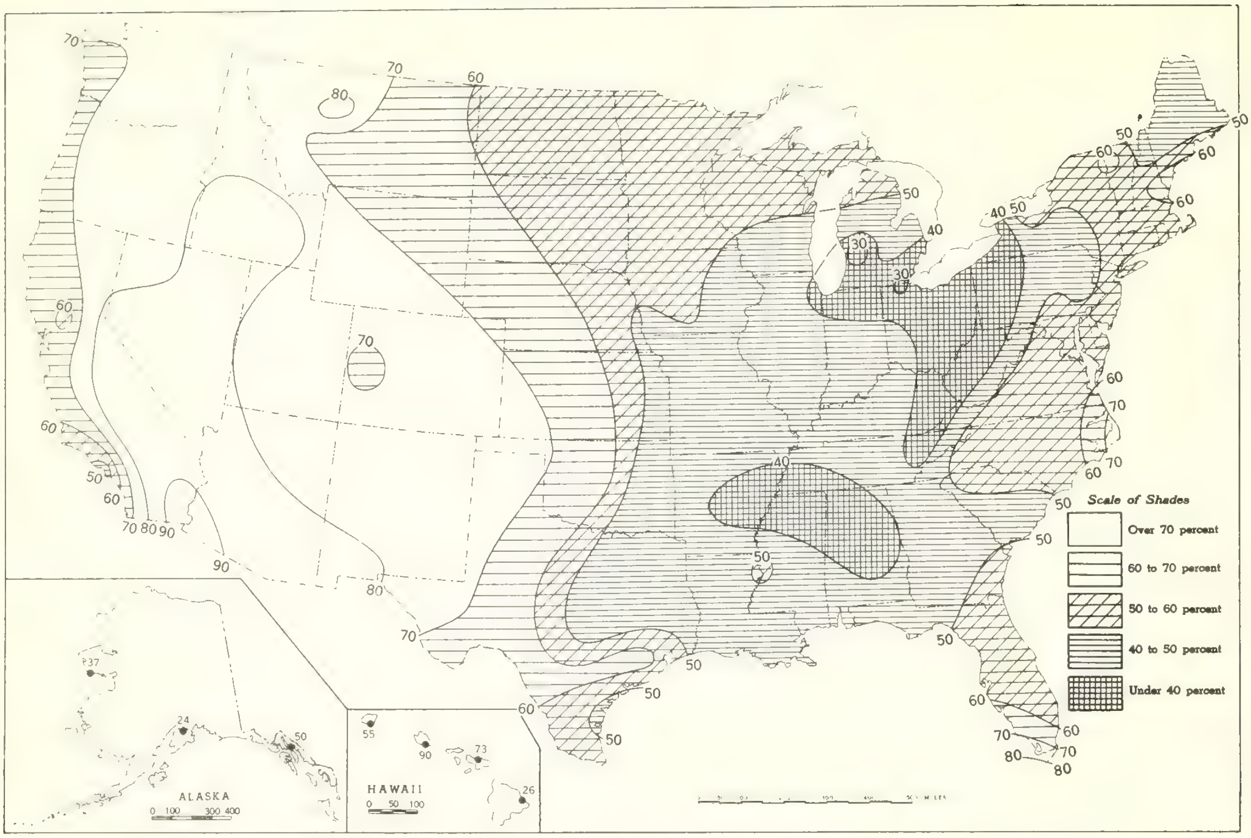


B. Depth of Snow on Ground (Inches), 7:00 a. m. E. S. T., March 29, 1965

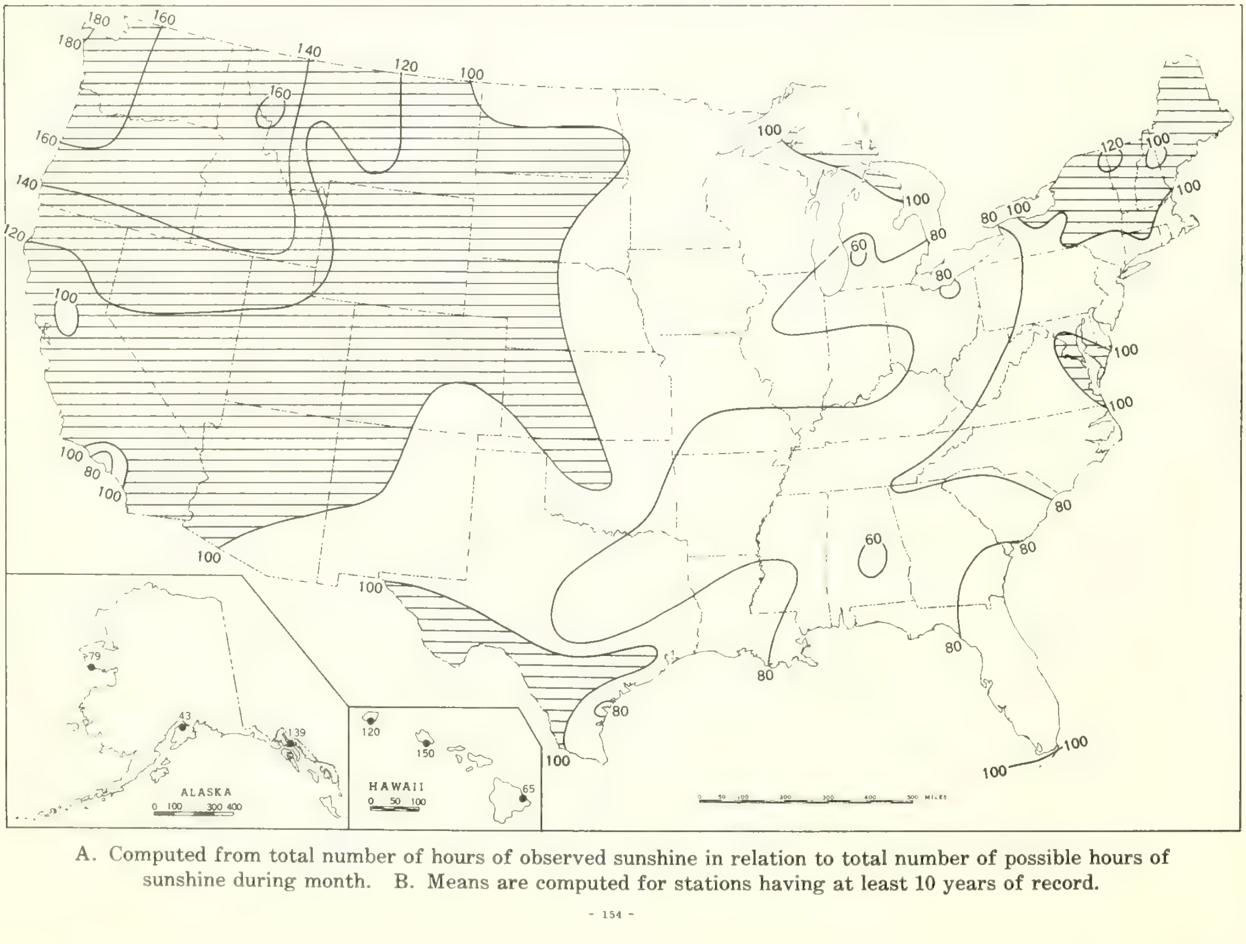


A. Amount of mean monthly snowfall is computed for Weather Bureau stations having at least 10 years of record.
B. Shows depth currently on ground at 7:00 a.m. E.S.T., of the Monday nearest the end of the month.
It is based on reports from Weather Bureau and cooperative stations.

Chart VI. A. Percentage of Possible Sunshine, March 1965.

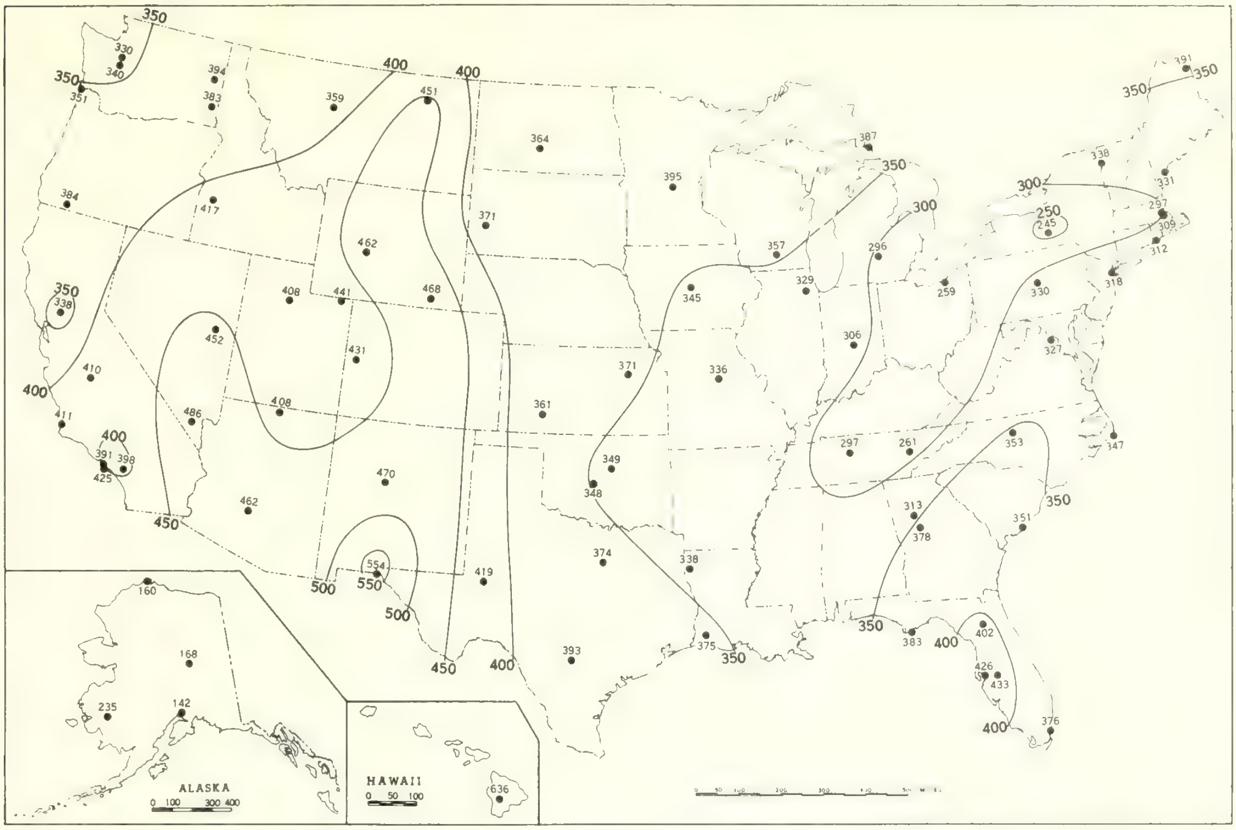


B. Percentage of Mean Monthly Sunshine, March 1965.

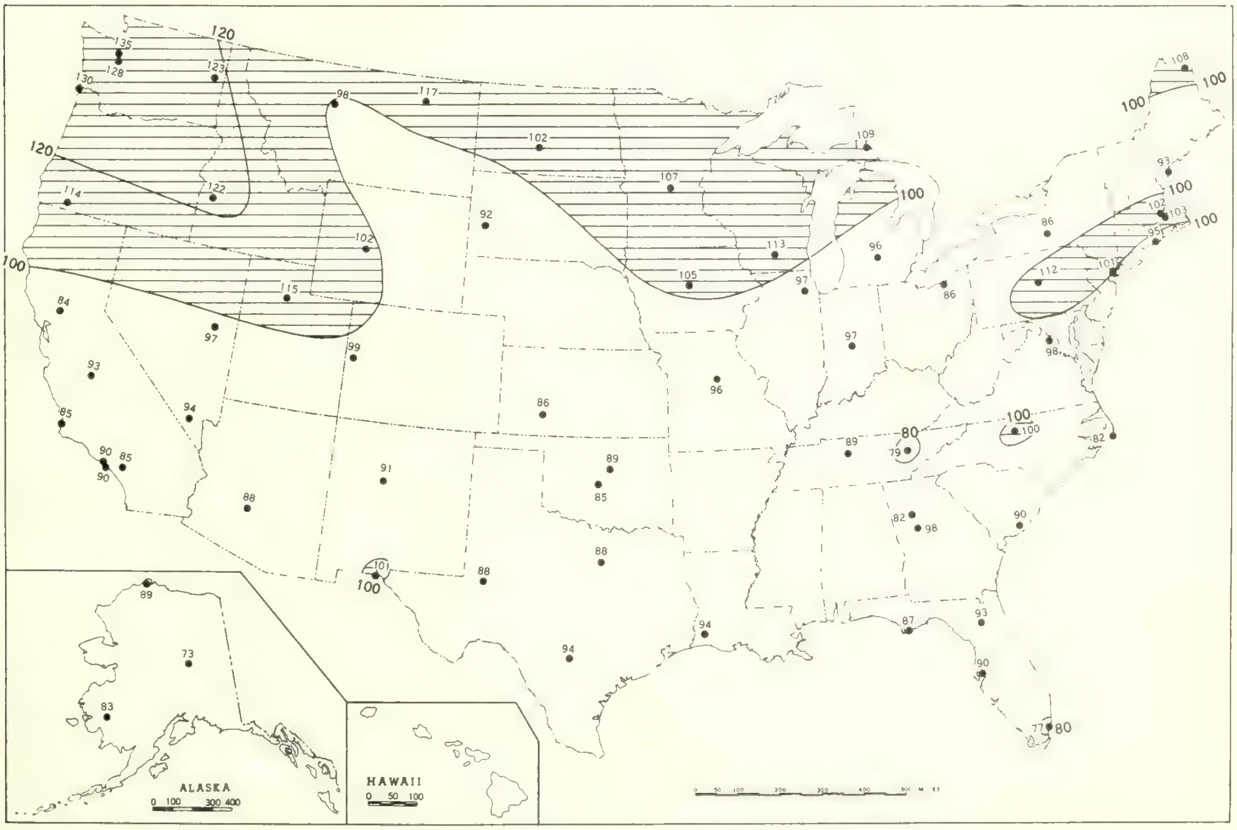


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, March 1965.

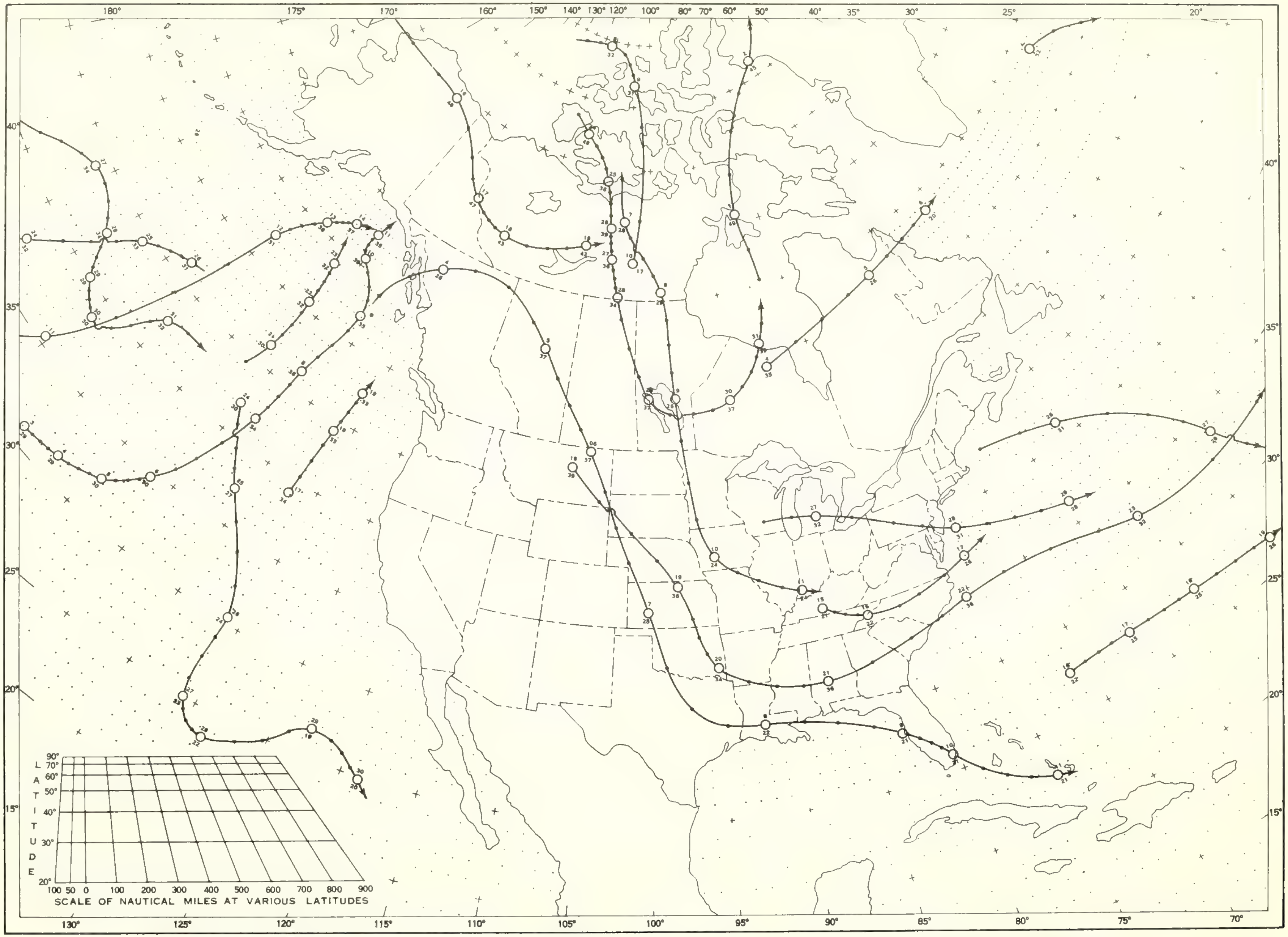


B. Percentage of Mean Daily Solar Radiation, March 1965.



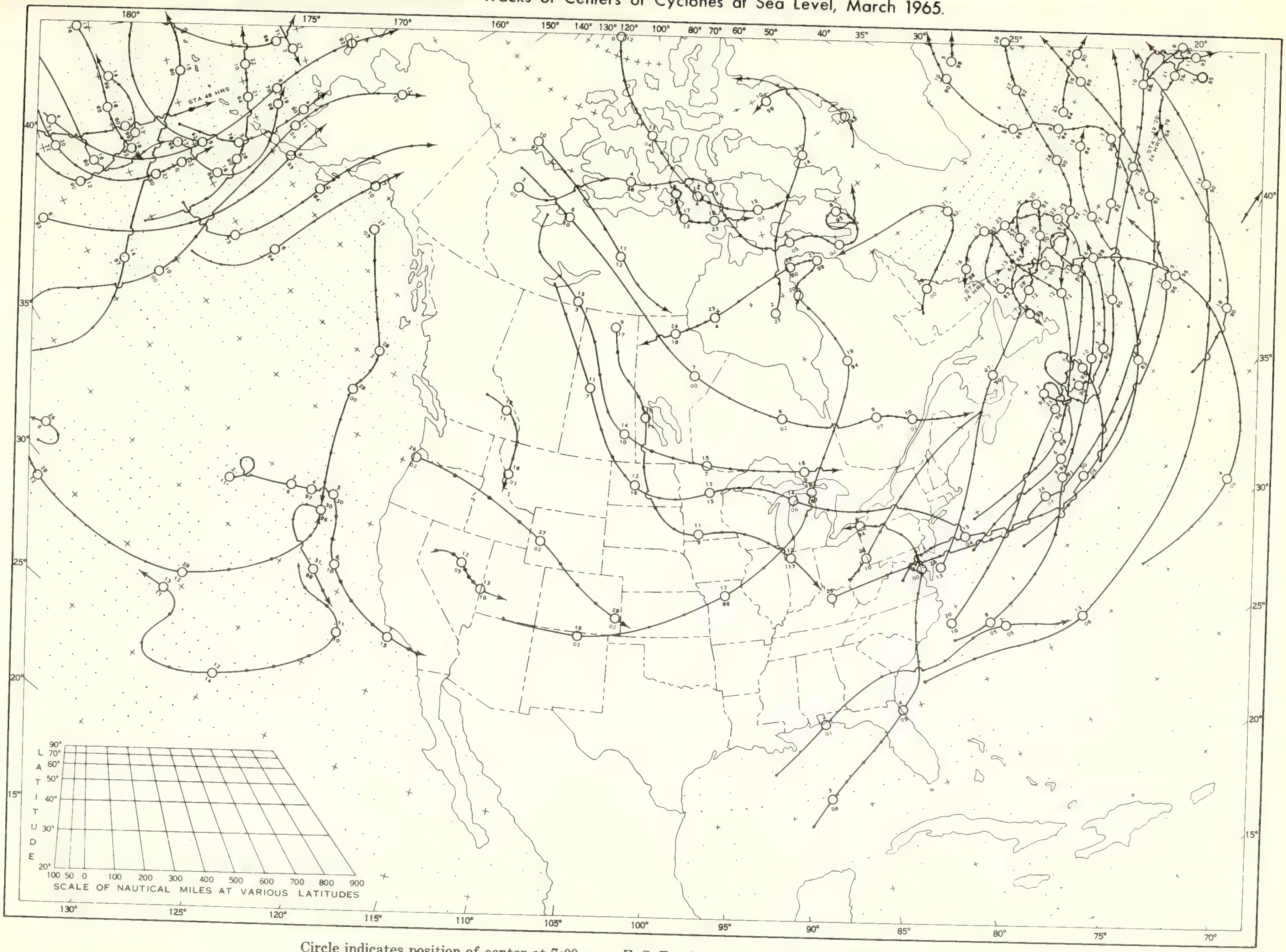
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm. $^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, March 1965.



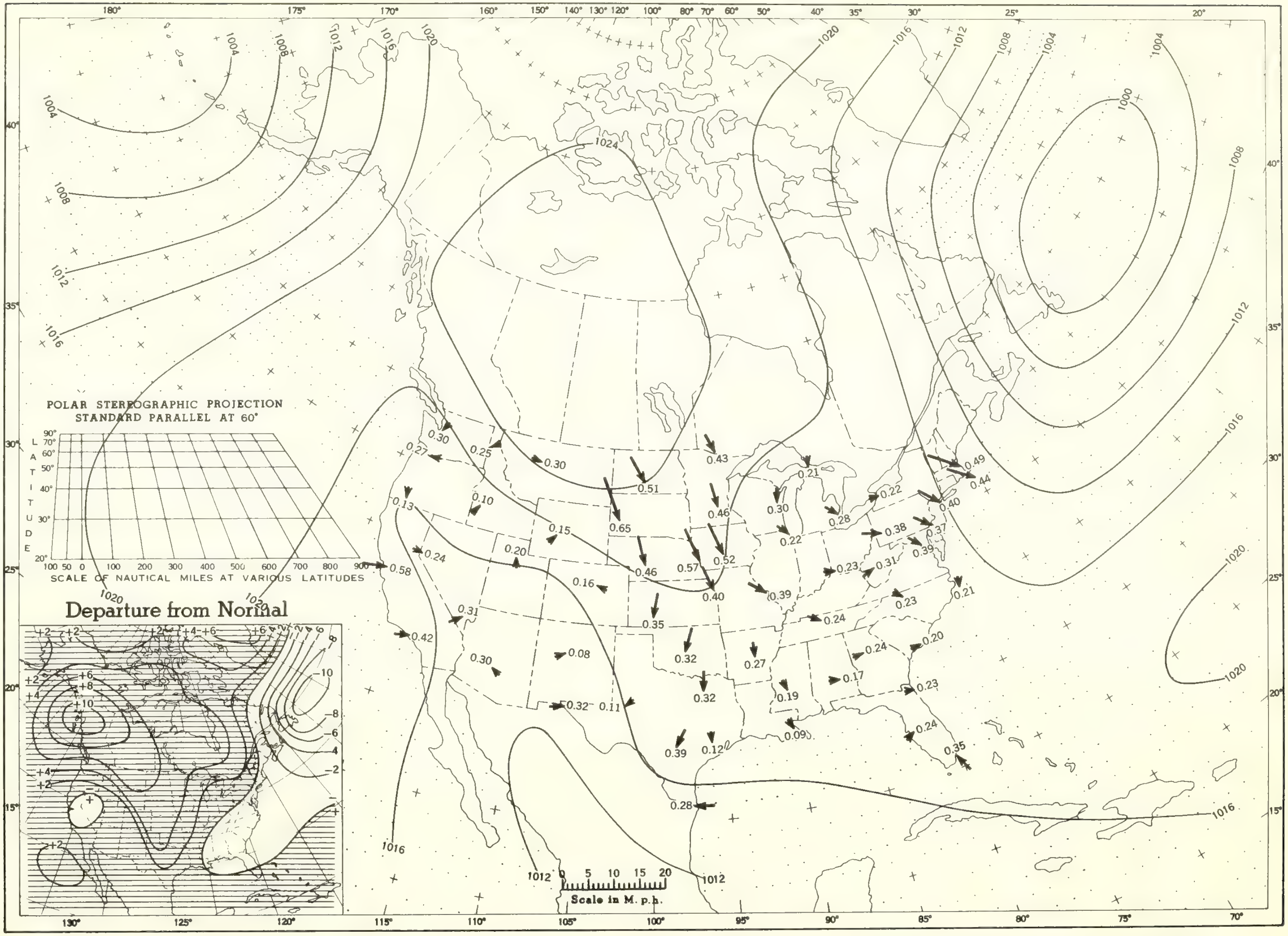
Circle indicates position of center at 7:00 a. m. E. S. T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, March 1965.



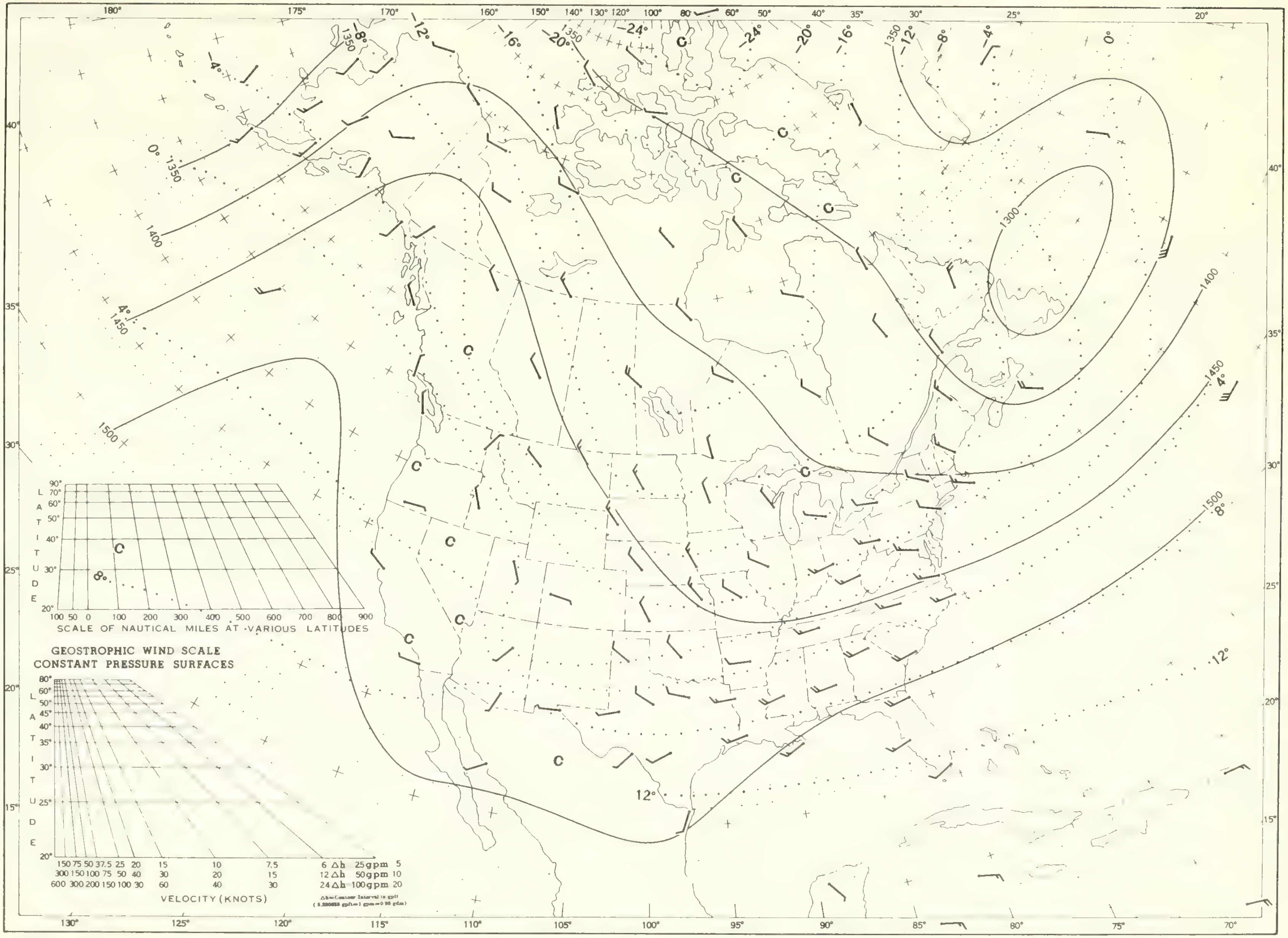
Circle indicates position of center at 7:00 a. m. E. S. T. See Chart VIII for explanation of symbols.

Chart X. Average Sea Level Pressure (mb.) and Resultant Surface Wind, March 1965. Inset: Departure of Average Pressure (mb.) from Normal, March 1965.



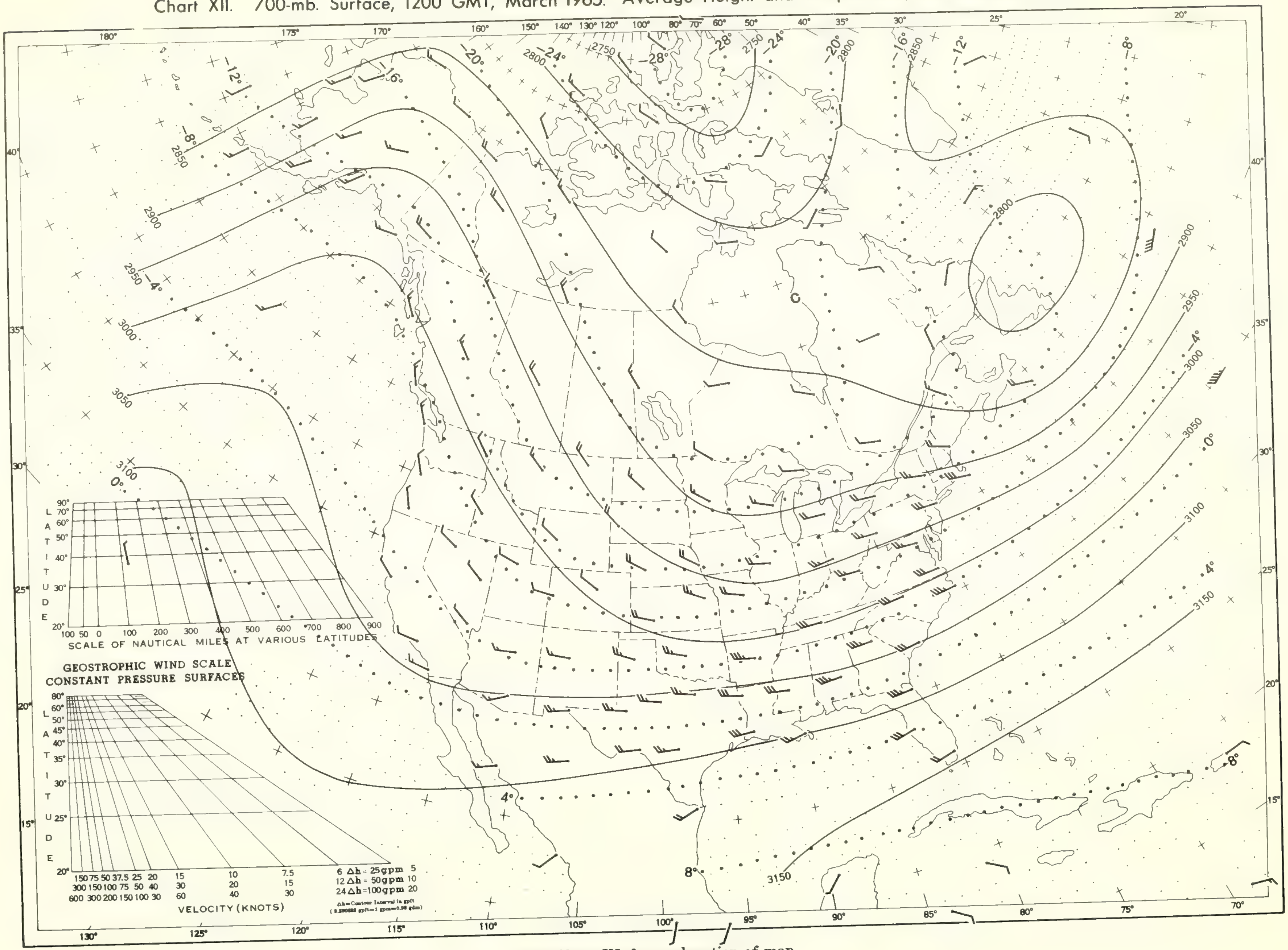
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb. Surface, 1200 GMT, March 1965. Average Height and Temperature, and Resultant Winds.



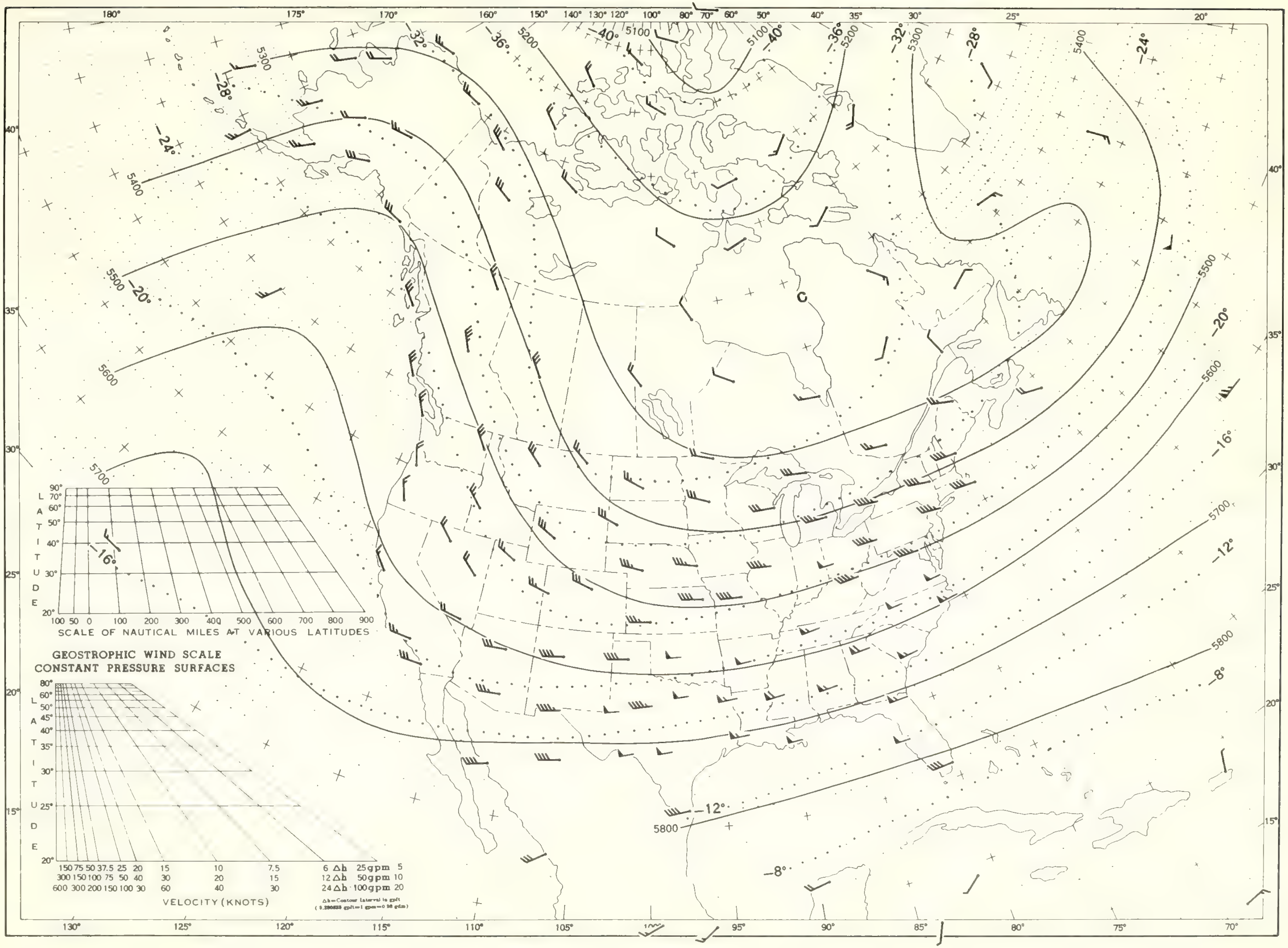
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in knots; flag represents 50 knots, full feather 10 knots, and half feather 5 knots. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, March 1965. Average Height and Temperature, and Resultant Winds.



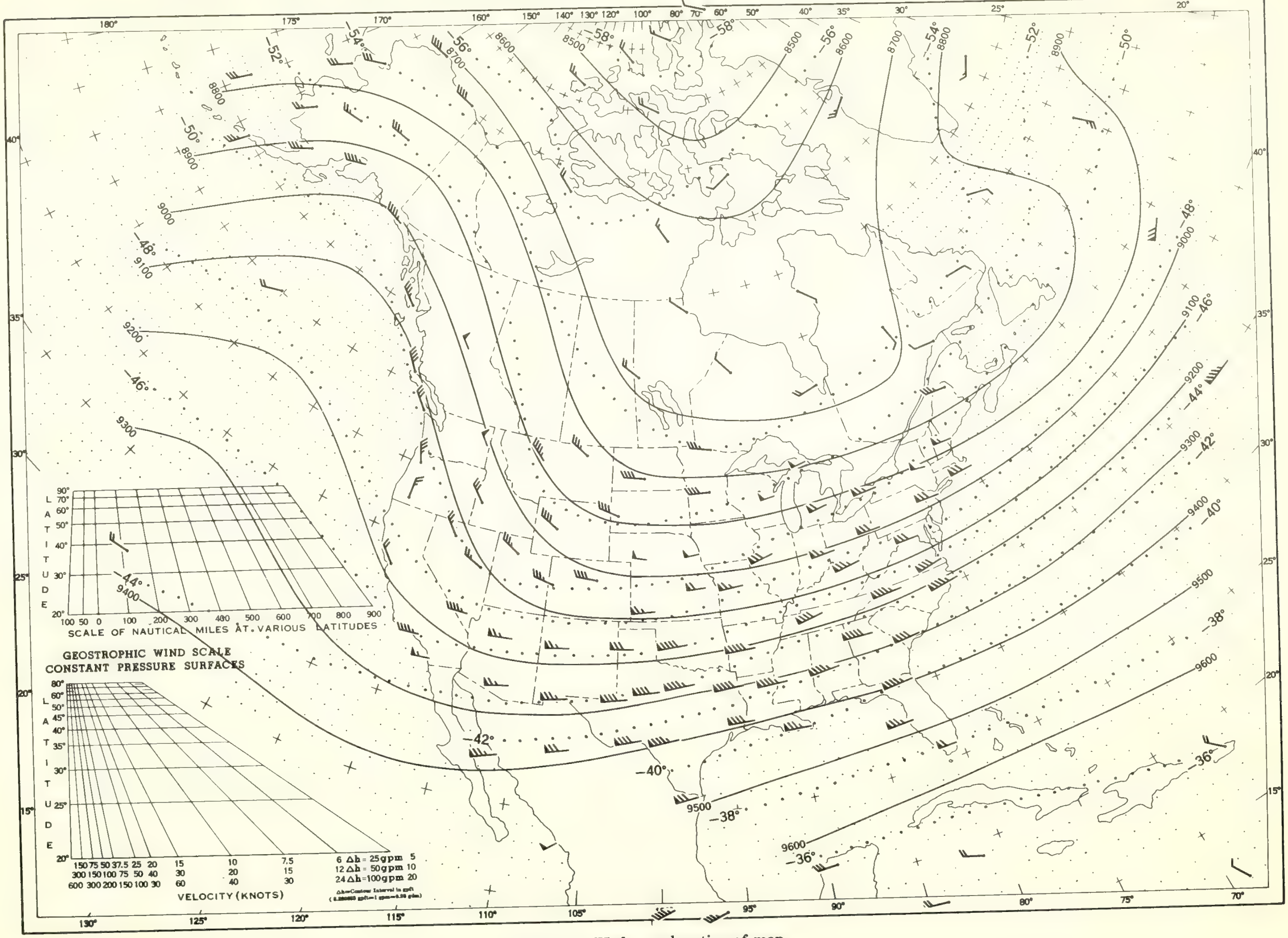
See Chart XI for explanation of map.

Chart XIII. 500-mb. Surface, 1200 GMT, March 1965. Average Height and Temperature, and Resultant Winds.



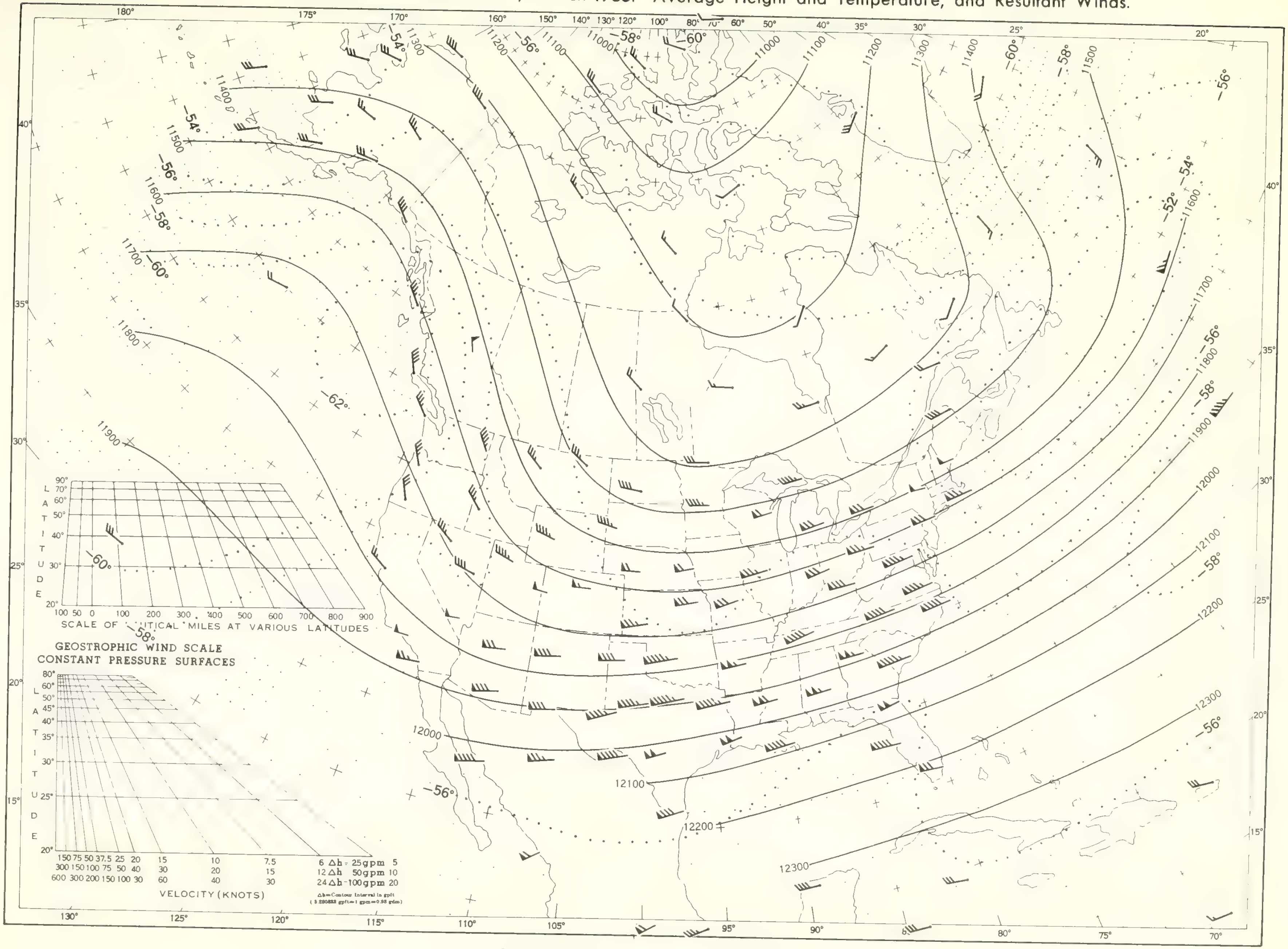
See Chart XI for explanation of map.

Chart XIV. 300-mb. Surface, 1200 GMT, March 1965. Average Height and Temperature, and Resultant Winds.



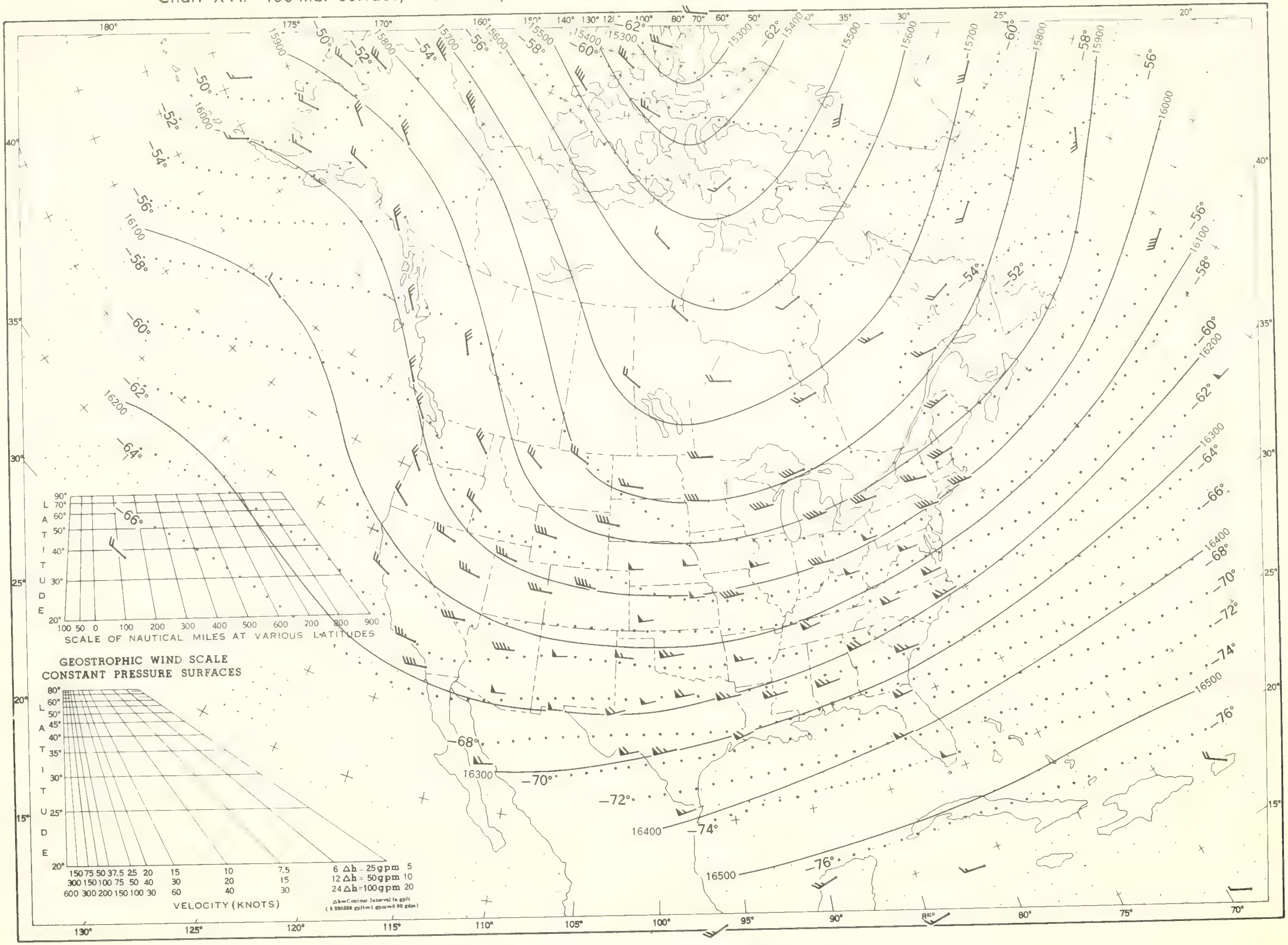
See Chart XI for explanation of map.

Chart XV. 200-mb. Surface, 1200 GMT, March 1965. Average Height and Temperature, and Resultant Winds.



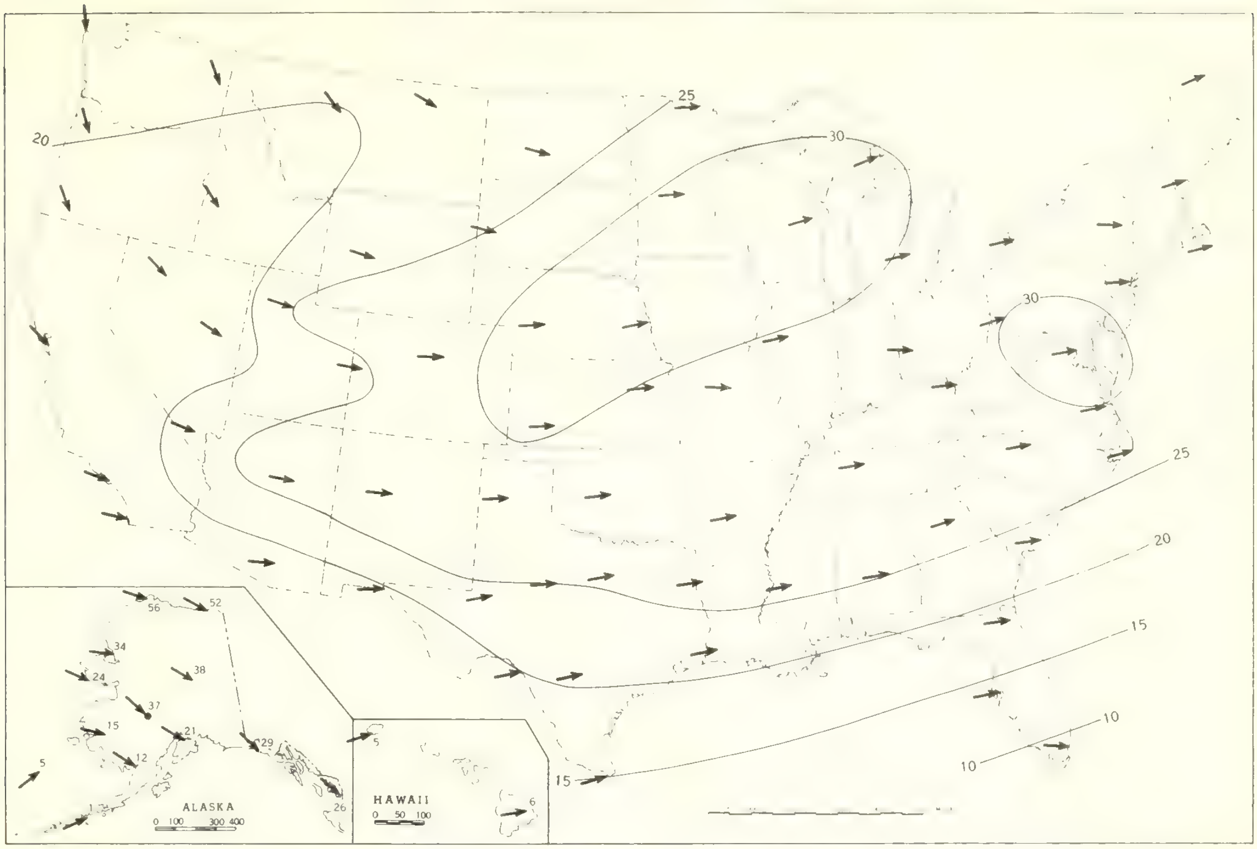
See Chart XI for explanation of map.

Chart XVI. 100-mb. Surface, 1200 GMT, March 1965. Average Height and Temperature, and Resultant Winds.

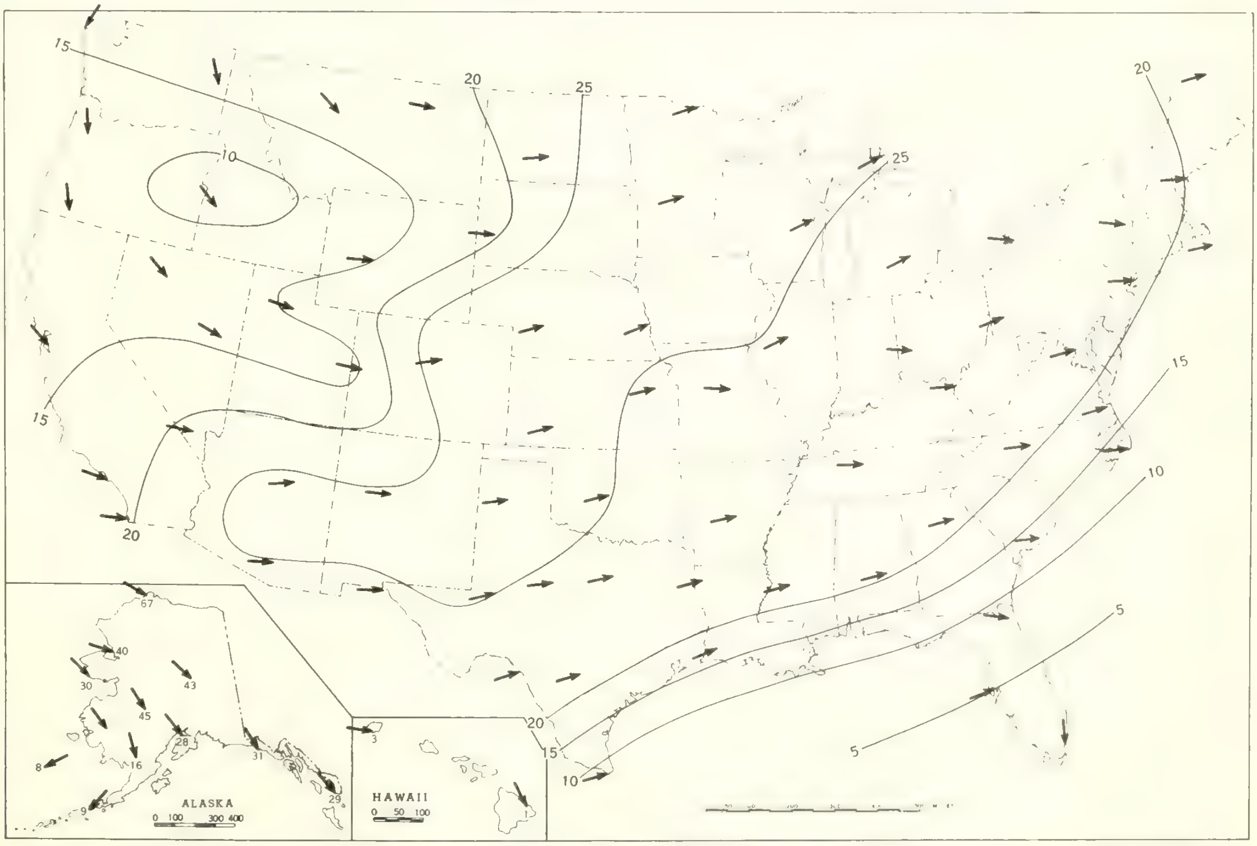


See Chart XI for explanation of map.

Chart XVII. A. 50-mb. Surface, 1200 GMT, March 1965. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, March 1965. Resultant Winds.



Wind speed (isotachs) in knots. Arrows show resultant wind direction. All wind data are based on rawin observations.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

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APRIL 1965
Volume 16 No. 4

ASHEVILLE: 1965

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NOTE: Delayed data and corrections will be carried in the June and December issues of this publication.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 16 No. 4

APRIL 1965

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. One of the rainiest Aprils of record over the Far West. Generous rains; several times the April normals, at some desert locations.

2. Driest April of record at some locations in southern Great Plains.

3. Unusual number of tornadoes April 11.

4. Heavy rains and snowmelt produced disastrous flooding in Upper Mississippi River Basin. See the article in this publication that relates to this flooding.

TEMPERATURE.--Record-breaking cold prevailed over the northern Great Plains early in April. Grand Rapids, and Lansing, Mich., registered 10° and 2°, respectively, on the 3d. A cold front stretched from the Dakotas to Georgia. Warm air streamed northward over the southern States pushing afternoon temperatures into the 80's as far north as Oklahoma. Maximum temperatures reached the 90's over parts of Florida and the 70's along the Atlantic seaboard. Warm temperatures continued over Florida where 90° maximums occurred on several days during the second week. Temperatures over the southern Great Plains warmed even more in the third week and from the 21st to 23d many stations over the southern Great Plains registered maximums in the upper 80's and low 90's. Early on the 23d, a stationary front stretched from Utah to the middle Atlantic States. Record-breaking heat pushed northward to meet chilly air from the north. The cool air east of the Rocky Mountains advanced southward from the 26th to the end of the month, bringing minimum temperatures in the 40's to much of the central and southern Great Plains. Maximum temperatures over the central Great Plains were generally in the 50's on the 27th but rapid warming brought the temperatures over the central Great Plains from near freezing in the mornings of the 28th and 29th to above 90° on the 30th. North Platte, Nebr., registered 21°, the coldest for the month, on the 28th and 90°, the warmest temperature for the month, on the 30th.

Monthly average temperatures were generally below normal over the northern Great Plains, the Northeast, and Far Southwest, and above normal over the rest of the Nation. Much of northwestern Arizona averaged more than 4° colder than normal. Parts of the central and southern Great Plains averaged more than 4° warmer than normal. At Phoenix, Ariz., it was the coldest April in many years and at Washington, D. C., it was the coldest April of record. A few new record temperatures occurred. Bakersfield, Calif., registered 98° on the 28th and Flagstaff, Ariz., set a new low temperature record for April when the mercury dropped to 0° on the 13th.

PRECIPITATION.--April began with a snowstorm over the Lakes region, showers in California, and a drought in progress over Florida. Lansing, Mich., received 6 inches of snow on the 1st day of the month. The snow spread eastward and portions of western New York received up to 10 inches of snow. The rains in California continued for more than a week. By April 9, almost 6 inches of rain had fallen at Los Angeles. This was more than five times the normal for Los Angeles for the entire month. Heavy snow fell at high elevations in the West. By April 12, Flagstaff, Ariz., elevation about 7000 feet, had received over 58 inches. This far exceeds the previous April record of 36 inches set at Flatstaff in 1917 and is almost 10 times the April average. Snow in the northern Rocky Mountains was accompanied in some places by howling winds - 70 m.p.h. at Lander, Wyo. Heavy showers fell from the Dakotas to Texas. In the northern Great Plains, the heavy showers were preceded by freezing rain. Numerous thundershowers over the central Great Plains were accompanied by high winds. At Kansas City, Mo., the wind reached 60 m.p.h. in gusts shortly after midnight on the 3d. In the Ozark region, some of the thundershowers were accompanied by large hail. The rains over California spread over the deserts of California and neighboring States.

The rains were welcome over the plains of eastern Colorado but the rains over the upper Mississippi River Valley melted more of the snowpack and added more water to the flooding rivers. By the end of the first week of April, some rivers had exceeded previous record levels, and highways in some parts of Iowa were closed by the waters. Continued rains increased the flooding. Rains began in northern California and continued in the central and south. The soils along the coast became saturated and snow on Mt. Wilson, near Los Angeles, accumulated to 37 inches.

By April 10, over 8000 persons in Minnesota, Iowa, and Wisconsin were forced to leave their homes. On the 11th, 37 tornadoes occurred over the Great Lakes region and the Ohio River Valley. At midmonth, flooding continued along the upper Mississippi River and its tributaries, snow, rain, and gusty winds continued east of the Rocky Mountains from Montana across the northern Great Plains to the Northeast, and thunderstorms occurred over the central Great Plains. The Red River of the North was also above flood stage. By the end of the third week only 1 inch of the snowpack at Duluth, Minn., which had neared 50 inches, remained.

While one part of the nation battled the highest flood stages of record, another (Florida) received its first measurable rain in more than 30 days. Tampa registered 0.15 inch on the 21st., the first measurable rain since March 20.

Drenching rains fell over the upper Mississippi River Valley in the fourth week of April. Muscatine, Iowa, received about 6 1/2 inches on the 23d. Hail as large as baseballs fell near Margaret, Texas, on the 24th. Scattered thunderstorms occurred from southern Texas to Alabama near the end of the fourth week of April.

April rainfall exceeded the normal amounts over most of the area west of the Continental Divide. The main exception was in southeastern Arizona and southern

New Mexico. Southern California and the coastal portions of northern California, western Arizona, and southern Utah received more than twice their April normal rainfall. Portions of southern California and extreme western Arizona received from 5 to 10 times the April normals for those areas. Over much of the West, April 1965 was one of the rainiest Aprils of record. In contrast, the western edge of the Great Plains from the Nebraska Panhandle southward to the Rio Grande, southeastern Arizona, southern New Mexico, eastern Texas, Arkansas, Louisiana, Mississippi, and southern Alabama were very dry. In some localities in those areas, April 1965 was one of the driest Aprils of record.

TORNADOES.--An unusual number of tornadoes occurred over the Great Plains during April. The tornadoes were especially numerous on Palm Sunday, April 11. A total of 37 such storms occurred on that date over Iowa, Illinois, Wisconsin, Michigan, Indiana, and Ohio. Tornadoes occurred on several other dates and over other States from the Dakotas to Texas and eastward to the Carolinas. For more details about these tornadoes and other severe storms, see Storm Data.

CONDENSED CLIMATOLOGICAL SUMMARY

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	Jasper 4N	94	9	Double Springs	30	29	Centre 5SW	7.49	2 Stations	0.52
Alaska	4 Stations	68	18+	Kobuk	-36	12	Little Port Walter	17.99	Sheep Mountain	.07
Arizona	5 Stations	104	22+	Fort Valley	-7	13	Junipine	8.08	4 Stations	.00
Arkansas	Morrillton	96	9	Evening Shade 1NE	27	1	Beaver Dam	11.43	Conway	.54
California	6 Stations	104	30+	White Mountain 2	-5	11+	Squirrel Inn 2	18.72	Lone Tree Canyon	.15
Colorado	Eversoll Ranch	99	22	Wagon Wheel Gap 3N	-10	11	Bonham Reservoir	6.74	Two Buttes 1NW	.00
Connecticut	Norwich Pub Util Plt	82	30	Putnam Water Works	10	1	Groton	3.80	Hartford WBAP	2.14
Delaware	3 Stations	81	12	Georgetown 5SW	20	4	Georgetown 5SW	3.00	Middletown 1WSW	.84
Florida	Chipley 3E	97	13	Fountain 3SSE	35	17	Monticello 3W	12.34	Miami Beach	.06
Georgia	2 Stations	94	24	Blue Ridge	28	3	Quitman	8.47	Columbus	.75
Hawaii	Waikiki 717.2	89	6	Haleakala Summit 338.4	26	4	N Wailua Ditch 1051	30.25	Kihei 311	.42
Idaho	Grand View 3WNW	83	28	2 Stations	26	2+	Fenn Ranger Station	5.91	Challis	.30
Illinois	Harrisburg	93	23	Barrington 1NW	23	3	Illinois City Dam 16	11.69	Hutsonville Power Pl	2.09
Indiana	Evansville	90	23	La Grange Sewage Plant	17	3	Whitestown	6.98	Jasper	2.59
Iowa	2 Stations	93	30	Fairfield	16	2	Muscatine 4ENE	9.69	Clarinda	2.13
Kansas	Kinsley	98	24	Imperial	20	28	Parsons	9.38	Johnson 11ESE	T
Kentucky	2 Stations	91	25+	2 Stations	20	4+	Vanceburg	7.71	Jeremiah	1.56
Louisiana	do	93	24+	Converse	34	29	Andrew	4.11	2 Stations	.00
Maine	do	78	30	Clayton Lake 2	-5	1	Woodland	3.82	St. Francis	.68
Maryland	Baltimore WB City	85	30	Bittinger 2NW	10	3	Oakland 1SE	5.48	Conowingo Dam	1.51
Massachusetts	Weston	80	30	2 Stations	6	1	Edgartown	3.66	Peru	2.00
Michigan	2 Stations	83	29	Kenton US Forest	-2	2	Frankfort 2NE	5.30	Seney Natl WLR	.89
Minnesota	do	88	30+	Gunflint Lake	0	2	Caledonia	6.48	Babbitt 2SE	.77
Mississippi	3 Stations	92	24+	University	33	29	Dancy	5.67	Pearlington	.05
Missouri	Steelville 1NW	98	23	Cook Station	24	29	Ozark Beach	10.90	Kansas City U of Mo	1.71
Montana	2 Stations	82	30+	Simpson 6NW	1	4	Essex	5.89	2 Stations	.06
Nebraska	Niobrara	97	30	Broken Bow 2W	16	28	Valparaiso	4.73	Benkelman	.04
Nevada	Overton	97	30	2 Stations	10	14+	Key Pittman WMA	4.54	Dufurrena	.13
New Hampshire	3 Stations	78	30	Fabyan	-5	1	MacDowell Dam	3.37	Bethlehem	1.14
New Jersey	Atlantic City WBAP	85	12	4 Stations	15	1	New Monmouth	3.57	Belmar 2SW	1.10
New Mexico	Jal	102	21	Fence Lake	-3	14	Red River	2.48	17 Stations	.00
New York	Dobbs Ferry	81	30	3 Stations	-10	1	Hooker 4N	5.18	Forestport	.98
North Carolina	2 Stations	92	24+	Transou	17	3	Franklin 1SSW	7.30	Hatteras	1.10
North Dakota	McLeod 3E	86	29	3 Stations	12	17+	La Moure	4.98	Portal	.23
Ohio	Ironton	86	21	2 Stations	11	4+	Irwin	8.22	Put in Bay Perry Mon	1.19
Oklahoma	Buffalo	98	22	Goodwell	24	28	Grove 1E	8.41	Reginer	T
Oregon	Richland	88	29+	Crater Lake NP Hq	10	2	Brookings	10.47	Adel 1S	.06
Pennsylvania	Norristown	83	12	Clermont 4NW	6	3	Donegal	3.76	Butler	.45
Puerto Rico	Dos Bocas	95	26	Cayey 1E	50	17+	Matrullas Dam	14.32	Caguas 2ENE	.60
Rhode Island	2 Stations	75	30	Greenville	20	1	Kingston	3.69	Woonsocket	2.34
South Carolina	Paris Mtn Fire Tower	96	23	Landrum 1NE	29	3	Longcreek 1N	8.27	Andrews	1.91
South Dakota	Vermillion 2N	97	30	Deerfield 5NW	12	27	Bowdle	4.24	Belle Fourche 2NE	.97
Tennessee	Savannah	95	25	Mountain City No 2	19	3	Ashwood	9.79	Memphis PO Bldg	1.62
Texas	McAllen FAA AP	105	11	2 Stations	25	28	Liberty Hill	5.65	23 Stations	.00
Utah	Moab 4NW	89	22	Bryce Canyon FAA AP	-7	11	Blowhard Mtn Radar	10.36	Moroni	.15
Vermont	3 Stations	74	30	West Burke	-4	1	Searsburg Mountain	3.77	Bloomfield	1.41
Virginia	2 Stations	89	24+	Big Meadows	14	3	Trout Dale	6.14	2 Stations	1.42
Washington	3 Stations	85	28	Mount Spokane Summit	12	3	Matlock 3W	9.03	White Swan	.14
West Virginia	2 Stations	91	23+	Canaan Valley	8	3	Pickens 1	8.26	Harpers Ferry	2.09
Wisconsin	Superior 7SE	87	29	Brule Island	-5	3	Sparta	5.99	Spooner Exp Farm	1.41
Wyoming	Torrington Exp Farm	86	30	2 Stations	0	12+	Moran 5WNW	3.22	Rairden 2WSW	.02

+ And also on an earlier date or dates

NOTE: Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)				
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90° F. or above	Min. 32 F. or below	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	994.9	1017.2	76	53	64.8	1.7	87	9	38	29	0	0	55	73	2.54	- 1.93	0.55	8	7	0.0	0	2.0	24	49	W	12	10	5	15	6.3	51
HUNTSVILLE	600	993.9	1016.9	77	55	65.6	4.0	88	24	42	17	0	0	53	66	3.15	- 0.84	1.04	7	7	0.0	0	1.4	21	32	31	15	13	4	13	5.5	
MOBILE	211	1009.1	1016.8	82	61	71.4	3.8	90	12	50	29+	1	0	61	75	0.60	- 5.76	0.51	3	2	0.0	0	3.0	19	24	2	19	5	15	10	6.0	
MONTGOMERY	194	1010.2	1017.4	79	56	67.5	3.4	86	24+	43	17	0	0	56	71	0.88	- 4.01	0.41	5	5	0.0	0	1.7	24	27	S	19	8	6	16	6.4	52
ALASKA																																
ANCHORAGE PRK STRIP	85			45	31	38.0	2.3	60	16	20	12	0	19			0.16	- 0.26	0.08	6	0	1.2	T										
ANCHORAGE	143	1005.8	1010.8	47	32	39.7		62	16	25	13+	0	13	23	53	0.30		0.12	8	0	2.8	1	0.5	36	32	2	20	6	7	17	6.9	54
ANNETTE	110	1009.1	1013.1	50	36	42.7	- 0.7	65	16	27	6	0	9	33	73	9.87	0.75	2.86	15	0	T	T	3.2	15	32	16	22	8	6	16	6.5	
BARROW	22	1014.9	1015.7	10	- 5	2.2	2.0	36	13	-28	5	0	30	- 3	76	0.66	0.55	0.15	15	0	8.8	17	1.3	32	37	27	13	5	10	15	7.0	
BARTER ISLAND	39	1013.9	1015.8	12	- 3	4.5	3.6	35	14	-20	22	0	30	2	85	0.21	0.04	0.06	9	0	2.1	20	4.1	26	44	27	11	7	9	14	6.6	
BETHEL	125	1008.5	1014.2	34	19	26.5	0.6	43	14	- 2	11	0	29	20	77	0.64	0.06	0.36	8	0	4.3	7	2.8	28	38	18	13+	8	7	15	6.6	
COLD BAY	94	1011.2	1015.1	41	30	35.2	1.9	58	15	24	23	0	19	28	76	0.83	- 0.63	0.42	11	0	3.2	1	4.2	29	60	15	4	4	6	20	7.7	
FAIRBANKS	436	995.6	1013.1	39	22	30.9	1.5	56	26	5	22	0	27	19	64	0.47	0.22	0.31	6	0	5.8	3	1.6	30	31	23	26+	3	4	23	8.1	
JUNEAU	12	1011.9	1012.8	47	29	37.7	- 0.3	58	15	18	20	0	23	30	78	3.33	0.46	0.60	15	0	0.8	T	5.8	12	37	12	22	9	3	18	6.7	52
KING SALMON	43	1010.8	1012.7	39	23	31.2	- 1.6	59	14	10	12+	0	30	24	77	1.29	0.65	0.35	14	0	7.9	1	2.9	32	39	34	20	8	5	17	6.5	
KOTZEBUE	10	1012.9	1013.2	24	6	14.6	1.4	36	13	-14	11+	0	30	11	81	0.34	0.03	0.12	8	0	6.7	16	2.4	20	49	12	12	9	3	18	6.7	
MC GRATH	334	1000.3	1013.4	38	21	29.4	1.8	52	17	- 3	12	0	29	20	68	1.11	0.64	0.51	12	0	12.1	4	1.7	29	26	3	20	5	5	20	7.3	
NOME	13	1011.5	1012.3	27	13	20.4	- 0.8	35	15+	-10	11	0	30	16	80	1.34	0.54	0.35	14	0	11.4	11	1.7	9	40	7	30	10	5	15	6.1	47
ST. PAUL ISLAND	22	1013.9	1014.8	34	25	29.6	1.2	42	18	14	11	0	27	27	88	1.52	0.56	0.41	18	0	4.0	14	2.9	25	48	27	7	2	3	25	8.5	
SHEMYA	122	1009.8	1013.5	39	33	35.9	0.4	42	29+	28	15	0	12	31	85	1.33	- 0.73	0.36	14	0	3.8	2	5.4	22	66	20	12	1	2	27	9.1	
YAKUTAT	28	1009.8	1010.9	44	27	35.8	- 1.2	58	16	19	1	0	27	30	81	11.59	4.36	3.45	14	0	14.2	7	2.9	11	44	12	3	2	10	18	7.6	
ARIZONA																																
FLAGSTAFF	6993	786.0	1015.5	53	25	39.2	- 4.1	75	21	0	13	0	27	24	64	5.62	4.44	1.47	12	1	58.3	23	4.3	19	29	17	1	9	6	15	6.1	
PHOENIX	1117	973.9	1012.8	77	50	63.4	- 3.8	97	30	40	11	5	0	40	48	1.35	1.03	0.87	5	1	0.0	0	0.9	18	44Y	N	25	13	8	9	4.5	77
TUCSON	2584	924.8	1012.0	79	50	64.5	- 1.4	98	22+	37	11	6	0	27	30	0.23	- 0.04	0.22	2	0	0.0	0	3.0	23	33	NW	25	17	8	5	3.3	87
WINSLOW	4895	850.7	1014.5	69	36	52.8	- 2.8	90	20	26	13+	1	9	26	45	0.44	- 0.01	0.29	5	2	0.2	T	5.8	22	41	17	12	11	12	7	4.7	
YUMA	194	1005.1	1012.5	83	56	69.7	- 2.7	102	21	46	4	15	0	36	35	1.20	1.11	1.08	6	2	0.0	0	1.3	30	29	W	10	19	6	5	3.3	91
ARKANSAS																																
FORT SMITH	449	998.6	1015.2	79	50	64.4	2.7	92	22	34	29	4	0	50	65	1.97	- 2.27	0.57	7	8	0.0	0	0.3	1	36	W	14	10	12	8	5.2	70
LITTLE ROCK	257	1006.1	1015.5	79	53	65.8	3.4	90	22	38	29	1	0	54	68	1.19	- 3.74	0.65	6	2	0.0	0	2.0	22	34	NW	15	12	7	11	4.8	64
TEXARKANA	372	1002.7	1015.7	82	58	69.8	5.9	88	23+	40	29	0	0	55	63	1.07	- 4.23	0.45	4	3	0.0	0	3.6	19				11	8	11	5.1	
CALIFORNIA																																
BAKERSFIELD	494	997.6	1015.2	73	51	61.9	- 1.1	98	29	40	12+	4	0	44	57	1.65	0.84	0.52	9	1	0.0	0	1.7	36	23	27	9+	9	7	14	6.0	
BISHOP	4108			69	38	53.1	- 2.0	87	21+	23	9	0	8			0.49	0.03	0.37	5	0	1.4	T						6	9	15	6.6	
BLUE CANYON	5280			49	36	42.4	- 3.2	72	26	24	11	0	12			8.91	4.09	2.63	17	0	40.8	36			32	18	16	4	9	17	7.6	
BURBANK	724	988.8	1014.4	71	49	59.7	- 1.5	94	28	36	11+	3	0	46	67	5.66	4.45	1.87	11	2	0.0	0	3.4	16	22	13	8+	10	7	13	5.8	
EUREKA U	43			55	45	50.1	- 0.3	69	19	38	3	0	0			5.60	2.93	1.79	14	0	0.0	0			35	NW	11	3	6	21	8.2	41
FRESNO	328	1003.4	1015.2	72	50	60.8	- 0.5	95	28	42	12	5	0	47	67	1.74	0.61	0.50	8	2	0.0	0	0.5	5	26	NW	20	7	7	16	7.0	73
LONG BEACH	34	1013.9	1015.4	69	51	60.0	0.0	86	28+	44	12+	0	0	48	70	4.42	3.65	1.31	9	3	0.0	0	2.2	23	29	26	10	8	10	12	5.9	
LOS ANGELES	97	1011.2	1014.9	65	52	58.6	- 0.8	79	25	43	11	0	0	49	74	4.52	3.47	1.31	9	4	0.0	0	3.3	25	39Y	S	1	7	9	14	6.2	
LOS ANGELES U	270			71	52	61.7	- 0.1	92	28	41	11	1	0			6.02	4.85	2.04	9	0	0.0	0			31	W	10	11	10	9	5.1	52
MT SHASTA R	3544			54	37	45.4	- 2.1	78	27	28	10+	0	11			8.08	5.31	2.84	19	0	14.4	3										
OAKLAND	6	1015.2	1015.5	62	51	56.2	- 0.4	79	26	39	11	0	0	48	74	2.54	1.16	1.07	10	0	0.0	0	5.3	25	32	29	9	5	9	16	7.1	
RED BLUFF	342	1001.4	1014.0	69	50	59.1	- 1.3	90	26	38	11+	1	0			3.94	2.11	1.48	15	2	0.0	0	3.8	17	42	S	15	6	6	18	7.3	52
SACRAMENTO	17	1013.9	1014.7	67	47	57.3	- 1.1	88	26	37	11	0	0	48	75	2.70	1.30	1.01	12	0	0.0	0	4.1	19	27	SE	8	4	8	18	7.4	67
SANDBERG R	4517			53	38	45.9	- 4.9	77	29	24	11	0	14			3.43	2.46	1.05	8	0	31.2	8						7	5	18	6.6	
SAN DIEGO	13	1014.2	1015.4	68	53	60.7	- 0.8	81	20+	44	12	0	0	51	73	3.58	2.79	1.40	11	0	0.0	0	2.3	26	33	S	8	9	13	8	5.5	66
SAN FRANCISCO	8	1015.6	1016.1	61	48	54.5	- 1.2	83	26	39	11+	0	0	46	78	3.47	2.17	1.04	12	1	0.0	0	6.4	27	37	W	9	6	7	17	7.1	
SAN FRANCISCO U	52			61	50	55.7	0.0	85	26	43	9	0	0			3.21	1.77	0.99	12	0	0.0	0			38	W	9					54
SANTA CATALINA	1568			65	52	58.4	1.7	89	29+	41	12+	0	0			4.58	3.36	1.61	10	2	0.0	0						9	8	13	5.8	
SANTA MARIA	236			66	45	55.3	- 0.3	83	26	33	11	0	0			3.42	2.23	1.33	12	0	0.0	0						7	8	15	6.4	
STOCKTON	22	1014.6	1015.6	71	49	59.7	0.0	93	27	36	11	2	0	48	71	2.08	0.94	0.64	13	0	0.0	0	2.4	26	28	15	8	5	5	20	7.5	
COLORADO																																
ALAMOSA	7536			58	26	41.8	0.0	75	22+	13	12	0	27			0.36	- 0.33	0.11	9	0	4.5	T						9	11	10	5.4	
COLORADO SPRINGS	6145	808.7	1012.7	61	36	48.3	2.7	78	22	28	10+	0	9	23	45	1.61	0.30	0.99	5	1	2.2	T	1.6	22	43	30	8	6	9	15	6.7	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Date	Temperature: Lowest	Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	No of days: .01 inch or more	No of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	No of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
COLORADO																																
DENVER	5283	834.1	1011.3	65	37	51.2	4.8	84	22	25	14	0	4	26	47	1.05	- 1.06	0.49	8	0	0.3	T	1.7	21	30	SW	9	6	10	14	6.3	65
GRAND JUNCTION	4855	850.3	1012.6	66	42	53.9	1.6	84	22+	31	14	0	3	30	47	1.95	1.20	1.33	9	1	0.2	T	2.5	14	38	W	1	5	6	19	7.4	52
PUEBLO	4684	853.7	1012.3	70	38	53.8	3.1	88	22	26	12	0	5	27	41	1.46	0.28	0.99	5	0	0.0	0	2.4	28	44	SW	9	8	10	12	5.9	70
CONNECTICUT																																
BRIDGEPORT	7	1015.2	1015.7	55	38	46.5	- 1.5	71	30	24	1	0	3	33	66	2.71	- 1.09	1.27	12	1	1.3	1	3.7	31	33	31	16	5	11	14	6.6	
HARTFORD	169	1007.8	1014.5	58	37	47.5	- 1.0	81	30	22	1	0	8	28	53	2.14	- 1.59	0.82	6	1	1.7	1	3.2	30	26	NW	13	5	9	16	6.9	62
NEW HAVEN	6			55	37	45.8	- 1.1	72	30	24	1	0	6			3.18	- 0.71	1.13	13	0	1.3	1			30	W	13+	5	9	16	6.5	60
DELAWARE																																
WILMINGTON	78	1012.5	1015.7	59	40	49.3	- 2.8	79	30	22	1	0	5	35	63	1.76	- 1.57	0.42	11	0	0.6	1	2.4	30	38	24	12	5	10	15	6.7	
DIST.OF COLUMBIA																																
WASH NATL AP	14	1013.9	1016.2	62	42	51.8	- 3.9	83	12	30	1	0	4	38	64	1.65	- 1.50	0.52	13	0	0.0		1.4	31	40	NW	13	[illegible]	5	17	6.6	50
FLORIDA																																
APALACHICOLA U	13			77	64	70.5	3.0	84	16+	53	2	0	0			2.50	- 1.80	0.80	6	4	0.0	0			26	NW	19	10	13	7	5.2	67
DAYTONA BEACH	31	1016.9	1018.1	81	61	70.8	1.9	92	12	52	30	1	0	61	75	1.00	- 1.97	0.87	3	3	0.0	0	0.6	9	25	26	16	8	13	9	5.7	
FORT MYERS	15	1017.3	1017.7	86	64	74.8	2.0	92	14	55	3	1	0	63	71	2.39	- 0.25	1.48	5	3	0.0	0	1.0	27	25	15	25+	12	15	3	4.3	
JACKSONVILLE	24	1016.6	1017.7	82	61	71.3	2.6	92	12	49	1	3	0	58	67	0.95	- 2.60	0.66	7	2	0.0	0	1.4	25	45	NW	19	6	16	8	5.7	69
KEY WEST	4	1016.6	1017.2	85	76	80.3	4.5	89	28	72	30+	0	0	68	67	0.64	- 1.84	0.52	3	1	0.0	0	5.9	9	25	NE	30	21	3	6	3.8	87
LAKELAND U	214			85	64	74.2	2.7	91	11	54	2	1	0			3.52	0.01	2.36	6	0	0.0	0						13	10	7	4.6	83
MIAMI	7	1017.3	1017.6	85	68	76.7	2.5	93	16	59	3	3	0	64	67	1.20	- 2.68	1.09	3	0	0.0	0	3.0	11	23	33	27+	12	13	5	4.8	
ORLANDO	108	1013.5	1017.9	86	64	74.8	3.6	93	12	52	2	4	0	61	70	0.66	- 2.76	0.34	5	4	0.0	0	0.5	28	23	8	21	11	12	7	5.3	
PENSACOLA	112	1013.5	1017.6	79	62	70.3	2.4	87	13+	49	17	0	0	62	78	1.59	- 3.66	1.07	5	0	0.0	0	3.1	19	37	NW	19					70
TALLAHASSEE	58	1015.6	1017.9	82	57	69.4	1.9	92	12	40	18+	2	0	57	71	7.14	2.50	2.89	7	8	0.0	0	0.7	25	23	30	19	4	18	8	5.9	
TAMPA	19	1017.6	1017.9	84	61	72.7	1.3	90	14	48	30	1	0	61	73	1.10	- 1.74	0.48	5	3	0.0		1.5	27	25	15	25	13	9	8	4.9	75
WEST PALM BEACH	15	1016.9	1017.6	86	65	75.5	1.6	93	16	56	3+	4	0	62	65	0.51	- 3.83	0.46	3	1	0.0	0	2.6	12	24	4	29	14	12	4	4.0	
GEORGIA																																
ATHENS	802	987.8	1016.8	75	51	63.0	1.9	89	23	38	17+	0	0	52	73	4.66	0.27	2.28	11	9	0.0	0	2.9	26	25	24	12	11	6	13	5.6	
ATLANTA	1010	980.4	1017.2	74	53	63.3	3.1	87	24	39	2+	0	0	51	70	3.10	- 1.37	1.03	9	6	0.0	0	2.5	25	28	W	27+	12	2	16	5.8	62
AUGUSTA	143	1011.2	1016.5	78	52	65.0	1.8	92	24	40	14	1	0	53	71	2.21	- 1.35	0.72	11	8	0.0	0	2.0	24	32	16	24	10	4	16	5.9	
COLUMBUS	385			81	55	68.2	4.4	91	24	41	17+	1	0	55	69	1.07	- 3.52	0.29	8	0	0.0	0	1.4	26	23	32	12	9	5	16	6.3	
MACON	354	1004.7	1017.8	78	54	66.2	0.6	91	24	41	17+	1	0	55	73	3.49	- 0.26	0.84	11	9	0.0	0	1.9	25	30	NW	26+	9	5	16	6.2	54
ROME	637			77	50	63.4	3.6	90	24	35	17	1	0			4.02	- 0.57	0.93	12	0	0.0	0										
SAVANNAH	46	1015.6	1017.4	78	55	66.4	0.7	88	24+	44	30+	0	0	55	71	1.39	- 2.31	0.69	5	2	0.0	0	1.9	23	26	NW	16	11	7	12	5.7	63
HAWAII																																
HILO	31	1015.2	1016.4	80	65	72.4	0.8	85	24+	62	11+	0	0	65	80	18.49	6.57	6.98	22	2	0.0	0	2.1	18	28	14	12	0	10	20	8.3	29
HONOLULU	7	1015.6	1016.1	81	69	75.0	0.8	85	26	62	16	0	0	64	70	1.48	0.17	0.54	10	1	0.0	0	4.3	7	26	NE	8+	2	9	19	7.5	78
KAHULUI	48	1013.2	1015.7	81	64	72.6	- 0.8	86	22	59	16+	0	0			1.08	- 0.36	0.58	7	1	0.0	0	5.3	6	30	E	5	3	13	14	7.0	69
LIHUE	115	1011.5	1016.7	78	66	71.7	- 0.8	83	24+	60	17+	0	0	65	83	7.12	3.78	2.50	18	4	0.0	0	4.4	7	27	E	5	1	11	18	7.7	37
IDAHO																																
BOISE	2838	913.0	1012.8	61	39	50.2	- 0.2	76	29+	31	12+	0	6	37	65	2.81	1.65	0.72	12	1	1.3	1	2.7	13	29	NW	28	7	2	21	7.4	57
IDAHO FALLS 42NW R	4790			57	31	43.8	0.7	72	29	21	13	0	18			1.83	1.34	0.43	12	0			2.7	22	35	SW	19					
IDAHO FALLS 46W R	4932			57	32	44.3	1.0	71	29	24	18+	0	18			1.54	1.03	0.40	12	0	3.1	1	4.3	22	42	SSW	20					
LEWISTON	1413			63	41	52.1	1.3	78	27	30	7	0	2			1.93	0.79	0.52	13	0	T	T						6	6	18	6.9	
POCATELLO	4454	860.5	1013.4	58	35	46.8	0.3	72	29	25	4	0	14	33	65	1.65	0.59	0.31	16	3	1.2	T	4.9	22	46	SW	22	2	7	21	8.0	47
ILLINOIS																																
CAIRO U	314			71	53	62.2	2.8	89	23	42	3+	0	0			4.80	0.73	1.60	9	0	0.0	0			35	SW	11	10	6	14	5.8	59
CHICAGO O HARE	658	990.9	1015.7	55	38	46.6	- 0.6	75	11	28	3	0	4	36	70	3.48	0.54	0.89	15	7	T	T	2.5	7	54	24	11	3	9	18	7.4	
CHICAGO MIDWAY	607	992.9		56	39	47.7	- 1.3	78	11	29	3	0	2	36	68	4.21	1.17	1.22	11	4	T	T	2.0	6	43	SW	11	4	9	17	7.2	50
MOLINE	582	992.9	1014.6	59	40	49.2	- 0.8	81	30	30	3	0	3	41	77	7.92	4.75	2.31	14	5	0.0	0	1.5	6	44	SW	11	2	11	17	7.5	42
PEORIA	652	990.9	1015.0	61	41	50.9	0.1	82	30	31	2	0	1	43	77	5.58	1.61	1.69	13	9	0.0	0	0.8	8	42	SW	11	4	8	18	7.5	45
ROCKFORD	724	987.8	1015.2	55	36	45.6	- 2.2	73	30	29	3	0	7	37	76	4.62	1.57	1.11	14	5	T	T	2.5	7	40	24	11	5	10	15	7.1	
SPRINGFIELD	588	992.2	1014.5	65	44	54.6	1.2	87	30	32	2	0	1	44	72	4.59	1.00	1.34	10	9	T	T	1.5	22	36	W	11	6	8	16	7.0	43

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
INDIANA																																
EVANSVILLE	381	1001.7	1015.9	69	47	57.5	-0.2	87	23+	32	1	0	1	48	72	2.97	-1.01	0.70	11	5	0.0	0	2.3	24	29	NW	15	5	9	16	7.0	50
FORT WAYNE	791	985.4	1015.9	58	38	48.1	-1.2	79	30	24	3	0	7			4.13	0.99	1.47	14	7	0.4	T	1.4	2	34	SW	11	4	8	18	7.4	51
INDIANAPOLIS	792	986.1	1015.4	64	45	54.4	3.6	82	23	29	3+	0	3	42	65	5.80	2.06	1.72	13	8	T	T	0.6	23	47	W	11	3	5	22	8.0	50
SOUTH BEND	773	987.1	1015.5	57	37	46.9	-0.6	75	30	24	3	0	6	36	68	4.87	1.29	1.09	13	6	0.4	T	0.8	9	27	27	11	6	6	18	7.2	
IOWA																																
BURLINGTON	694			61	41	50.8	0.0	86	30	31	2	0	2	46	82	7.45	4.01		14	7	0.0		1.3	36	38	23	11	4	8	18	7.2	
DES MOINES	938	979.3	1014.6	58	38	48.1	-0.6	88	30	25	16	0	5	40	78	4.18	1.65	1.25	12	5	0.0	0	2.2	6	76	W	23	3	8	19	7.7	46
DUBUQUE	1065			54	37	45.4	-1.4	79	30	28	3+	0	6			6.92	3.84	1.89	15	0	T	2						3	5	22	8.0	
SIOUX CITY	1095	974.3	1014.2	62	38	50.1	1.2	93	30	29	16	1	6	39	70	2.49	0.24	1.01	14	7	1.0	1	1.7	5	38	NW	15	4	11	15	7.0	48
WATERLOO	868	982.4	1014.6	54	34	44.3	-3.0	81	30	22	19	0	12	38	81	4.81	2.11	1.72	13	6	0.0	T	2.0	6				2	7	21	7.9	
KANSAS																																
CONCORDIA	1470	960.0	1012.9	67	44	55.4	2.6	92	30	29	28	1	1	41	64	1.34	-0.78	0.57	8	7	0.0	0	0.3	14	45	NW	15	8	7	15	6.5	56
DODGE CITY	2582	922.5	1012.8	72	44	57.9	4.3	91	22	30	28	1	2	38	55	0.63	-1.21	0.29	4	6	0.0	0	0.8	21	36	SE	9	7	6	17	6.5	71
GOODLAND	3645	886.2	1012.6	70	37	53.2	5.1	90	30	24	25	1	8	28	47	0.10	-1.49	0.10	1	1	0.0	0	1.1	24	43	16	9	8	5	17	6.2	
TOPEKA	876	981.7	1013.6	69	45	57.2	2.8	88	23+	30	28	0	1	45	66	2.31	-0.98	0.89	10	10	0.0	0	1.6	23	45	SW	11	9	5	16	6.6	59
WICHITA	1321	965.8	1013.2	72	49	60.4	3.7	88	22	32	28	0	1	47	66	2.63	0.33	1.06	10	9	0.0	0	2.3	18	38	W	11	7	6	17	6.5	65
KENTUCKY																																
COVINGTON	869	983.7	1015.5	65	42	53.3	1.1	80	30+	27	3	0	4	40	65	4.90	1.68	0.91	16	11	T	0	1.6	26	29	29	12+	6	3	21	7.4	
LEXINGTON	966	980.7	1016.1	67	45	55.9	1.5	82	23	29	3	0	3	43	64	3.24	-0.80	0.82	17	9	0.0	0	2.9	20	29	24	12+	7	9	14	6.6	
LOUISVILLE	474	998.0	1015.4	70	47	58.3	3.5	85	23+	31	3	0	2	45	64	3.28	-0.54	0.86	12	9	0.0	0	2.8	29	29	SW	11+	4	9	17	7.2	61
LOUISIANA																																
ALEXANDRIA	92	1012.5	1016.7	81	57	68.9	3.1	85	25+	39	30	0	0	59	75	0.29	-5.41	0.15	4	2	0.0	0	2.3	18	18	35	15	10	6	14	6.0	
BATON ROUGE	64	1014.2	1017.0	83	61	71.9	3.7	89	11	46	30	0	0	61	74	1.47	-3.30	1.47	1	1	0.0	0	2.7	16	23	31	19	6	8	16	6.5	
LAKE CHARLES	14	1015.2	1016.4	82	62	71.8	3.9	92	19	47	29	1	0	62	77	0.96	-3.41	0.70	2	4	0.0	0	4.2	17	35	28	19	6	9	15	6.4	
NEW ORLEANS	3	1015.9	1016.8	80	61	70.9	3.0	85	19	46	30	0	0	62	77	0.33	-4.22	0.22	3	2	0.0	0	2.9	14	25	20	15	6	14	10	5.8	
SHREVEPORT	252	1006.1	1015.3	81	59	70.1	4.8	88	10+	44	1	0	0	58	70	1.16	-3.41	0.52	5	4	0.0	0	4.4	18	29	29	26	11	7	12	5.5	58
MAINE																																
CARIBOU	624			46	28	37.0	0.6	60	30	16	1	0	23			1.10	-1.53	0.40	9	0	4.0	2						7	8	15	6.3	
PORTLAND	61	1011.9	1014.1	52	30	41.1	-1.4	69	30	12	1	0	18	27	62	2.93	-0.80	1.15	13	0	2.6	2	1.8	28	25	NW	4	9	8	13	6.0	65
MARYLAND																																
BALTIMORE	148	1010.2	1015.8	61	40	50.3	-3.9	81	12	20	4	0	5	35	61	1.72	-1.88	0.48	16	1	0.0	0	2.5	31	41	NW	13	8	6	16	6.7	48
MASSACHUSETTS																																
BLUE HILL OBS R	629			52	34	43.3	-2.4	76	30	18	1	0	11			2.64	-1.36	0.75	11	0	3.7	3			45	S	16					55
BOSTON	15	1013.2	1014.1	52	36	44.2	-3.7	76	30	22	1	0	2	31	68	2.32	-1.45	0.61	12	0	1.6	2	2.2	30	26	SW	25+	9	6	15	6.1	60
NANTUCKET	43	1013.9	1014.3	47	35	41.2	-3.1	60	30	25	1	0	9	33	75	3.21	-0.55	1.38	14	1	0.5	T	2.0	32	35	S	16	9	7	14	6.3	56
PITTSFIELD	1170			51	31	40.9	-2.1	73	30	14	1	0	17			2.95	-0.92	0.70	10	0	4.3	4										
WORCESTER	986	977.0	1014.2	52	34	42.9	-1.7	74	30	14	1	0	9	26	57	3.56	-0.37	1.07	13	0	6.7	5	5.3	30	28	27	17	7	8	15	6.2	
MICHIGAN																																
ALPENA	689			46	26	35.9	-3.2	72	29	0	2	0	23			3.43	0.80	1.20	11	0	6.8	6			26	SE	6	8	5	17	6.7	57
DETROIT	619	993.2	1016.3	54	36	44.9	-2.7	71	29	22	3	0	7	32	66	3.04	0.04	1.60	10	1	2.4	2	2.3	1	55	W	12	4	4	22	7.6	47
DETROIT M WAYNE CO	633	991.9	1016.2	55	35	45.1	-2.1	75	30	22	3	0	10	33	66	3.30	0.25	1.97	9	1	2.5	2	2.0	2				5	4	21	7.5	
DETROIT WILLOW RUN	711	987.8	1016.5	54	33	43.5	-4.2	71	30+	18	3	0	10	31	65	2.98	-0.07	1.73	9	1	2.2	2	1.7	36	32	27	12	5	5	20	7.3	
FLINT	770	987.8	1016.3	52	33	42.9	-0.8	74	30	13	3	0	11	32	69	1.68	-0.98	0.57	12	1	5.8	4	1.0	5	40	22	11	4	9	17	7.3	
GRAND RAPIDS	784	986.5	1016.2	52	33	42.8		76	30	10	3	0	13	33	72	2.49		0.64	12	1	5.4	6	1.7	6	48	SW	12	6	7	17	6.9	47
HOUGHTON LAKE	1150	974.3	1017.0	48	28	37.9		70	30	5	3+	0	22	27	70	2.85		0.60	12	1	10.8	6	0.2	3	21	30	12	6	5	19	7.5	
LANSING	841	984.1	1016.3	53	32	42.5	-3.2	74	11	2	3	0	13	35	78	2.04	-0.83	0.57	9	1	6.6	8	0.7	6	47	W	12	5	9	16	7.0	46
MARQUETTE U	677			46	31	38.2	-1.1	83	29	16	3	0	20			1.43	-1.27	0.36	12	0	2.9	33			29	SW	19	5	3	22	7.5	55
MUSKEGON	627	992.6	1015.9	53	36	44.5	-0.7	71	30	16	3	0	7	32	66	2.86	0.28	1.12	10	2	6.1	5	1.9	9	38	23	11	7	6	17	6.6	
SAULT STE MARIE	721	989.8	1017.0	44	28	36.0	-2.0	66	29	13	3+	0	25	26	71	1.33	-0.83	0.39	9	0	7.7	10	0.7	31	29	23	19	6	7	17	7.1	57
MINNESOTA																																
DULUTH	1428	964.1	1016.8	47	29	38.0	1.0	83	29	19	2	0	25	26	68	1.64	-0.72	0.57	13	0	1.6	41	1.9	6	36	NW	15+	3	8	19	7.9	48

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	F.	F.	F.	F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MINNESOTA																																
INTERNATIONAL FALLS	1179	972.6	1016.7	48	29	38.2	0.8	80	29	19	2	0	25	27	68	1.37	-0.19	0.63	9	1	5.0	22	0.4	35	30	30	29	4	7	19	7.5	
MINNEAPOLIS	834	985.1	1015.9	50	34	41.8	-2.5	76	29	26	28	0	14	34	78	3.52	1.67	0.78	16	4	2.0	8	2.7	6	30	NW	15	4	6	20	7.9	36
ROCHESTER	1297	967.2	1015.7	49	35	41.9	-2.1	75	30	26	28	0	9	35	79	3.92	1.73	0.93	19	5	5.2	3	1.7	10	35	14	10	5	6	19	7.5	
ST CLOUD	1034	977.3	1016.0	49	32	40.7	-2.1	84	29	23	2	0	18		73	3.44	1.42	1.15	11	0	6.1	27						1	8	21	8.2	
MISSISSIPPI																																
JACKSON	310	1005.1	1017.0	81	55	67.8		89	24	38	30	0	0	57	73	1.25	-3.41	0.84	6	3	0.0	0	3.4	18	26	N	15	8	6	16	6.0	
MERIDIAN	290	1006.4	1017.4	81	54	67.6	3.2	88	24	37	17	0	0	57	73	1.65	-3.68	0.73	7	7	0.0	0	2.1	21	20	32	26+	8	5	17	6.2	
VICKSBURG U	234			79	61	70.0	4.3	86	24+	50	29	0	0			1.14	-3.78	0.94	5	0	0.0	0			30	NW	26	11	3	16	5.6	73
MISSOURI																																
COLUMBIA	778	985.8	1013.9	69	47	58.4	3.8	91	22	34	16	2	0	43	62	4.49	1.19	1.40	8	8	0.0	0	2.5	25	50	SW	11	8	6	16	6.5	54
KANSAS CITY	742	986.5	1013.4	70	47	58.5	2.8	90	23+	32	16	2	1	43	61	2.21	-1.35	0.76	8	6	0.0	0	1.7	20	34	SW	11+	9	3	18	6.5	63
ST JOSEPH	811			70	43	56.3	2.7	90	22	28	28	1	1			2.15	-1.00	0.51	10	9	0.0	0	0.6	20	35	23	11	8	5	17	6.6	
ST LOUIS	535	994.6	1015.0	69	47	58.4	3.5	90	23	35	2	1	0	43	62	3.67	-0.04	1.18	10	6	0.0	0	2.4	26	38	SW	5	6	9	15	6.5	54
SPRINGFIELD	1268	969.5	1014.7	73	47	60.1	4.5	88	23	34	27	0	0	48	69	7.40	3.31	2.92	9	10	0.0	0	3.9	19	65	SW	5	10	11	9	5.7	67
MONTANA																																
BILLINGS	3567	888.9	1013.6	57	35	45.8	-0.2	77	30	23	4	0	14	33	68	1.18	-0.13	0.58	14	1	3.4	1	3.1	33	39	NW	20	3	6	21	7.7	50
GLASGOW	2284			51	33	41.8	-1.6	81	28	19	1	0	15			0.51	-0.50	0.36	6	0	3.1	9						2	4	24	8.3	
GREAT FALLS	3662	885.9	1014.6	55	34	44.7	1.1	76	28	25	16	0	13	33	68	2.51	1.53	0.61	14	2	11.5	4	3.5	25	34	SW	28	5	5	20	7.2	67
HAVRE	2582			51	31	41.2	-1.9	77	28	14	4	0	18			1.12	0.15	0.48	9	0	6.4	2			32	E	9	2	9	19	7.5	57
HELENA	3828	878.8	1014.6	57	32	44.4	1.1	76	28	21	18	0	19	31	65	0.98	0.15	0.52	13	1	6.3	4	4.0	29	38	W	30	2	9	19	7.7	55
KALISPELL	2965	908.9	1014.2	55	32	43.5	-0.2	67	28	23	18	0	18	31	63	1.44	0.40	0.54	12	1	4.0	3	0.9	11	35	16	9	5	5	20	7.3	
MILES CITY	2629	920.4	1014.3	56	34	44.6	-1.1	80	30	22	17	0	14	35	75	2.12	1.06		14	2	4.0		2.4	34								
MISSOULA	3190	902.1	1014.9	57	33	44.7	0.4	69	27	25	18+	0	20	34	73	1.68	0.71	0.48	13	2	4.0	1	1.9	32	41	S	9	5	6	19	7.3	47
NEBRASKA																																
GRAND ISLAND	1841	947.5	1013.9	63	39	51.2	1.6	92	30	26	28	1	5	37	65	2.18	-0.10	0.79	9	7	0.0	0	1.3	36	30	34	15+	6	7	17	6.9	
LINCOLN U	1150			63	42	52.5	0.7	90	30	32	28	1	1			3.69	1.24	1.68	11	0	0.0	0			34	SE	16					
NORFOLK	1544			61	37	49.3	0.9	94	30	25	28	2	7			1.04	-1.14	0.24	11	0	0.2	T						3	10	17	7.0	
NORTH PLATTE	2775	914.3	1012.2	66	37	51.4	3.7	90	30	21	28	1	6	35	62	1.42	-0.59	1.24	4	5	T	T	2.3	36	43	SE	9	8	7	15	6.5	60
OMAHA	978	978.3	1014.0	65	42	53.2	1.5	93	30	32	28	1	1	42	70	3.71	1.15	1.35	9	5	0.0	0	1.4	4	42	W	8	3	11	16	7.3	43
SCOTTSBLUFF	3957	877.1	1012.8	66	36	51.1	4.5	87	30	28	1	0	5	31	56	0.71	-1.10	0.50	6	4	2.0	1	3.4	31	46	27	17	7	9	14	6.4	
VALENTINE	2587			61	35	48.2	2.5	92	30	28	27	1	10			1.33	-0.65	0.60	7	0	T	0			38	SE	10+	5	12	13	6.6	55
NEVADA																																
ELKO	5050	842.2	1013.4	58	32	44.9	0.6	74	29+	22	17+	0	14	32	64	1.81	0.99	0.60	13	3	7.7	3	2.3	23	30	22	5	2	7	21	8.0	
ELY	6253	806.0	1012.5	55	29	41.9	-0.7	74	30	15	10	0	22	25	57	0.74	-0.21	0.16	14	2	6.8	2	6.1	19	34	S	8	3	4	23	7.9	68
LAS VEGAS	2162	936.7	1012.9	72	51	61.2	-3.3	93	30	35	13+	4	0	33	42	2.44	2.21	0.97	8	1	0.0	0	4.5	22	37	SW	1	11	8	11	5.4	73
RENO	4404	863.5	1012.7	65	34	49.6	1.6	82	28	22	7	0	15	30	50	0.27	-0.27	0.10	6	0	T	T	2.8	22	32	SW	20+	2	8	20	7.7	89
WINNEMUCCA	4299	864.9	1012.7	61	35	47.9	2.0	81	28	23	17	0	17	30	55	0.94	0.12	0.32	11	1	3.3	1	1.9	24	35	W	28	4	7	19	7.3	43
NEW HAMPSHIRE																																
CONCORD	339	1001.4	1014.3	54	29	41.3	-2.5	77	30	18	25	0	21	26	60	2.49	-0.82	0.74	11	0	1.3	1	2.4	29	28	NW	30	9	9	12	5.9	69
MT WASHINGTON OBS	6262			24	12	18.2	-4.8	37	30	-7	1	0	30			3.97	-1.92	1.23	14	0	23.3	12			87Y	W	17	7	11	12	6.5	47
NEW JERSEY																																
ATLANTIC CITY	64	1013.5	1016.0	60	38	48.7	-2.3	85	12	24	1	0	6	35	66	2.00	-1.41	0.51	11	1	3.2	2	2.1	30	35	30	13+	4	10	16	6.9	40
ATLANTIC CITY U	11			55	42	48.3	-1.6	79	12	28	1	0	4			2.30	-1.08	0.67	11	0					43	NW	13					
NEWARK	11	1014.6	1015.5	58	42	50.0	-2.3	81	30	30	1	0	1	32	58	2.60	-0.91	0.78	11	2	0.7	1	3.7	32	40	33	13	5	11	14	6.7	
TRENTON U	56			58	41	49.4	-2.3	80	30	28	1	0	4			2.87	-0.34	0.62	13	0	2.5	2			37	NW	12	7	7	16	6.4	52
NEW MEXICO																																
ALBUQUERQUE	5310	836.8	1012.6	70	40	54.8	-0.9	89	22	27	11	0	4	22	35	0.49	0.02	0.37	4	1	T	0	1.8	23	56	SW	10	13	10	7	4.5	72
CLAYTON	4969			70	40	55.0	4.3	91	22	28	12	1	3			0.62	-0.57	0.55	3	0	T	0						10	9	11	5.7	
RATON	6379			65	32	48.3	1.4	87	22	22	11+	0	16			1.12	0.06	0.66	2	0	4.4	T						7	10	13	5.8	
ROSWELL	3617			81	43	62.0	3.0	101	22	34	16+	5	0			0.38	-0.35	0.38	1	1	0.0	0			35	22	9	14	10	6	4.4	79
SILVER CITY	5373			72	39	55.4	-1.0	90	22	30	6	1	6			0.00	-0.29	0.00	0	0	0.0	0						16	8	6	3.6	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	F.	F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW YORK																																
ALBANY	277	1004.4	1015.2	53	31	42.2	- 4.0	74	30	10	1	0	17	28	61	2.38	- 0.39	0.70	10	1	2.1	4	3.4	29	34	NW	12	5	9	16	7.1	56
BINGHAMTON	1590	955.6	1015.3	49	32	40.3	- 3.2	72	30	19	1	0	13	30	70	2.88	- 0.06	0.83	15	2	12.7	7	4.0	31	42	W	12	4	6	20	7.7	46
BUFFALO	705	989.8	1015.9	50	33	41.2	- 2.3	62	21+	22	1	0	11	32	73	1.99	- 1.02	0.49	16	3	4.2	2	2.5	25	43	SW	12	6	5	19	7.5	46
NEW YORK U	132	1012.5	1015.7	59	42	50.6	- 0.8	80	30	29	1	0	1	31	54	2.90	- 0.53	0.88	11	1	1.2	T	2.2	31	29	NW	13	9	11	10	5.7	58
J.F. KENNEDY	15	1014.6	1015.4	57	40	48.3	- 0.7	77	30	27	1	0	4	33	63	3.18	- 0.30	0.69	14	2	1.4	1	1.5	30	29	31	12	5	11	14	6.5	
NEW YORK LA GUARDIA	11	1013.5	1015.4	58	44	50.7	- 0.5	77	30	32	1	0	1	34	59	2.75	- 0.82	0.92	13	2	0.7	1	2.5	32	37	NW	12	5	12	13	6.6	
ROCHESTER	547	996.3	1016.8	50	33	41.3	- 3.8	68	30	20	1	0	11	32	72	1.85	- 0.82	0.51	12	3	1.9	1	3.4	27	38	SW	12	5	7	18	7.0	47
SYRACUSE	417	1000.3	1015.6	52	33	42.3	- 3.7	70	30	16	1	0	13	30	65	3.53	0.45	1.36	14	1	4.7	1	4.1	30	40	W	12	5	8	17	6.6	47
NORTH CAROLINA																																
ASHEVILLE	2140	940.7	1016.7	70	45	57.4		84	23	30	3	0	1	46	73	2.62		1.10	11	7	0.0	0	1.8	35	32	35	13	9	8	13	5.8	67
CAPE HATTERAS R	7	1015.9	1016.4	64	46	55.0	- 4.3	77	9	33	11+	0	0	47	75	1.20	- 1.79	0.49	9	5	0.0	0	1.9	35	31	NNE	2	9	7	14	6.1	75
CHARLOTTE	735	989.2	1016.4	73	52	62.4	2.1	88	23+	35	3	0	0	48	67	3.32	- 0.17	1.01	9	4	0.0	0	1.8	26	26	S	15+	8	6	16	6.2	65
GREENSBORO	897	984.4	1016.2	70	47	58.6	1.2	90	23	30	3	1	2	46	68	3.07	- 0.36	1.88	8	4	0.0	0	2.3	26	32	NW	12	8	7	15	6.6	52
RALEIGH	434	1000.3	1016.1	71	46	58.3	- 1.0	89	23	28	3	0	2	44	65	1.51	- 2.01	0.45	9	6	0.0	0	2.3	26	30	36	29	6	11	13	6.4	58
WILMINGTON	28	1015.6	1016.9	73	52	62.4	- 0.1	88	23+	38	3	0	0	49	66	2.40	- 0.46	0.69	12	6	0.0	0	2.2	26	37	W	12	8	8	14	5.9	67
NORTH DAKOTA																																
BISMARCK	1647	955.0	1015.5	51	33	42.0	- 1.5	80	28	22	27	0	18	31	71	1.88	0.66	0.54	17	1	7.2	3	1.9	4	33	E	2	3	4	23	8.1	38
FARGO	896	982.7	1016.2	50	33	41.6	- 0.4	84	29	26	27+	0	16	34	78	3.04	1.32	1.35	9	1	2.5	2	1.4	7	34	N	26	3	7	20	8.0	
WILLISTON	1899			51	31	40.8	- 1.5	81	28	21	27	0	25			0.99	0.05	0.53	8	0	1.6	8			37	W	18	2	5	23	8.2	43
OHIO																																
AKRON	1208	971.2	1016.0	59	36	47.3	- 1.4	74	30+	16	3	0	11	35	67	1.57	- 1.77	0.35	13	6	T	T	1.5	32	40	30	7	3	7	20	7.5	
CINCINNATI OBS	761			66	45	55.3	1.1	83	30	26	3	0	3			5.96	2.33	1.05	11	0	T	T			34	W	8					52
CLEVELAND	777	986.8	1016.2	55	36	45.6	- 1.0	75	21	21	3	0	8	34	68	1.83	- 1.58	0.57	14	3	0.4	T	1.5	31	36	S	11	5	6	19	7.4	47
COLUMBUS	812	986.1	1016.3	63	40	51.4	0.6	80	30	19	3	0	4	39	66	5.90	2.41	1.26	14	10	T	0	1.5	33	42	NW	12	4	7	19	7.5	44
DAYTON	1002	979.7	1015.9	62	41	51.3	0.6	79	30	20	3	0	4	39	67	4.54	1.22	1.37	14	10	T	0	0.9	21	33	N	8	6	5	19	7.5	50
MANSFIELD	1297			57	35	45.9	- 1.0	75	30	17	3	0	10			3.02	- 0.29	0.65	14	5	T	T						3	7	20	7.6	
TOLEDO	676	990.9	1016.3	57	36	46.8	- 0.1	79	6	18	3	0	8	36	72	2.07	- 0.70	0.46	12	5	1.4	1	0.8	3	31	W	12	5	5	20	7.6	49
YOUNGSTOWN	1178	972.9	1016.0	56	35	45.0	- 2.0	70	30+	17	3	0	11	33	66	2.56	- 1.14	0.69	15	3	0.5	T	2.1	34	44	30	12	3	8	19	7.6	
OKLAHOMA																																
OKLAHOMA CITY	1280	967.8	1013.7	77	54	65.5	5.6	90	21	37	28	1	0	50	62	3.24	0.12	1.05	8	7	0.0	0	6.3	18	40	SW	8	12	6	12	5.5	74
TULSA	650	989.8	1014.0	80	53	66.2	7.3	94	21	37	28	5	0	49	59	3.00	- 1.02	1.50	8	9	0.0	0	4.9	20	42	SW	8	9	9	12	5.6	77
OREGON																																
ASTORIA	8	1015.2	1015.8	57	42	49.3	0.3	70	26+	30	3	0	1	41	76	5.47	0.29	2.26	20	1	0.0	0	2.7	22	35	18	19+	2	4	24	8.6	
BURNS U	4151	870.0	1013.0	59	33	45.7	- 0.3	72	27	21	8	0	18	31	59	1.28	0.53	0.39	13	0	1.4	1	2.6	29				4	6	20	7.3	
EUGENE	359	1002.0	1015.6	61	42	51.8	1.0	77	27+	32	4+	0	2	43	76	2.92	0.54	1.27	13	0	0.0	0	1.5	24	31	27	14	3	7	20	8.0	
MEACHAM	4050			51	33	42.0	1.2	68	27	25	2	0	16			2.46	- 0.34	1.20	14	0	4.7	1									7.4	
MEDFORD	1298	967.2	1014.8	65	41	53.4	2.8	84	27	32	7+	0	2	41	68	3.07	2.01	1.05	14	0	0.0	0	1.1	28	35	14	15	4	4	22	7.8	
PENDLETON	1482	960.4	1014.0	64	42	52.9	0.9	84	27	28	7	0	2	37	58	0.65	- 0.44	0.20	12	0	0.0	0	4.2	25	35	26	1	5	8	17	6.8	
PORTLAND	21	1013.9	1015.4	62	42	51.8	0.0	80	26	32	6+	0	3	43	75	2.20	0.11	1.29	12	0	0.0	0	1.7	28	36	S	15	4	6	20	7.9	52
SALEM	196	1008.5	1015.8	61	39	50.3	- 0.8	76	27+	28	3	0	7	43	79	2.41	0.08	1.00	15	0	0.0	0	2.4	22	30	20	15	4	6	20	7.9	
SEXTON SUMMIT R	3836	880.5	1013.8	52	34	42.5	- 2.2	76	27	23	6	0	16			4.40	2.55	2.03	13	0	11.1	6			42	17	20	4	8	18	7.5	
PACIFIC AREA																																
CANTON ISLAND	8			87	77	82.3	- 1.3	89	20+	74	15	0	0			1.82	- 1.80	0.49	16	0	0.0	0						2	21	7	6.0	
ENIWETOK	13	1010.8	1011.5	86	77	81.6	- 0.5	88	26	74	16+	0	0	72	74	0.36	- 0.92	0.18	7	0	0.0	0	13.6	8								
TAGUAC GUAM R	361			87	70	78.1	- 1.8	89	30	59	6	0	0			0.50	- 2.53	0.15	14	0	0.0	0										87
JOHNSTON	7	1013.5	1014.3	81	73	76.9	- 1.1	85	20	70	17+	0	0	66	70	0.57	- 1.71	0.21	8	0	0.0	0	9.8	7	29	NE	3	12	12	6	4.8	92
KOROR R	94	1006.4	1010.3	87	76	81.4	0.1	89	14	73	30	0	0	74	82	7.11	- 3.28	1.80	13	0	0.0	0	5.4	9	21	NE	26	0	0	30	10.0	73
KWAJALEIN	8	1010.2	1011.0	88	77	82.8	2.0	89	30+	74	21	0	0	72	74	0.24	- 4.78	0.14	6	0	0.0	0	16.6	6	25	7	25+	2	4	24	8.7	
MAJURO	10	1010.2	1010.5	85	77	81.3	0.7	87	20	74	11	0	0	73	76	4.69	- 7.62	2.90	11	1	0.0	0	14.7	7	33	NE	11	0	3	27	9.3	57
MARCUS ISLAND	20			77	67	71.8		82	12	61	28	0	0			2.52	1.44	1.02	9	0	0.0	0			30	N	16	3	13	14	7.0	58
PONAPE R	123	1004.4	1009.7	86	75	80.3	- 0.2	88	22+	71	18	0	0	74	82	14.28	- 5.76	3.17	24	2	0.0	0	8.8	6	22	SE	29	0	5	25	9.2	24
TRUK MOEN ISLAND	5	1009.1	1009.5	85	76	80.4	- 0.4	87	29+	71	12	0	0	74	78	8.17	- 4.15	2.05	21	0	0.0	0	10.2	5	38	NE	12	0	4	26	9.0	62
WAKE	11	1014.6	1014.8	81	72	76.5	- 1.9	84	5	69	24+	0	0	67	75	3.31	1.44	1.60	17	0	0.0	0	7.9	5	23	4	11+	5	13	12	6.4	
YAP R	55	1008.1	1009.9	87	76	81.2	- 0.6	89	24	73	11+	0	0	74	80	4.25	- 2.13	1.44	15	0	0.0	0	7.8	7	22	SE	26+	0	4	26	9.4	57

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PENNSYLVANIA																																
ALLENTOWN	376	1001.7	1015.9	58	36	47.2	- 2.1	80	30	21	1	0	6	33	62	2.10	- 1.66	0.61	11	0	1.7	1	3.6	30	44	25	12	5	10	15	6.7	
ERIE	732	989.2	1016.5	50	33	41.6	- 3.9	70	11	17	3	0	11	33	74	1.66	- 1.90	0.43	15	4	2.2	1	1.6	24	46	21	12	5	8	17	7.1	
HARRISBURG	338	1003.1	1016.1	60	40	50.1	- 1.7	82	30	22	1	0	4	34	58	1.25	- 1.77	0.36	12	0	0.2	T	2.4	31	42	W	12	3	8	19	7.4	49
PHILADELPHIA	5	1014.6	1015.7	58	40	49.0	- 3.0	78	30+	26	5	0	5	34	61	2.33	- 1.07	0.54	11	0	3.0	1	2.3	32	40	W	12	7	6	17	6.9	46
PITTSBURGH	1137	971.2	1015.6	60	38	49.0	0.0	74	30	21	3	0	6	36	65	1.79	- 1.29	0.42	12	2	0.2	T	3.4	31	46	24	12	2	8	20	7.8	41
PITTSBURGH U	749			61	41	50.5	- 1.7	75	30	23	3	0	4			2.19	- 1.18	0.53	14	0	0.8											38
READING U	266			60	41	50.0	- 2.6	81	30	27	1	0	4			1.36	- 2.06	0.39	10	0	0.3	T			50	W	12	7	8	15	6.6	46
SCRANTON	930	981.0	1015.9	55	36	45.3	- 3.1	77	30	20	1	0	6	32	63	2.63	- 0.64	0.60	14	1	3.8	2	2.7	30	40	SW	12	4	9	17	7.3	49
WILLIAMSPORT	527	996.6	1016.1	55	34	44.5	- 4.9	77	30	18	1	0	9	32	67	3.07	- 0.48	0.62	14	2	3.0	3	2.2	30	31	25	12	3	10	17	7.4	
RHODE ISLAND																																
BLOCK ISLAND	110			49	36	42.5	- 2.1	61	30+	25	1	0	5			2.70	- 0.91	1.00	9	0	1.3	T										
PROVIDENCE	51	1012.2	1014.5	55	36	45.4	- 1.8	75	30	22	1	0	8	29	58	2.43	- 1.32	0.95	11	1	T	0	2.0	28	28	18	16	8	8	14	6.3	56
SOUTH CAROLINA																																
CHARLESTON	41	1015.2	1016.8	76	54	64.5	- 0.3	89	9	43	2+	0	0	53	72	3.10	0.22	1.89	6	4	0.0	0	1.9	24	40Y	SW	15	9	9	12	5.8	55
CHARLESTON U	9			73	58	65.6	0.0	89	9	45	1	0	0			3.46	0.92	1.97	5	0	0.0	0			30	NE	3					
COLUMBIA	217	1008.5	1016.5	77	54	65.1	1.5	92	23	40	3+	2	0	51	67	3.99	- 0.02	0.99	13	6	0.0	0	1.6	25	35	31	15	11	7	12	5.4	65
FLORENCE	146			74	51	62.4	- 1.1	88	9	37	3	0	0			2.79	- 0.82		8	5	0.0											
GNVLE SPARTANBURG	957	982.1	1016.4	72	51	61.7	0.3	89	9	35	3	0	0	48	67	4.93	0.99	1.88	14	9	0.0	0	2.0	26	28	SW	18	8	9	13	5.9	59
SOUTH DAKOTA																																
ABERDEEN	1296	967.8	1015.2	54	33	43.7	- 1.1	88	29	22	7	0	13	33	74	2.93	0.89	0.75	17	5	10.9	4	2.8	4	28	36	15	1	9	20	7.9	
HURON	1282	967.5	1014.6	56	35	45.6	0.6	85	30+	28	28+	0	10	36	76	2.42	0.58	0.68	16	5	1.2	1	1.7	6	31	N	26	2	13	15	7.7	43
RAPID CITY	3165	901.8	1013.5	59	35	47.0	2.5	81	30+	20	6	0	10	33	66	1.50	- 0.17	0.54	14	2	5.5	4	3.3	35	35	SW	13	4	10	16	7.2	54
SIOUX FALLS	1418	962.8	1014.7	57	35	45.9	0.0	87	30	25	28	0	12	36	75	3.35	1.04	1.03	17	3	0.4	T	2.5	6	29	36	27+	4	8	18	7.2	
TENNESSEE																																
BRISTOL	1507	962.4	1016.4	70	46	57.9	1.3	84	23	27	3	0	1	47	69	3.42	0.26	1.05	9	8	0.0	0	3.3	28	30	29	15	7	9	14	6.3	
CHATTANOOGA	670	992.2	1016.9	75	50	62.5	1.6	89	24+	36	17+	0	0	51	71	2.87	- 1.42	0.97	10	8	0.0	0	1.2	21	37	NW	15	12	6	12	5.7	62
KNOXVILLE	980	981.7	1016.8	73	52	62.4	3.5	89	24+	39	17+	0	0	50	69	4.16	0.46	1.80	14	9	0.0	0	3.4	26	37	W	15	9	8	13	6.1	56
MEMPHIS	263	1006.1	1016.1	77	56	66.4	5.0	89	23	41	29	0	0	53	65	2.05	- 2.58	0.78	10	9	0.0	0	3.2	22	28	NW	15	12	5	13	5.1	68
NASHVILLE	590	994.2	1016.0	72	50	60.9	1.3	88	23	37	1	0	0	49	69	5.72	1.98	1.87	12	9	0.0	0	2.4	22	33	NW	18	10	7	13	5.6	59
OAK RIDGE	905			72	49	60.7	2.9	90	23	38	17	1	0			3.86	- 0.34	1.14	14	0	0.0	0			35Y	W	15	12	3	15	5.7	
TEXAS																																
ABILENE	1762	952.6	1013.2	80	56	68.1	3.8	94	21	42	29	5	0	49	56	2.78	0.51	2.31	7	5	0.0	0	5.5	17	37	SE	5	13	4	13	5.1	67
AMARILLO	3604	889.6	1011.9	76	43	59.4	1.9	98	22	35	28+	3	0	30	40	0.23	- 1.09	0.18	3	3	0.0	0	6.2	23	45	SW	9	12	7	11	5.1	76
AUSTIN	597	992.9	1014.6	81	62	71.4	3.7	89	18	47	30	0	0	60	73	1.91	- 1.64	1.17	6	7	0.0	0	4.5	16	29	W	26	8	4	18	6.6	43
BROWNSVILLE	16	1012.5	1013.0	85	68	76.3	2.4	93	11	56	30	1	0	66	75	0.10	- 1.45	0.09	2	1	0.0	0	10.7	14	36	S	5	8	11	11	5.9	71
CORPUS CHRISTI	41	1012.2	1013.7	82	66	73.6	1.9	88	18	51	30	0	0	66	82	0.80	- 1.34	0.76	3	1	0.0	0	10.7	13	38	S	5	4	9	17	7.0	47
DALLAS	481	997.3	1014.5	79	60	69.7	4.7	88	22+	47	29+	0	0	57	67	2.03	- 1.97	1.02	6	6	0.0	0	5.6	17	29	S	5	12	4	14	5.6	57
DEL RIO	1026	977.0	1012.8	86	62	73.6		98	18	49	30	13	0	55	59	3.13	- 1.71	1.88	6	5	0.0	0	5.6	11	35	35	26	9	5	16	6.3	
EL PASO	3918	880.5	1010.6	80	51	65.3	1.9	98	22	38	6	4	0	24	23	0.01	- 0.28	0.01	1	0	0.0	0	4.7	26	50	SW	10	16	5	9	4.0	80
FORT WORTH	537	994.2	1014.7	79	57	68.4	3.6	87	21+	43	29	0	0	57	69	2.15	- 1.45	1.39	5	6	0.0	0	4.5	18	26	18	5	12	5	13	5.4	
GALVESTON U	7			75	67	71.1	2.6	83	19	60	29+	0	0			0.55	- 2.04	0.47	2	0	0.0	0			45	NW	19					67
HOUSTON U	41			81	67	74.0	4.7	89	19	54	29	0	0			0.79	- 2.63	0.71	4	0	0.0	0										
HOUSTON	50	1013.5	1015.5	83	64	73.5	5.0	87	19+	50	29	0	0	63	74	0.95	- 2.29	0.75	6	2	0.0	0	6.2	14	32	27	19	7	6	17	6.8	70
LUBBOCK	3243	902.5	1012.5	79	49	63.6	4.1	98	22+	36	27	4	0	39	47	0.41	- 0.74	0.14	5	5	0.0	0	5.5	21	46	25	10	9	11	10	5.5	
MIDLAND	2851	914.7	1011.5	82	53	67.4	2.5	98	21	44	27+	8	0	39	44	0.33	- 0.50	0.30	2	4	0.0	0	4.1	18	36	28	14	9	14	7	5.1	
PORT ARTHUR	16	1015.2	1015.9	82	63	72.7	4.5	90	19	46	29	1	0	63	78	0.35	- 3.59	0.35	1	2	0.0	0	5.6	16	60	W	19	6	11	13	6.4	56
SAN ANGELO	1903	946.8	1012.4	85	56	70.5	3.4	98	21	38	29	10	0	47	49	0.12	- 1.89	0.07	4	3	0.0	0	3.8	18	25	18	5	11	8	11	5.0	
SAN ANTONIO	788	986.5	1014.3	81	62	71.6	3.4	90	18	44	30	1	0	60	72	1.97	- 0.85	1.28	5	4	0.0	0	5.2	12	42	NW	26	7	8	15	6.7	41
VICTORIA	104	1010.5	1014.5	82	65	73.5	3.5	87	23	50	16	0	0	64	77	0.91	- 1.71	0.56	3	3	0.0	0	7.2	13	30	36	26	3	8	19	7.5	
WACO	500	996.3	1014.3	82	62	71.9	5.3	94	18	46	29	1	0	59	68	1.35	- 2.53	1.19	5	3	0.0	0	5.7	16	25	33	26+	11	5	14	5.7	
WICHITA FALLS	994	977.3	1013.5	80	54	67.2	3.2	91	21	41	28	2	0	51	61	2.45	- 0.08	1.28	8	9	0.0	0	4.7	18	39	18	5	10	8	12	5.5	
UTAH																																
MILFORD	5028			61	34	47.4	- 0.3	81	30	24	14	0	11			1.31	0.59	0.38	12	0	8.4	2						4	11	15	7.0	
SALT LAKE CITY	4220	869.3	1012.9	63	39	51.0	1.1	80	30	28	12	0	3	32	54	2.30	0.54	1.38	12	0	2.4	1	4.8	17	34	SW	1	2	8	20	8.1	59

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station		Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)				
												No. of days							No. of days		Snow, Sleet				Fastest mile							
	Elevation (ground)	Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
UTAH																																
WENDOVER	4237			62	42	52.0	0.4	77	30	32	11+	0	2			0.42	- 0.09	0.27	6	0	T	T						4	8	18	7.2	
VERMONT																																
BURLINGTON	332	1001.7	1014.5	50	28	39.3	- 1.9	71	30	7	1	0	21	27	64	2.16	- 0.47	0.80	10	1	1.1	T	1.3	33	28	S	7	5	14	11	6.4	60
VIRGINIA																																
LYNCHBURG	916			66	43	54.3	- 1.9	82	23+	24	3	0	4			1.42	- 1.72	0.30	11	5	0.0	0			31	NW	13	5	13	12	6.6	53
NORFOLK	26	1014.9	1016.0	64	45	54.5	- 3.5	84	18	31	4	0	1	42	66	2.19	- 0.97	0.56	15	3	0.0	0	1.0	3	33	S	15	7	10	13	6.5	54
RICHMOND	162	1010.2	1016.3	65	43	53.9	- 4.2	84	18	27	1	0	4	40	66	2.13	- 1.02	0.90	14	2	0.0	0	0.9	31	30	NW	13	7	8	15	6.7	52
ROANOKE	1149	973.6	1015.7	66	44	54.9	- 1.5	82	23	27	3	0	2	40	62	1.70	- 1.40	0.44	12	4	0.0	0	3.1	27	32	33	9	5	12	13	6.6	
WASHINGTON																																
OLYMPIA	195	1008.1	1015.5	60	38	49.0	- 1.0	79	27	27	11	0	10	41	76	3.61	0.65	2.31	12	1	0.0	0	3.1	21	35	22	30	2	7	21	8.1	
SEATTLE TACOMA	400	999.0	1015.5	58	41	49.5	0.3	77	27	34	6+	0	0	41	75	3.73	1.33	1.85	16	2	0.0	0	1.5	23	28	23	30	3	5	22	8.0	39
SPOKANE	2356	929.2	1013.2	57	37	47.2	- 0.1	73	27	27	7	0	5	35	66	2.35	1.44	0.75	8	3	0.1	T	3.9	19	34	SW	20	6	7	17	6.9	54
STAMPEDE PASS R	3958			43	32	37.1	0.6	59	26	23	6	0	19			4.00	- 1.60	1.92	18	0	11.7	132						3	7	20	8.0	
TATOOSH ISLAND R	101	1011.9	1014.9	52	43	47.4	- 0.1	62	15	36	6	0	0	42	83	5.03	- 0.20	1.04	17	0	0.0	0	3.3	16	57	SW	20	1	6	23	8.4	52
WALLA WALLA U	949			65	45	55.2	1.4	81	27	35	7	0	0			1.68	0.28	0.56	11	0	0.0	0			20	SE	14	9	5	16	6.4	64
YAKIMA	1052	974.9	1013.3	65	36	50.5	0.0	79	27	26	17	0	9	33	54	0.48	0.01	0.24	5	2	0.0	0	3.6	26	23	22	19+	5	10	15	7.1	
WEST INDIES																																
SAN JUAN P.R.	15	1013.9	1016.4	84	71	77.7	1.1	89	2	65	8	0	0	67	70	2.19	- 1.53	1.17	11	1	0.0	0	6.0	6	25	E	20+	9	17	4	4.6	80
SWAN ISLAND	28			85	77	80.9	- 0.6	88	30+	74	17+	0	0			T	- 0.84	T	0	0	0.0	0						15	13	2	4.1	
WEST VIRGINIA																																
BECKLEY	2504	927.5	1015.9	63	41	52.2		79	11	20	3	0	5	40	68	3.98	0.99	1.00	19	9	T	T	4.8	25	35	22	15+	2	7	21	7.9	
CHARLESTON	939	981.0	1015.3	68	43	55.1	- 0.2	81	21+	22	3	0	5	43	68	6.46	2.78	1.83	18	12	T	0	3.5	25	32	23	12	4	10	16	7.3	
ELKINS	1970	944.5	1015.9	62	37	49.2	- 1.0	75	8	17	3	0	9	39	74	6.90	3.42	1.24	18	9	0.2	T	4.4	28	39	30	12	2	9	19	7.9	
HUNTINGTON	827	985.4	1015.5	68	45	56.2	0.5	83	21	26	3	0	2	44	68	5.68	2.01	1.54	17	9	0.0	0	2.3	27	36	32	8	2	11	17	7.4	
PARKERSBURG U	615			65	42	53.7	- 0.4	79	30+	24	3	0	3			4.04	0.79	0.92	15	0	T	T			36	W	12					49
WISCONSIN																																
GREEN BAY	682	990.5	1016.7	49	32	40.4	- 2.8	77	29	15	2	0	13	33	78	3.62	1.16	1.27	15	1	5.5	5	2.4	5	31	N	23	3	9	18	7.7	35
LA CROSSE	651	991.2	1016.3	53	34	43.5	- 3.5	80	29	24	9	0	11			4.87	2.12	1.21	15	1	1.6	1	0.5	5	26	10	10	4	4	22	7.8	
MADISON	858	983.7	1015.6	54	33	43.7	- 0.7	75	30	27	27+	0	13	35	75	2.94	0.37	0.85	16	3	0.8	T	2.2	7	31	SW	11	4	5	21	7.6	37
MILWAUKEE	672	990.9	1016.6	50	35	42.7	- 0.9	71	29	29	3	0	8	35	77	3.47	0.94	0.81	13	3	4.1	2	3.0	3	37	SW	11	6	7	17	7.1	53
WYOMING																																
CASPER	5338	834.7	1012.5	57	34	45.8	2.7	75	30	26	18	0	14	26	52	0.96	- 0.73	0.44	11	0	7.3	3	7.0	25	44	23	13	3	11	16	7.5	
CHEYENNE	6126	809.7	1013.0	58	34	45.7	3.1	76	30	27	28+	0	16	24	50	0.57	- 1.31	0.26	8	1	2.5	2	7.7	29	57	W	17	7	6	17	6.5	68
LANDER	5563	826.3	1012.5	56	34	45.4	2.2	73	21	27	12+	0	10	26	52	1.60	- 0.85	0.51	9	1	14.2	6	3.8	26	52	SW	2	3	6	21	7.8	62
SHERIDAN	3964	876.4	1014.0	58	32	45.0	1.4	77	30	22	18+	0	16	31	62	0.65	- 1.51	0.33	10	0	3.7	1	4.9	31	46	SW	2	5	4	21	7.6	44

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.
A Maximum hourly average.
B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
ALABAMA																																
BIRMINGHAM	189	994.9	1017.2	24.4	11.7	18.2	0.9	30.6	9	3.3	29	0	0	12.8	73	65	- 49	14	8	7	0	0	0.9	24	21.9	W	12	10	5	15	6.3	51
HUNTSVILLE	183	993.9	1016.9	25.0	12.8	18.7	2.2	31.1	24	5.6	17	0	0	11.7	66	80	- 21	26	7	7	0	0	0.6	21	14.3	31	15	13	4	13	5.5	
MOBILE	64	1009.1	1016.8	27.8	16.1	21.9	2.1	32.2	12	10.0	29+	1	0	16.1	75	15	-146	13	3	2	0	0	1.3	19	10.7	2	19	5	15	10	6.0	
MONTGOMERY	59	1010.2	1017.4	26.1	13.3	19.7	1.9	30.0	24+	6.1	17	0	0	13.3	71	22	-102	10	5	5	0	0	0.8	24	12.1	S	19	8	6	16	6.4	52
ALASKA																																
ANCHORAGE PRK STRIP	26			7.2	- 0.6	3.3	1.3	15.6	16	- 6.7	12	0	19			4	- 7	2	6	0	30	T										
ANCHORAGE	44	1005.8	1010.8	8.3	0.0	4.3		16.7	16	- 3.9	13+	0	13	- 5.0	53	8		3	8	0	71	T	0.2	36	14.3	2	20	6	7	17	6.9	54
ANNETTE	34	1009.1	1013.1	10.0	2.2	5.9	-0.4	18.3	16	- 2.8	6	0	9	0.6	73	251	19	73	15	0	T	T	1.4	15	14.3	16	22	8	6	16	6.5	
BARROW	7	1014.9	1015.7	-12.2	-20.6	-16.6	1.1	2.2	13	-33.3	5	0	30	-19.4	76	17	14	4	15	0	224	432	0.6	32	16.5	27	13	5	10	15	7.0	
BARTER ISLAND	12	1013.9	1015.8	-11.1	-19.4	-15.3	2.0	1.7	14	-28.9	22	0	30	-16.7	85	5	1	2	9	0	53	508	1.8	26	19.7	27	11	7	9	14	6.6	
BETHEL	38	1008.5	1014.2	1.1	- 7.2	- 3.1	0.3	6.1	14	-18.9	11	0	29	- 6.7	77	16	2	9	8	0	109	178	1.3	28	17.0	18	13+	8	7	15	6.6	
COLD BAY	29	1011.2	1015.1	5.0	- 1.1	1.8	1.1	14.4	15	- 4.4	23	0	19	- 2.2	76	21	- 16	11	11	0	81	T	1.9	29	26.8	15	4	4	6	20	7.7	
FAIRBANKS	133	995.6	1013.1	3.9	- 5.6	- 0.6	0.8	13.3	26	-15.0	22	0	27	- 7.2	64	12	6	8	6	0	147	76	0.7	30	13.9	23	26+	3	4	23	8.1	
JUNEAU	4	1011.9	1012.8	8.3	- 1.7	3.2	-0.2	14.4	15	- 7.8	20	0	23	- 1.1	78	85	12	15	15	0	20	T	2.6	12	16.5	12	22	9	3	18	6.7	52
KING SALMON	13	1010.8	1012.7	3.9	- 5.0	- 0.4	-0.9	15.0	14	-12.2	12+	0	30	- 4.4	77	33	17	9	14	0	201	T	1.3	32	17.4	34	20	8	5	17	6.5	
KOTZEBUE	3	1012.9	1013.2	- 4.4	-14.4	- 9.7	0.8	2.2	13	-25.6	11+	0	30	-11.7	81	9	1	3	8	0	170	406	1.1	20	21.9	12	12	9	3	18	6.7	
MC GRATH	102	1000.3	1013.4	3.3	- 6.1	- 1.4	1.0	11.1	17	-19.4	12	0	29	- 6.7	68	28	16	13	12	0	307	102	0.8	29	11.6	3	20	5	5	20	7.3	
NOME	4	1011.5	1012.3	- 2.8	-10.6	- 6.4	-0.4	1.7	15+	-23.3	11	0	30	- 8.9	80	34	14	9	14	0	290	279	0.8	9	17.9	7	30	10	5	15	6.1	47
ST. PAUL ISLAND	7	1013.9	1014.8	1.1	- 3.9	- 1.3	0.7	5.6	18	-10.0	11	0	27	- 2.8	88	39	14	10	18	0	102	356	1.3	25	21.5	27	7	2	3	25	8.5	
SHEMYA	37	1009.8	1013.5	3.9	0.6	2.2	0.2	5.6	29+	- 2.2	15	0	12	- 0.6	85	34	- 19	9	14	0	97	51	2.4	22	29.5	20	12	1	2	27	9.1	
YAKUTAT	9	1009.8	1010.9	6.7	- 2.8	2.1	-0.7	14.4	16	- 7.2	1	0	27	- 1.1	81	294	111	88	14	0	361	178	1.3	11	19.7	12	3	2	10	18	7.6	
ARIZONA																																
FLAGSTAFF	2131	786.0	1015.5	11.7	- 3.9	4.0	-2.3	23.9	21	-17.8	13	0	27	- 4.4	64	143	113	37	12	1	1481	584	1.9	19	13.0	17	1	9	6	15	6.1	
PHOENIX	340	973.9	1012.8	25.0	10.0	17.4	-2.1	36.1	30	4.4	11	5	0	4.4	48	34	26	22	5	1	0	0	0.4	18	19.7Y	N	25	13	8	9	4.5	77
TUCSON	788	924.8	1012.0	26.1	10.0	18.1	-0.8	36.7	22+	2.8	11	6	0	- 2.8	30	6	- 1	6	2	0	0	0	1.3	23	14.8	NW	25	17	8	5	3.3	87
WINSLOW	1492	850.7	1014.5	20.6	2.2	11.6	-1.6	32.2	20	- 3.3	13+	1	9	- 3.3	45	11		7	5	2	5	T	2.6	22	18.3	17	12	11	12	7	4.7	
YUMA	59	1005.1	1012.5	28.3	13.3	20.9	-1.5	38.9	21	7.8	4	15	0	2.2	35	30	28	27	6	2	0	0	0.6	30	13.0	W	10	19	6	5	3.3	91
ARKANSAS																																
FORT SMITH	137	998.6	1015.2	26.1	10.0	18.0	1.5	33.3	22	1.1	29	4	0	10.0	65	50	- 58	14	7	8	0	0	0.1	1	16.1	W	14	10	12	8	5.2	70
LITTLE ROCK	78	1006.1	1015.5	26.1	11.7	18.8	1.9	32.2	22	3.3	29	1	0	12.2	68	30	- 95	17	6	2	0	0	0.9	22	15.2	NW	15	12	7	11	4.8	64
TEXARKANA	113	1002.7	1015.7	27.8	14.4	21.0	3.3	31.1	23+	4.4	29	0	0	12.8	63	27	-107	11	4	3	0	0	1.6	19				11	8	11	5.1	
CALIFORNIA																																
BAKERSFIELD	151	997.6	1015.2	22.8	10.6	16.6	-0.6	36.7	29	4.4	12+	4	0	6.7	57	42	21	13	9	1	0	0	0.8	36	10.3	27	9+	9	7	14	6.0	
BISHOP	1252			20.6	3.3	11.7	-1.1	30.6	21+	- 5.0	9	0	8			12	1	9	5	0	36	T						6	9	15	6.6	
BLUE CANYON	1609			9.4	2.2	5.8	-1.8	22.2	26	- 4.4	11	0	12			226	104	67	17	0	1036	914			14.3	18	16	4	9	17	7.6	
BURBANK	221	988.8	1014.4	21.7	9.4	15.4	-0.8	34.4	28	2.2	11+	3	0	7.8	67	144	113	47	11	2	0	0	1.5	16	9.8	13	8+	10	7	13	5.8	
EUREKA U	13			12.8	7.2	10.1	-0.2	20.6	19	3.3	3	0	0			142	74	45	14	0	0	0			15.6	NW	11	3	6	21	8.2	41
FRESNO	100	1003.4	1015.2	22.2	10.0	16.0	-0.3	35.0	28	5.6	12	5	0	8.3	67	44	15	13	8	2	0	0	0.2	5	11.6	NW	20	7	7	16	7.0	73
LONG BEACH	10	1013.9	1015.4	20.6	10.6	15.6	0.0	30.0	28+	6.7	12+	0	0	8.9	70	112	93	33	9	3	0	0	1.0	23	13.0	26	10	8	10	12	5.9	
LOS ANGELES	30	1011.2	1014.9	18.3	11.1	14.8	-0.4	26.1	25	6.1	11	0	0	9.4	74	115	88	33	9	4	0	0	1.5	25	17.4Y	S	1	7	9	14	6.2	
LOS ANGELES U	82			21.7	11.1	16.5	-0.1	33.3	28	5.0	11	1	0			153	123	52	9	0	0	0			13.9	W	10	11	10	9	5.1	52
MT SHASTA R	1080			12.2	2.8	7.4	-1.2	25.6	27	- 2.2	10+	0	11			205	135	72	19	0	366	76										
OAKLAND	2	1015.2	1015.5	16.7	10.6	13.4	-0.2	26.1	26	3.9	11	0	0	8.9	74	65	29	27	10	0	0	0	2.4	25	14.3	29	9	5	9	16	7.1	
RED BLUFF	104	1001.4	1014.0	20.6	10.0	15.1	-0.7	32.2	26	3.3	11+	1	0			100	54	38	15	2	0	0	1.7	17	18.8	S	15	6	6	18	7.3	52
SACRAMENTO	5	1013.9	1014.7	19.4	8.3	14.1	-0.6	31.1	26	2.8	11	0	0	8.9	75	69	33	26	12	0	0	0	1.8	19	12.1	SE	8	4	8	18	7.4	67
SANDBERG R	1377			11.7	3.3	7.7	-2.7	25.0	29	- 4.4	11	0	14			87	62	27	8	0	792	203						7	5	18	6.6	
SAN DIEGO	4	1014.2	1015.4	20.0	11.7	15.9	-0.4	27.2	20+	6.7	12	0	0	10.6	73	91	71	36	11	0	0	0	1.0	26	14.8	S	8	9	13	8	5.5	66
SAN FRANCISCO	2	1015.6	1016.1	16.1	8.9	12.5	-0.7	28.3	26	3.9	11+	0	0	7.8	78	88	55	26	12	1	0	0	2.9	27	16.5	W	9	6	7	17	7.1	
SAN FRANCISCO U	16			16.1	10.0	13.2	0.0	29.4	26	6.1	9	0	0			82	45	25	12	0	0	0			17.0	W	9					54
SANTA CATALINA	478			18.3	11.1	14.7	0.9	31.7	29+	5.0	12+	0	0			116	85	41	10	2	0	0						9	8	13	5.8	
SANTA MARIA	72			18.9	7.2	12.9	-0.2	28.3	26	0.6	11	0	0			87	57	34	12	0	0	0						7	8	15	6.4	
STOCKTON	7	1014.6	1015.6	21.7	9.4	15.4	0.0	33.9	27	2.2	11	2	0	8.9	71	53	24	16	13	0	0	0	1.1	26	12.5	15	8	5	5	20	7.5	
COLORADO																																
ALAMOSA	2297			14.4	- 3.3	5.4	0.0	23.9	22+	-10.6	12	0	27			9	- 8	3	9	0	114	T						9	11	10	5.4	
COLORADO SPRINGS	1873	808.7	1012.7	16.1	2.2	9.1	1.5	25.6	22	- 2.2	10+	0	9	- 5.0	45	41	8	25	5	1	56	T	0.7	22	19.2	30	8	6	9	15	6.7	
DENVER	1610	834.1	1011.3	18.3	2.8	10.7	2.7	28.9	22	- 3.9	14	0	4	- 3.3	47	27	- 27	12	8	0	8	T	0.8	21	13.4	SW	9	6	10	14	6.3	65
GRAND JUNCTION	1480	850.3	1012.6	18.9	5.6	12.2	0.9	28.9	22+	- 0.6	14	0	5	- 1.1	47	50	30	34	9	1	5	T	1.1	14	17.0	W	1	5	6	19	7.4	52
PUEBLO	1428	853.7	1012.3	21.1	3.3	12.1	1.7	31.1	22	- 3.3	12	0	5	- 2.8	41	37	7	25	5	0	0	0	1.1	28	19.7	SW	9	8	10	12	5.9	70

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
CONNECTICUT																																
BRIDGEPORT	2	1015.2	1015.7	12.8	3.3	8.1	-0.8	21.7	30	-4.4	1	0	3	0.6	66	69	-28	32	12	1	33	T	1.7	31	14.8	31	16	5	11	14	6.6	
HARTFORD	52	1007.8	1014.5	14.4	2.8	8.6	-0.6	27.2	30	-5.6	1	0	8	-2.2	53	54	-40	21	6	1	43	T	1.4	30	11.6	NW	13	5	9	16	6.9	62
NEW HAVEN	2			12.8	2.8	7.7	-0.6	22.2	30	-4.4	1	0	6			81	-18	29	13	0	33	T			13.4	W	13+	5	9	16	6.5	60
DELAWARE																																
WILMINGTON	24	1012.5	1015.7	15.0	4.4	9.6	-1.6	26.1	30	-5.6	1	0	5	1.7	63	45	-40	11	11	0	15	T	1.1	30	17.0	24	12	5	10	15	6.7	
DIST.OF COLUMBIA																																
WASH NATL AP	4	1013.9	1016.2	16.7	5.6	11.0	-2.2	28.3	12	-1.1	1	0	4	3.3	64	42	-38	13	13	0	0	0	0.6	31	17.9	NW	13	8	5	17	6.6	50
FLORIDA																																
APALACHICOLA U	4			25.0	17.8	21.4	1.7	28.9	16+	11.7	2	0	0			64	-46	20	6	4	0	0			11.6	NW	19	10	13	7	5.2	67
DAYTONA BEACH	9	1016.9	1018.1	27.2	16.1	21.6	1.1	33.3	12	11.1	30	1	0	16.1	75	25	-50	22	3	3	0	0	0.3	9	11.2	26	16	8	13	9	5.7	
FORT MYERS	5	1017.3	1017.7	30.0	17.8	23.8	1.1	33.3	14	12.8	3	1	0	17.2	71	61	-6	38	5	3	0	0	0.4	27	11.2	15	25+	12	15	3	4.3	
JACKSONVILLE	7	1016.6	1017.7	27.8	16.1	21.8	1.4	33.3	12	9.4	1	3	0	14.4	67	24	-66	17	7	2	0	0	0.6	25	20.1	NW	19	6	16	8	5.7	69
KEY WEST	1	1016.6	1017.2	29.4	24.4	26.8	2.5	31.7	28	22.2	30+	0	0	20.0	67	16	-47	13	3	1	0	0	2.6	9	11.2	NE	30	21	3	6	3.8	87
LAKELAND U	65			29.4	17.8	23.4	1.5	32.8	11	12.2	2	1	0			89	0	60	6	0	0	0						13	10	7	4.6	83
MIAMI	2	1017.3	1017.6	29.4	20.0	24.8	1.4	33.9	16	15.0	3	3	0	17.8	67	30	-68	28	3	0	0	0	1.3	11	10.3	33	27+	12	13	5	4.8	
ORLANDO	33	1013.5	1017.9	30.0	17.8	23.8	2.0	33.9	12	11.1	2	4	0	16.1	70	17	-70	9	5	4	0	0	0.2	28	10.3	8	21	11	12	7	5.3	
PENSACOLA	34	1013.5	1017.6	26.1	16.7	21.3	1.3	30.6	13+	9.4	17	0	0	16.7	78	40	-93	27	5	0	0	0	1.4	19	16.5	NW	19					70
TALLAHASSEE	18	1015.6	1017.9	27.8	13.9	20.8	1.1	33.3	12	4.4	18+	2	0	13.9	71	181	64	73	7	8	0	0	0.3	25	10.3	30	19	4	18	8	5.9	
TAMPA	6	1017.6	1017.9	28.9	16.1	22.6	0.7	32.2	14	8.9	30	1	0	16.1	73	28	-44	12	5	3	0	0	0.7	27	11.2	15	25	13	9	8	4.9	75
WEST PALM BEACH	5	1016.9	1017.6	30.0	18.3	24.2	0.9	33.9	16	13.3	3+	4	0	16.7	65	13	-97	12	3	1	0	0	1.2	12	10.7	4	29	14	12	4	4.0	
GEORGIA																																
ATHENS	244	987.8	1016.8	23.9	10.6	17.2	1.1	31.7	23	3.3	17+	0	0	11.1	73	118	7	58	11	9	0	0	1.3	26	11.2	24	12	11	6	13	5.6	
ATLANTA	308	980.4	1017.2	23.3	11.7	17.4	1.7	30.6	24	3.9	2+	0	0	10.6	70	79	-35	26	9	6	0	0	1.1	25	12.5	W	27+	12	2	16	5.8	62
AUGUSTA	44	1011.2	1016.5	25.6	11.1	18.3	1.0	33.3	24	4.4	14	1	0	11.7	71	56	-34	18	11	8	0	0	0.9	24	14.3	16	24	10	4	16	5.9	
COLUMBUS	117			27.2	12.8	20.1	2.4	32.8	24	5.0	17+	1	0	12.8	69	27	-89	7	8	0	0	0	0.6	26	10.3	32	12	9	5	16	6.3	
MACON	108	1004.7	1017.8	25.6	12.2	19.0	0.3	32.8	24	5.0	17+	1	0	12.8	73	89	-7	21	11	9	0	0	0.8	25	13.4	NW	26+	9	5	16	6.2	54
ROME	194			25.0	10.0	17.4	2.0	32.2	24	1.7	17	1	0			102	-14	24	12	0	0	0										
SAVANNAH	14	1015.6	1017.4	25.6	12.8	19.1	0.4	31.1	24+	6.7	30+	0	0	12.8	71	35	-59	18	5	2	0	0	0.8	23	11.6	NW	16	11	7	12	5.7	63
HAWAII																																
HILO	9	1015.2	1016.4	26.7	18.3	22.4	0.4	29.4	24+	16.7	11+	0	0	18.3	80	470	167	177	22	2	0	0	0.9	18	12.5	14	12	0	10	20	8.3	29
HONOLULU	2	1015.6	1016.1	27.2	20.6	23.9	0.4	29.4	26	16.7	16	0	0	17.8	70	38	4	14	10	1	0	0	1.9	7	11.6	NE	8+	2	9	19	7.5	78
KAHULUI	15	1013.2	1015.7	27.2	17.8	22.6	-0.4	30.0	22	15.0	16+	0	0			27	-9	15	7	1	0	0	2.4	6	13.4	E	5	3	13	14	7.0	69
LIHUE	35	1011.5	1016.7	25.6	18.9	22.1	-0.4	28.3	24+	15.6	17+	0	0	18.3	83	181	96	64	18	4	0	0	2.0	7	12.1	E	5	1	11	18	7.7	37
IDAHO																																
BOISE	865	913.0	1012.8	16.1	3.9	10.1	-0.1	24.4	29+	-0.6	12+	0	6	2.8	65	71	42	18	12	1	33	T	1.2	13	13.0	NW	28	7	2	21	7.4	57
IDAHO FALLS 42NW R	1460			13.9	-0.6	6.6	0.4	22.2	29	-6.1	13	0	18			46	34	11	12	0			1.2	22	15.6	SW	19					
IDAHO FALLS 46W R	1503			13.9	0.0	6.8	0.6	21.7	29	-4.4	18+	0	18			39	26	10	12	0	79	T	1.9	22	18.8	SSW	20					
LEWISTON	431			17.2	5.0	11.2	0.7	25.6	27	-1.1	7	0	2			49	20	13	13	0	T	T						6	6	18	6.9	
POCATELLO	1358	860.5	1013.4	14.4	1.7	8.2	0.2	22.2	29	-3.9	4	0	14	0.6	65	42	15	8	16	3	30	T	2.2	22	20.6	SW	22	2	7	21	8.0	47
ILLINOIS																																
CAIRO U	96			21.7	11.7	16.8	1.6	31.7	23	5.6	3+	0	0			122	19	41	9	0	0	0			15.6	SW	11	10	6	14	5.8	59
CHICAGO O HARE	201	990.9	1015.7	12.8	3.3	8.1	-0.3	23.9	11	-2.2	3	0	4	2.2	70	88	14	23	15	7	T	T	1.1	7	24.1	24	11	3	9	18	7.4	
CHICAGO MIDWAY	185	992.9		13.3	3.9	8.7	-0.7	25.6	11	-1.7	3	0	2	2.2	68	107	30	31	11	4	T	T	0.9	6	19.2	SW	11	4	9	17	7.2	50
MOLINE	177	992.9	1014.6	15.0	4.4	9.6	-0.4	27.2	30	-1.1	3	0	3	5.0	77	201	121	59	14	5	0	0	0.7	6	19.7	SW	11	2	11	17	7.5	42
PEORIA	199	990.9	1015.0	16.1	5.0	10.5	0.1	27.8	30	-0.6	2	0	1	6.1	77	142	41	43	13	9	0	0	0.4	8	18.8	SW	11	4	8	18	7.5	45
ROCKFORD	221	987.8	1015.2	12.8	2.2	7.6	-1.2	22.8	30	-1.7	3	0	7	2.8	76	117	40	28	14	5	T	T	1.1	7	17.9	24	11	5	10	15	7.1	
SPRINGFIELD	179	992.2	1014.5	18.3	6.7	12.6	0.7	30.6	30	0.0	2	0	1	6.7	72	117	25	34	10	9	T	T	0.7	22	16.1	W	11	6	8	16	7.0	43
INDIANA																																
EVANSVILLE	116	1001.7	1015.9	20.6	8.3	14.2	-0.1	30.6	23+	0.0	1	0	1	8.9	72	75	-26	18	11	5	0	0	1.0	24	13.0	NW	15	5	9	16	7.0	50
FORT WAYNE	241	985.4	1015.9	14.4	3.3	8.9	-0.7	26.1	30	-4.4	3	0	7			105	25	37	14	7	10	T	0.6	2	15.2	SW	11	4	8	18	7.4	51
INDIANAPOLIS	241	986.1	1015.4	17.8	7.2	12.4	2.0	27.8	23	-1.7	3+	0	3	5.6	65	147	52	44	13	8	T	T	0.3	23	21.0	W	11	3	5	22	8.0	50
SOUTH BEND	236	987.1	1015.5	13.9	2.8	8.3	-0.3	23.9	30	-4.4	3	0	6	2.2	68	124	33	28	13	6	10	T	0.4	9	12.1	27	11	6	6	18	7.2	
IOWA																																
BURLINGTON	212			16.1	5.0	10.4	0.0	30.0	30	-0.6	2	0	2	7.[illegible]	82	189	102		14	7	0	0	0.6	36	17.0	23	11	4	8	18	7.2	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station ∅	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	°C.		°C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
IOWA																																
DES MOINES	286	979.3	1014.6	14.4	3.3	8.9	-0.3	31.1	30	- 3.9	16	0	5	4.4	78	106	42	32	12	5	0	0	1.0	6	34.0	W	23	3	8	19	7.7	46
DUBUQUE	325			12.2	2.8	7.4	-0.8	26.1	30	- 2.2	3+	0	6			176	98	48	15	0	T	51						3	5	22	8.0	
SIOUX CITY	334	974.3	1014.2	16.7	3.3	10.1	0.7	33.9	30	- 1.7	16	1	6	3.9	70	63	6	26	14	7	25	T	0.8	5	17.0	NW	15	4	11	15	7.0	48
WATERLOO	265	982.4	1014.6	12.2	1.1	6.8	-1.7	27.2	30	- 5.6	19	0	12	3.3	81	122	54	44	13	6	0	T	0.9	6				2	7	21	7.9	
KANSAS																																
CONCORDIA	448	960.0	1012.9	19.4	6.7	13.0	1.4	33.3	30	- 1.7	28	1	1	5.0	64	34	- 20	14	8	7	0	0	0.1	14	20.1	NW	15	8	7	15	6.5	56
DODGE CITY	787	922.5	1012.8	22.2	6.7	14.4	2.4	32.8	22	- 1.1	28	1	2	3.3	55	16	- 31	7	4	6	0	0	0.4	21	16.1	SE	9	7	6	17	6.5	71
GOODLAND	1111	886.2	1012.6	21.1	2.8	11.8	2.8	32.2	30	- 4.4	25	1	8	- 2.2	47	3	- 38	3	1	1	0	0	0.5	24	19.2	16	9	8	5	17	6.2	
TOPEKA	267	981.7	1013.6	20.6	7.2	14.0	1.6	31.1	23+	- 1.1	28	0	1	7.2	66	59	- 25	23	10	10	0	0	0.7	23	20.1	SW	11	9	5	16	6.6	59
WICHITA	403	965.8	1013.2	22.2	9.4	15.8	2.1	31.1	22	0.0	28	0	1	8.3	66	67	8	27	10	9	0	0	1.0	18	17.0	W	11	7	6	17	6.5	65
KENTUCKY																																
COVINGTON	265	983.7	1015.5	18.3	5.6	11.8	0.6	26.7	30+	- 2.8	3	0	4	4.4	65	124	43	23	16	11	T	0	0.7	26	13.0	29	12+	6	3	21	7.4	
LEXINGTON	294	980.7	1016.1	19.4	7.2	13.3	0.8	27.8	23	- 1.7	3	0	3	6.1	64	82	- 20	21	17	9	0	0	1.3	20	13.0	24	12+	7	9	14	6.6	
LOUISVILLE	144	998.0	1015.4	21.1	8.3	14.6	1.9	29.4	23+	- 0.6	3	0	2	7.2	64	83	- 14	22	12	9	0	0	1.3	29	13.0	SW	11+	4	9	17	7.2	61
LOUISIANA																																
ALEXANDRIA	28	1012.5	1016.7	27.2	13.9	20.5	1.7	29.4	25+	3.9	30	0	0	15.0	75	7	-137	4	4	2	0	0	1.0	18	8.0	35	15	10	6	14	6.0	
BATON ROUGE	20	1014.2	1017.0	28.3	16.1	22.2	2.1	31.7	11	7.8	30	0	0	16.1	74	37	- 84	37	1	1	0	0	1.2	16	10.3	31	19	6	8	16	6.5	
LAKE CHARLES	4	1015.2	1016.4	27.8	16.7	22.1	2.2	33.3	19	8.3	29	1	0	16.7	77	24	- 87	18	2	4	0	0	1.9	17	15.6	28	19	6	9	15	6.4	
NEW ORLEANS	1	1015.9	1016.8	26.7	16.1	21.6	1.7	29.4	19	7.8	30	0	0	16.7	77	8	-107	6	3	2	0	0	1.3	14	11.2	20	15	6	14	10	5.8	
SHREVEPORT	77	1006.1	1015.3	27.2	15.0	21.2	2.7	31.1	10+	6.7	1	0	0	14.4	70	29	- 87	13	5	4	0	0	2.0	18	13.0	29	26	11	7	12	5.5	58
MAINE																																
CARIBOU	190			7.8	- 2.2	2.8	0.3	15.6	30	- 8.9	1	0	23			28	- 39	10	9	0	102	51						7	8	15	6.3	
PORTLAND	19	1011.9	1014.1	11.1	- 1.1	5.1	-0.8	20.6	30	-11.1	1	0	18	- 2.8	62	74	- 20	29	13	0	66	51	0.8	28	11.2	NW	4	9	8	13	6.0	65
MARYLAND																																
BALTIMORE	45	1010.2	1015.8	16.1	4.4	10.2	-2.2	27.2	12	- 6.7	4	0	5	1.7	61	44	- 48	12	16	1	0	0	1.1	31	18.3	NW	13	8	6	16	6.7	48
MASSACHUSETTS																																
BLUE HILL OBS R	192			11.1	1.1	6.3	-1.3	24.4	30	- 7.8	1	0	11			67	- 35	19	11	0	94	76			20.1	S	16					55
BOSTON	5	1013.2	1014.1	11.1	2.2	6.8	-2.1	24.4	30	- 5.6	1	0	2	- 0.6	68	59	- 37	15	12	0	41	51	1.0	30	11.6	SW	25+	9	6	15	6.1	60
NANTUCKET	13	1013.9	1014.3	8.3	1.7	5.1	-1.7	15.6	30	- 3.9	1	0	9	0.6	75	82	- 14	35	14	1	13	T	0.9	32	15.6	S	16	9	7	14	6.3	56
PITTSFIELD	357			10.6	- 0.6	4.9	-1.2	22.8	30	-10.0	1	0	17			75	- 23	18	10	0	109	102										
WORCESTER	301	977.0	1014.2	11.1	1.1	6.1	-0.9	23.3	30	-10.0	1	0	9	- 3.3	57	90	- 9	27	13	0	170	127	2.4	30	12.5	27	17	7	8	15	6.2	
MICHIGAN																																
ALPENA	210			7.8	- 3.3	2.2	-1.8	22.2	29	-17.8	2	0	23			87	20	30	11	0	173	152			11.6	SE	6	8	5	17	6.7	57
DETROIT	189	993.2	1016.3	12.2	2.2	7.2	-1.5	21.7	29	- 5.6	3	0	7	0.0	66	77	1	41	10	1	61	51	1.0	1	24.6	W	12	4	4	22	7.6	47
DETROIT M WAYNE CO	193	991.9	1016.2	12.8	1.7	7.3	-1.2	23.9	30	- 5.6	3	0	10	0.6	66	84	6	50	9	1	64	51	0.9	2				5	4	21	7.5	
DETROIT WILLOW RUN	217	987.8	1016.5	12.2	0.6	6.4	-2.3	21.7	30+	- 7.8	3	0	10	- 0.6	65	76	- 2	44	9	1	56	51	0.8	36	14.3	27	12	5	5	20	7.3	
FLINT	235	987.8	1016.3	11.1	0.6	6.1	-0.4	23.3	30	-10.6	3	0	11	0.0	69	43	- 25	14	12	1	147	102	0.4	5	17.9	22	11	4	9	17	7.3	
GRAND RAPIDS	239	986.5	1016.2	11.1	0.6	6.0		24.4	30	-12.2	3	0	13	0.6	72	63		16	12	1	137	152	0.8	6	21.5	SW	12	6	7	17	6.9	47
HOUGHTON LAKE	351	974.3	1017.0	8.9	- 2.2	3.3		21.1	30	-15.0	3+	0	22	- 2.8	70	72		15	12	1	274	152	0.1	3	9.4	30	12	6	5	19	7.5	
LANSING	256	984.1	1016.3	11.7	0.0	5.8	-1.8	23.3	11	-16.7	3	0	13	1.7	78	52	- 21	14	9	1	168	203	0.3	6	21.0	W	12	5	9	16	7.0	46
MARQUETTE U	206			7.8	- 0.6	3.4	-0.6	28.3	29	- 8.9	3	0	20			36	- 32	9	12	0	74	838			13.0	SW	19	5	3	22	7.5	55
MUSKEGON	191	992.6	1015.9	11.7	2.2	6.9	-0.4	21.7	30	- 8.9	3	0	7	0.0	66	73	7	28	10	2	155	127	0.8	9	17.0	23	11	7	6	17	6.6	
SAULT STE MARIE	220	989.8	1017.0	6.7	- 2.2	2.2	-1.1	18.9	29	-10.6	3+	0	25	- 3.3	71	34	- 21	10	9	0	196	254	0.3	31	13.0	23	19	6	7	17	7.1	57
MINNESOTA																																
DULUTH	435	964.1	1016.8	8.3	- 1.7	3.3	0.6	28.3	29	- 7.2	2	0	25	- 3.3	68	42	- 18	14	13	0	41	1041	0.8	6	16.1	NW	15+	3	8	19	7.9	48
INTERNATIONAL FALLS	359	972.6	1016.7	8.9	- 1.7	3.4	0.4	26.7	29	- 7.2	2	0	25	- 2.8	68	35	- 5	16	9	1	127	559	0.2	35	13.4	30	29	4	7	19	7.5	
MINNEAPOLIS	254	985.1	1015.9	10.0	1.1	5.4	-1.4	24.4	29	- 3.3	28	0	14	1.1	78	89	42	20	16	4	51	203	1.2	6	13.4	NW	15	4	6	20	7.9	36
ROCHESTER	395	967.2	1015.7	9.4	1.7	5.5	-1.2	23.9	30	- 3.3	28	0	9	1.7	79	100	44	24	19	5	132	76	0.8	10	15.6	14	10	5	6	19	7.5	
ST CLOUD	315	977.3	1016.0	9.4	0.0	4.8	-1.2	28.9	29	- 5.0	2	0	18		73	87	36	29	11	0	155	686						1	8	21	8.2	
MISSISSIPPI																																
JACKSON	94	1005.1	1017.0	27.2	12.8	19.9		31.7	24	3.3	30	0	0	13.9	73	32	- 87	21	6	3	0	0	1.5	18	11.6	N	15	8	6	16	6.0	
MERIDIAN	88	1006.4	1017.4	27.2	12.2	19.8	1.8	31.1	24	2.8	17	0	0	13.9	73	42	- 93	19	7	7	0	0	0.9	21	8.9	32	26+	8	5	17	6.2	
VICKSBURG U	71			26.1	16.1	21.1	2.4	30.0	24+	10.0	29	0	0			29	- 96	24	5	0	0	0			13.4	NW	26	11	3	16	5.6	73

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
MISSOURI																																
COLUMBIA	237	985.8	1013.9	20.6	8.3	14.7	2.1	32.8	22	1.1	16	2	0	6.1	62	114	30	36	8	8	0	0	1.1	25	22.4	SW	11	8	6	16	6.5	54
KANSAS CITY	226	986.5	1013.4	21.1	8.3	14.7	1.6	32.2	23+	0.0	16	2	1	6.1	61	56	-34	19	8	6	0	0	0.8	20	15.2	SW	11+	9	3	18	6.5	63
ST JOSEPH	247			21.1	6.1	13.5	1.5	32.2	22	-2.2	28	1	1			55	-25	13	10	9	0	0	0.3	20	15.6	23	11	8	5	17	6.6	
ST LOUIS	163	994.6	1015.0	20.6	8.3	14.7	1.9	32.2	23	1.7	2	1	0	6.1	62	93	-1	30	10	6	0	0	1.1	26	17.0	SW	5	6	9	15	6.5	54
SPRINGFIELD	386	969.5	1014.7	22.8	8.3	15.6	2.5	31.1	23	1.1	27	0	0	8.9	69	188	84	74	9	10	0	0	1.7	19	29.1	SW	5	10	11	9	5.7	67
MONTANA																																
BILLINGS	1087	888.9	1013.6	13.9	1.7	7.7	-0.1	25.0	30	-5.0	4	0	14	0.6	68	30	-3	15	14	1	86	T	1.4	33	17.4	NW	20	3	6	21	7.7	50
GLASGOW	696			10.6	0.6	5.4	-0.9	27.2	28	-7.2	1	0	15			13	-13	9	6	0	79	229						2	4	24	8.3	
GREAT FALLS	1116	885.9	1014.6	12.8	1.1	7.1	0.6	24.4	28	-3.9	16	0	13	0.6	68	64	39	15	14	2	292	102	1.6	25	15.2	SW	28	5	5	20	7.2	67
HAVRE	787			10.6	-0.6	5.1	-1.1	25.0	28	-10.0	4	0	18			28	4	12	9	0	163	51			14.3	E	9	2	9	19	7.5	57
HELENA	1167	878.8	1014.6	13.9	0.0	6.9	0.6	24.4	28	-6.1	18	0	19	-0.6	65	25	4	13	13	1	160	102	1.8	29	17.0	W	30	2	9	19	7.7	55
KALISPELL	904	908.9	1014.2	12.8	0.0	6.4	-0.1	19.4	28	-5.0	18	0	18	-0.6	63	37	10	14	12	1	102	76	0.4	11	15.6	16	9	5	5	20	7.3	
MILES CITY	801	920.4	1014.3	13.3	1.1	7.0	-0.6	26.7	30	-5.6	17	0	14	1.7	75	54	27		14	2	102		1.1	34								
MISSOULA	972	902.1	1014.9	13.9	0.6	7.1	0.2	20.6	27	-3.9	18+	0	20	1.1	73	43	18	12	13	2	102	T	0.8	32	18.3	S	9	5	6	19	7.3	47
NEBRASKA																																
GRAND ISLAND	561	947.5	1013.9	17.2	3.9	10.7	0.9	33.3	30	-3.3	28	1	5	2.8	65	55	-3	20	9	7	0	0	0.6	36	13.4	34	15+	6	7	17	6.9	
LINCOLN U	351			17.2	5.6	11.4	0.4	32.2	30	0.0	28	1	1			94	31	43	11	0	0	0			15.2	SE	16					
NORFOLK	471			16.1	2.8	9.6	0.5	34.4	30	-3.9	28	2	7			26	-29	6	11	0	5	T						3	10	17	7.0	
NORTH PLATTE	846	914.3	1012.2	18.9	2.8	10.8	2.1	32.2	30	-6.1	28	1	6	1.7	62	36	-15	31	4	5	T	T	1.0	36	19.2	SE	9	8	7	15	6.5	60
OMAHA	298	978.3	1014.0	18.3	5.6	11.8	0.8	33.9	30	0.0	28	1	1	5.6	70	94	29	34	9	5	0	0	0.6	4	18.8	W	8	3	11	16	7.3	43
SCOTTSBLUFF	1206	877.1	1012.8	18.9	2.2	10.6	2.5	30.6	30	-2.2	1	0	5	-0.6	56	18	-28	13	6	4	51	T	1.5	31	20.6	27	17	7	9	14	6.4	
VALENTINE	789			16.1	1.7	9.0	1.4	33.3	30	-2.2	27	1	10			34	-17	15	7	0	T	0			17.0	SE	10+	5	12	13	6.6	55
NEVADA																																
ELKO	1539	842.2	1013.4	14.4	0.0	7.2	0.3	23.3	29+	-5.6	17+	0	14	0.0	64	46	25	15	13	3	196	76	1.0	23	13.4	22	5	2	7	21	8.0	
ELY	1906	806.0	1012.5	12.8	-1.7	5.5	-0.4	23.3	30	-9.4	10	0	22	-3.9	57	19	-5	4	14	2	173	51	2.7	19	15.2	S	8	3	4	23	7.9	68
LAS VEGAS	659	936.7	1012.9	22.2	10.6	16.2	-1.8	33.9	30	1.7	13+	4	0	0.6	42	62	56	25	8	1	0	0	2.0	22	16.5	SW	1	11	8	11	5.4	73
RENO	1342	863.5	1012.7	18.3	1.1	9.8	0.9	27.8	28	-5.6	7	0	15	-1.1	50	7	-7	3	6	0	T	T	1.3	22	14.3	SW	20+	2	8	20	7.7	89
WINNEMUCCA	1310	864.9	1012.7	16.1	1.7	8.8	1.1	27.2	28	-5.0	17	0	17	-1.1	55	24	3	8	11	1	84	T	0.8	24	15.6	W	28	4	7	19	7.3	43
NEW HAMPSHIRE																																
CONCORD	103	1001.4	1014.3	12.2	-1.7	5.2	-1.4	25.0	30	-7.8	25	0	21	-3.3	60	63	-21	19	11	0	33	T	1.1	29	12.5	NW	30	9	9	12	5.9	69
MT WASHINGTON OBS	1909			-4.4	-11.1	-7.7	-2.7	2.8	30	-21.7	1	0	30			101	-49	31	14	0	592	305			38.9Y	W	17	7	11	12	6.5	47
NEW JERSEY																																
ATLANTIC CITY	20	1013.5	1016.0	15.6	3.3	9.3	-1.3	29.4	12	-4.4	1	0	6	1.7	66	51	-36	13	11	1	81	51	0.9	30	15.6	30	13+	4	10	16	6.9	40
ATLANTIC CITY U	3			12.8	5.6	9.1	-0.9	26.1	12	-2.2	1	0	4			58	-27	17	11	0					19.2	NW	13					
NEWARK	3	1014.6	1015.5	14.4	5.6	10.0	-1.3	27.2	30	-1.1	1	0	1	0.0	58	66	-23	20	11	2	18	T	1.7	32	17.9	33	13	5	11	14	6.7	
TRENTON U	17			14.4	5.0	9.7	-1.3	26.7	30	-2.2	1	0	4			73	-9	16	13	0	64	51			16.5	NW	12	7	7	16	6.4	52
NEW MEXICO																																
ALBUQUERQUE	1618	836.8	1012.6	21.1	4.4	12.7	-0.5	31.7	22	-2.8	11	0	4	-5.6	35	12	1	9	4	1	T	0	0.8	23	25.0	SW	10	13	10	7	4.5	72
CLAYTON	1515			21.1	4.4	12.8	2.4	32.8	22	-2.2	12	1	3			16	-14	14	3	0	T	0						10	9	11	5.7	
RATON	1944			18.3	0.0	9.1	0.8	30.6	22	-5.6	11+	0	16			28	2	17	2	0	112	T						7	10	13	5.8	
ROSWELL	1102			27.2	6.1	16.7	1.7	38.3	22	1.1	16+	5	0			10	-9	10	1	1	0	0			15.6	22	9	14	10	6	4.4	79
SILVER CITY	1638			22.2	3.9	13.0	-0.6	32.2	22	-1.1	6	1	6			0	-7	0	0	0	0	0						16	8	6	3.6	
NEW YORK																																
ALBANY	84	1004.4	1015.2	11.7	-0.6	5.7	-2.2	23.3	30	-12.2	1	0	17	-2.2	61	60	-10	18	10	1	53	102	1.5	29	15.2	NW	12	5	9	16	7.1	56
BINGHAMTON	485	955.6	1015.3	9.4	0.0	4.6	-1.8	22.2	30	-7.2	1	0	13	-1.1	70	73	-2	21	15	2	323	178	1.8	31	18.8	W	12	4	6	20	7.7	46
BUFFALO	215	989.8	1015.9	10.0	0.6	5.1	-1.3	16.7	21+	-5.6	1	0	11	0.0	73	51	-26	12	16	3	107	51	1.1	25	19.2	SW	12	6	5	19	7.5	46
NEW YORK U	40	1012.5	1015.7	15.0	5.6	10.3	-0.4	26.7	30	-1.7	1	0	1	-0.6	54	74	-13	22	11	1	30	T	1.0	31	13.0	NW	13	9	11	10	5.7	58
J.F. KENNEDY	5	1014.6	1015.4	13.9	4.4	9.1	-0.4	25.0	30	-2.8	1	0	4	0.6	63	81	-8	18	14	2	36	T	0.7	30	13.0	31	12	5	11	14	6.5	
NEW YORK LA GUARDIA	3	1013.5	1015.4	14.4	6.7	10.4	-0.3	25.0	30	0.0	1	0	1	1.1	59	70	-21	23	13	2	18	T	1.1	32	16.5	NW	12	5	12	13	6.6	
ROCHESTER	167	996.3	1016.8	10.0	0.6	5.2	-2.1	20.0	30	-6.7	1	0	11	0.0	72	47	-21	13	12	3	48	T	1.5	27	17.0	SW	12	5	7	18	7.0	47
SYRACUSE	127	1000.3	1015.6	11.1	0.6	5.7	-2.1	21.1	30	-8.9	1	0	13	-1.1	65	90	11	35	14	1	119	T	1.8	30	17.9	W	12	5	8	17	6.6	47
NORTH CAROLINA																																
ASHEVILLE	652	940.7	1016.7	21.1	7.2	14.1		28.9	23	-1.1	3	0	1	7.8	73	67		28	11	7	0	0	0.8	35	14.3	35	13	9	8	13	5.8	67
CAPE HATTERAS R	2	1015.9	1016.4	17.8	7.8	12.8	-2.4	25.0	9	0.6	11+	0	0	8.3	75	30	-45	12	9	5	0	0	0.8	35	13.9	NNE	2	9	7	14	6.1	75
CHARLOTTE	224	989.2	1016.4	22.8	11.1	16.9	1.2	31.1	23+	1.7	3	0	0	8.9	67	84	-4	26	9	4	0	0	0.8	26	11.6	S	15+	8	6	16	6.2	65

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		°C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
NORTH CAROLINA																																
GREENSBORO	273	984.4	1016.2	21.1	8.3	14.8	0.7	32.2	23	- 1.1	3	1	2	7.8	68	78	- 9	48	8	4	0	0	1.0	26	14.3	NW	12	8	7	15	6.6	52
RALEIGH	132	1000.3	1016.1	21.7	7.8	14.6	-0.6	31.7	23	- 2.2	3	0	2	6.7	65	38	- 51	11	9	6	0	0	1.0	26	13.4	36	29	6	11	13	6.4	58
WILMINGTON	9	1015.6	1016.9	22.8	11.1	16.9	-0.1	31.1	23+	3.3	3	0	0	9.4	66	61	- 12	18	12	6	0	0	1.0	26	16.5	W	12	8	8	14	5.9	67
NORTH DAKOTA																																
BISMARCK	502	955.0	1015.5	10.6	0.6	5.6	-0.8	26.7	28	- 5.6	27	0	18	- 0.6	71	48	17	14	17	1	183	76	0.8	4	14.8	E	2	3	4	23	8.1	38
FARGO	273	982.7	1016.2	10.0	0.6	5.3	-0.2	28.9	29	- 3.3	27+	0	16	1.1	78	77	34	34	9	1	64	51	0.6	7	15.2	N	26	3	7	20	8.0	
WILLISTON	579			10.6	- 0.6	4.9	-0.8	27.2	28	- 6.1	27	0	25			25	1	13	8	0	41	203			16.5	W	18	2	5	23	8.2	43
OHIO																																
AKRON	368	971.2	1016.0	15.0	2.2	8.5	-0.8	23.3	30+	- 8.9	3	0	11	1.7	67	40	- 45	9	13	6	T	T	0.7	32	17.9	30	7	3	7	20	7.5	
CINCINNATI OBS	232			18.9	7.2	12.9	0.6	28.3	30	- 3.3	3	0	3			151	59	27	11	0	T	T			15.2	W	8					52
CLEVELAND	237	986.8	1016.2	12.8	2.2	7.6	-0.6	23.9	21	- 6.1	3	0	8	1.1	68	46	- 40	14	14	3	10	T	0.7	31	16.1	S	11	5	6	19	7.4	47
COLUMBUS	247	986.1	1016.3	17.2	4.4	10.8	0.3	26.7	30	- 7.2	3	0	4	3.9	66	150	61	32	14	10	T	0	0.7	33	18.8	NW	12	4	7	19	7.5	44
DAYTON	305	979.7	1015.9	16.7	5.0	10.7	0.3	26.1	30	- 6.7	3	0	4	3.9	67	115	31	35	14	10	T	0	0.4	21	14.8	N	8	6	5	19	7.5	50
MANSFIELD	395			13.9	1.7	7.7	-0.6	23.9	30	- 8.3	3	0	10			77	- 7	17	14	5	T	T						3	7	20	7.6	
TOLEDO	206	990.9	1016.3	13.9	2.2	8.2	-0.1	26.1	6	- 7.8	3	0	8	2.2	72	53	- 18	12	12	5	36	T	0.4	3	13.9	W	12	5	5	20	7.6	49
YOUNGSTOWN	359	972.9	1016.0	13.3	1.7	7.2	-1.1	21.1	30+	- 8.3	3	0	11	0.6	66	65	- 29	18	15	3	13	T	0.9	34	19.7	30	12	3	8	19	7.6	
OKLAHOMA																																
OKLAHOMA CITY	390	967.8	1013.7	25.0	12.2	18.6	3.1	32.2	21	2.8	28	1	0	10.0	62	82	3	27	8	7	0	0	2.8	18	17.9	SW	8	12	6	12	5.5	74
TULSA	198	989.8	1014.0	26.7	11.7	19.0	4.1	34.4	21	2.8	28	5	0	9.4	59	76	- 26	38	8	9	0	0	2.2	20	18.8	SW	8	9	9	12	5.6	77
OREGON																																
ASTORIA	2	1015.2	1015.8	13.9	5.6	9.6	0.2	21.1	26+	- 1.1	3	0	1	5.0	76	139	7	57	20	1	0	0	1.2	22	15.6	18	19+	2	4	24	8.6	
BURNS U	1265	870.0	1013.0	15.0	0.6	7.6	-0.2	22.2	27	- 6.1	8	0	18	- 0.6	59	33	13	10	13	0	36	T	1.2	29				4	6	20	7.3	
EUGENE	109	1002.0	1015.6	16.1	5.6	11.0	0.6	25.0	27+	0.0	4+	0	2	6.1	76	74	14	32	13	0	0	0	0.7	24	13.9	27	14	3	7	20	8.0	
MEACHAM	1234			10.6	0.6	5.6	0.7	20.0	27	- 3.9	2	0	16			62	- 9	30	14	0	119	T									7.4	
MEDFORD	396	967.2	1014.8	18.3	5.0	11.9	1.6	28.9	27	0.0	7+	0	2	5.0	68	78	51	27	14	0	0	0	0.5	28	15.6	14	15	4	4	22	7.8	
PENDLETON	452	960.4	1014.0	17.8	5.6	11.6	0.5	28.9	27	- 2.2	7	0	2	2.8	58	17	- 11	5	12	0	0	0	1.9	25	15.6	26	1	5	8	17	6.8	
PORTLAND	6	1013.9	1015.4	16.7	5.6	11.0	0.0	26.7	26	0.0	6+	0	3	6.1	75	56	3	33	12	0	0	0	0.8	28	16.1	S	15	4	6	20	7.9	52
SALEM	60	1008.5	1015.8	16.1	3.9	10.2	-0.4	24.4	27+	- 2.2	3	0	7	6.1	79	61	2	25	15	0	0	0	1.1	22	13.4	20	15	4	6	20	7.9	
SEXTON SUMMIT R	1169	880.5	1013.8	11.1	1.1	5.8	-1.2	24.4	27	- 5.0	6	0	16			112	65	52	13	0	282	152			18.8	17	20	4	8	18	7.5	
PACIFIC AREA																																
CANTON ISLAND	2			30.6	25.0	27.9	-0.7	31.7	20+	23.3	15	0	0			46	- 46	12	16	0	0	0						2	21	7	6.0	
ENIWETOK	4	1010.8	1011.5	30.0	25.0	27.6	-0.3	31.1	26	23.3	16+	0	0	22.2	74	9	- 23	5	7	0	0	0	6.1	8								
TAGUAC GUAM R	110			30.6	21.1	25.6	-1.0	31.7	30	15.0	6	0	0			13	- 64	4	14	0	0	0										87
JOHNSTON	2	1013.5	1014.3	27.2	22.8	24.9	-0.6	29.4	20	21.1	17+	0	0	18.9	70	14	- 43	5	8	0	0	0	4.4	7	13.0	NE	3	12	12	6	4.8	92
KOROR R	29	1006.4	1010.3	30.6	24.4	27.4	0.1	31.7	14	22.8	30	0	0	23.3	82	181	- 83	46	13	0	0	0	2.4	9	9.4	NE	26	0	0	30	10.0	73
KWAJALEIN	2	1010.2	1011.0	31.1	25.0	28.2	1.1	31.7	30+	23.3	21	0	0	22.2	74	6	-121	4	6	0	0	0	7.4	6	11.2	7	25+	2	4	24	8.7	
MAJURO	3	1010.2	1010.5	29.4	25.0	27.4	0.4	30.6	20	23.3	11	0	0	22.8	76	119	-194	74	11	1	0	0	6.6	7	14.8	NE	11	0	3	27	9.3	57
MARCUS ISLAND	6			25.0	19.4	22.1		27.8	12	16.1	28	0	0			64	37	26	9	0	0	0			13.4	N	16	3	13	14	7.0	58
PONAPE R	37	1004.4	1009.7	30.0	23.9	26.8	-0.1	31.1	22+	21.7	18	0	0	23.3	82	363	-146	81	24	2	0	0	3.9	6	9.8	SE	29	0	5	25	9.2	24
TRUK MOEN ISLAND	2	1009.1	1009.5	29.4	24.4	26.9	-0.2	30.6	29+	21.7	12	0	0	23.3	78	208	-105	52	21	0	0	0	4.6	5	17.0	NE	12	0	4	26	9.0	62
WAKE	3	1014.6	1014.8	27.2	22.2	24.7	-1.1	28.9	5	20.6	24+	0	0	19.4	75	84	37	41	17	0	0	0	3.5	5	10.3	4	11+	5	13	12	6.4	
YAP R	17	1008.1	1009.9	30.6	24.4	27.3	-0.3	31.7	24	22.8	11+	0	0	23.3	80	108	- 54	37	15	0	0	0	3.5	7	9.8	SE	26+	0	4	26	9.4	57
PENNSYLVANIA																																
ALLENTOWN	115	1001.7	1015.9	14.4	2.2	8.4	-1.2	26.7	30	- 6.1	1	0	6	0.6	62	53	- 42	15	11	0	43	T	1.6	30	19.7	25	12	5	10	15	6.7	
ERIE	223	989.2	1016.5	10.0	0.6	5.3	-2.2	21.1	11	- 8.3	3	0	11	0.6	74	42	- 48	11	15	4	56	T	0.7	24	20.6	21	12	5	8	17	7.1	
HARRISBURG	103	1003.1	1016.1	15.6	4.4	10.1	-0.9	27.8	30	- 5.6	1	0	4	1.1	58	32	- 45	9	12	0	5	T	1.1	31	18.8	W	12	3	8	19	7.4	49
PHILADELPHIA	2	1014.6	1015.7	14.4	4.4	9.4	-1.7	25.6	30+	- 3.3	5	0	5	1.1	61	59	- 27	14	11	0	76	T	1.0	32	17.9	W	12	7	6	17	6.9	46
PITTSBURGH	347	971.2	1015.6	15.6	3.3	9.4	0.0	23.3	30	- 6.1	3	0	6	2.2	65	45	- 33	11	12	2	5	T	1.5	31	20.6	24	12	2	8	20	7.8	41
PITTSBURGH U	228			16.1	5.0	10.3	-0.9	23.9	30	- 5.0	3	0	4			56	- 30	13	14	0	20											38
READING U	81			15.6	5.0	10.0	-1.4	27.2	30	- 2.8	1	0	4			35	- 52	10	10	0	8	T			22.4	W	12	7	8	15	6.6	46
SCRANTON	283	981.0	1015.9	12.8	2.2	7.4	-1.7	25.0	30	- 6.7	1	0	6	0.0	63	67	- 16	15	14	1	97	51	1.2	30	17.9	SW	12	4	9	17	7.3	49
WILLIAMSPORT	161	996.6	1016.1	12.8	1.1	6.9	-2.7	25.0	30	- 7.8	1	0	9	0.0	67	78	- 12	16	14	2	76	76	1.0	30	13.9	25	12	3	10	17	7.4	
RHODE ISLAND																																
BLOCK ISLAND	34			9.4	2.2	5.8	-1.2	16.1	30+	- 3.9	1	0	5			69	- 23	25	9	0	33	T										
PROVIDENCE	16	1012.2	1014.5	12.8	2.2	7.4	-1.0	23.9	30	- 5.6	1	0	8	- 1.7	58	62	- 34	24	11	1	T	0	0.9	28	12.5	18	16	8	8	14	6.3	56

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

APRIL 1965

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	No of days: 25 mm or more	No of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm	M.p.s.		M p.s							%
SOUTH CAROLINA																																
CHARLESTON	12	1015.2	1016.8	24.4	12.2	18.1	-0.2	31.7	9	6.1	2+	0	0	11.7	72	79	6	48	6	4	0	0	0.8	24	17.9Y	SW	15	9	9	12	5.8	55
CHARLESTON U	3			22.8	14.4	18.7	0.0	31.7	9	7.2	1	0	0			88	23	50	5	0	0	0			13.4	NE	3					
COLUMBIA	66	1008.5	1016.5	25.0	12.2	18.4	0.8	33.3	23	4.4	3+	2	0	10.6	67	101	-1	25	13	6	0	0	0.7	25	15.6	31	15	11	7	12	5.4	65
FLORENCE	45			23.3	10.6	16.9	-0.6	31.1	9	2.8	3	0	0			71	-21		8	5	0	0										
GNVLE SPARTANBURG	292	982.1	1016.4	22.2	10.6	16.5	0.2	31.7	9	1.7	3	0	0	8.9	67	125	25	48	14	9	0	0	0.9	26	12.5	SW	18	8	9	13	5.9	59
SOUTH DAKOTA																																
ABERDEEN	395	967.8	1015.2	12.2	0.6	6.5	-0.6	31.1	29	-5.6	7	0	13	0.6	74	74	23	19	17	5	277	102	1.3	4	12.5	36	15	1	9	20	7.9	
HURON	391	967.5	1014.6	13.3	1.7	7.6	0.3	29.4	30+	-2.2	28+	0	10	2.2	76	61	15	17	16	5	30	T	0.8	6	13.9	N	26	2	13	15	7.7	43
RAPID CITY	965	901.8	1013.5	15.0	1.7	8.3	1.4	27.2	30+	-6.7	6	0	10	0.6	66	38	-4	14	14	2	140	102	1.5	35	15.6	SW	13	4	10	16	7.2	54
SIOUX FALLS	432	962.8	1014.7	13.9	1.7	7.7	0.0	30.6	30	-3.9	28	0	12	2.2	75	85	26	26	17	3	10	T	1.1	6	13.0	36	27+	4	8	18	7.2	
TENNESSEE																																
BRISTOL	459	962.4	1016.4	21.1	7.8	14.4	0.7	28.9	23	-2.8	3	0	1	8.3	69	87	7	27	9	8	0	0	1.5	28	13.4	29	15	7	9	14	6.3	
CHATTANOOGA	204	992.2	1016.9	23.9	10.0	16.9	0.9	31.7	24+	2.2	17+	0	0	10.6	71	73	-36	25	10	8	0	0	0.5	21	16.5	NW	15	12	6	12	5.7	62
KNOXVILLE	299	981.7	1016.8	22.8	11.1	16.9	1.9	31.7	24+	3.9	17+	0	0	10.0	69	106	12	46	14	9	0	0	1.5	26	16.5	W	15	9	8	13	6.1	56
MEMPHIS	80	1006.1	1016.1	25.0	13.3	19.1	2.8	31.7	23	5.0	29	0	0	11.7	65	52	-66	20	10	9	0	0	1.4	22	12.5	NW	15	12	5	13	5.1	68
NASHVILLE	180	994.2	1016.0	22.2	10.0	16.1	0.7	31.1	23	2.8	1	0	0	9.4	69	145	50	47	12	9	0	0	1.1	22	14.8	NW	18	10	7	13	5.6	59
OAK RIDGE	276			22.2	9.4	15.9	1.6	32.2	23	3.3	17	1	0			98	-9	29	14	0	0	0			15.6Y	W	15	12	3	15	5.7	
TEXAS																																
ABILENE	537	952.6	1013.2	26.7	13.3	20.1	2.1	34.4	21	5.6	29	5	0	9.4	56	71	13	59	7	5	0	0	2.5	17	16.5	SE	5	13	4	13	5.1	67
AMARILLO	1098	889.6	1011.9	24.4	6.1	15.2	1.1	36.7	22	1.7	28+	3	0	-1.1	40	6	-28	5	3	3	0	0	2.8	23	20.1	SW	9	12	7	11	5.1	76
AUSTIN	182	992.9	1014.6	27.2	16.7	21.9	2.1	31.7	18	8.3	30	0	0	15.6	73	49	-42	30	6	7	0	0	2.0	16	13.0	W	26	8	4	18	6.6	43
BROWNSVILLE	5	1012.5	1013.0	29.4	20.0	24.6	1.3	33.9	11	13.3	30	1	0	18.9	75	3	-37	2	2	1	0	0	4.8	14	16.1	S	5	8	11	11	5.9	71
CORPUS CHRISTI	12	1012.2	1013.7	27.8	18.9	23.1	1.1	31.1	18	10.6	30	0	0	18.9	82	20	-34	19	3	1	0	0	4.8	13	17.0	S	5	4	9	17	7.0	47
DALLAS	147	997.3	1014.5	26.1	15.6	20.9	2.6	31.1	22+	8.3	29+	0	0	13.9	67	52	-50	26	6	6	0	0	2.5	17	13.0	S	5	12	4	14	5.6	57
DEL RIO	313	977.0	1012.8	30.0	16.7	23.1		36.7	18	9.4	30	13	0	12.8	59	80	-43	48	6	5	0	0	2.5	11	15.6	35	26	9	5	16	6.3	
EL PASO	1194	880.5	1010.6	26.7	10.6	18.5	1.1	36.7	22	3.3	6	4	0	-4.4	23	T	-7	T	1	0	0	0	2.1	26	22.4	SW	10	16	5	9	4.0	80
FORT WORTH	164	994.2	1014.7	26.1	13.9	20.2	2.0	30.6	21+	6.1	29	0	0	13.9	69	55	-37	35	5	6	0	0	2.0	18	11.6	18	5	12	5	13	5.4	
GALVESTON U	2			23.9	19.4	21.7	1.4	28.3	19	15.6	29+	0	0			14	-52	12	2	0	0	0			20.1	NW	19					67
HOUSTON U	12			27.2	19.4	23.3	2.6	31.7	19	12.2	29	0	0			20	-67	18	4	0	0	0										
HOUSTON	15	1013.5	1015.5	28.3	17.8	23.1	2.8	30.6	19+	10.0	29	0	0	17.2	74	24	-58	19	6	2	0	0	2.8	14	14.3	27	19	7	6	17	6.8	70
LUBBOCK	988	902.5	1012.5	26.1	9.4	17.6	2.3	36.7	22+	2.2	27	4	0	3.9	47	10	-19	4	5	5	0	0	2.5	21	20.6	25	10	9	11	10	5.5	
MIDLAND	869	914.7	1011.5	27.8	11.7	19.7	1.4	36.7	21	6.7	27+	8	0	3.9	44	8	-13	8	2	4	0	0	1.8	18	16.1	28	14	9	14	7	5.1	
PORT ARTHUR	5	1015.2	1015.9	27.8	17.2	22.6	2.5	32.2	19	7.8	29	1	0	17.2	78	9	-91	9	1	2	0	0	2.5	16	26.8	W	19	6	11	13	6.4	56
SAN ANGELO	580	946.8	1012.4	29.4	13.3	21.4	1.9	36.7	21	3.3	29	10	0	8.3	49	3	-48	2	4	3	0	0	1.7	18	11.2	18	5	11	8	11	5.0	
SAN ANTONIO	240	986.5	1014.3	27.2	16.7	22.0	1.9	32.2	18	6.7	30	1	0	15.6	72	50	-22	33	5	4	0	0	2.3	12	18.8	NW	26	7	8	15	6.7	41
VICTORIA	32	1010.5	1014.5	27.8	18.3	23.1	1.9	30.6	23	10.0	16	0	0	17.8	77	23	-43	14	3	3	0	0	3.2	13	13.4	36	26	3	8	19	7.5	
WACO	152	996.3	1014.3	27.8	16.7	22.2	2.9	34.4	18	7.8	29	1	0	15.0	68	34	-64	30	5	3	0	0	2.5	16	11.2	33	26+	11	5	14	5.7	
WICHITA FALLS	303	977.3	1013.5	26.7	12.2	19.6	1.8	32.8	21	5.0	28	2	0	10.6	61	62	-2	33	8	9	0	0	2.1	18	17.4	18	5	10	8	12	5.5	
UTAH																																
MILFORD	1533			16.1	1.1	8.6	-0.2	27.2	30	-4.4	14	0	11			33	15	10	12	0	213	51						4	11	15	7.0	
SALT LAKE CITY	1286	869.3	1012.9	17.2	3.9	10.6	0.6	26.7	30	-2.2	12	0	3	0.0	54	58	14	35	12	0	61	T	2.1	17	15.2	SW	1	2	8	20	8.1	59
WENDOVER	1291			16.7	5.6	11.1	0.2	25.0	30	0.0	11+	0	2			11	-2	7	6	0	T	T						4	8	18	7.2	
VERMONT																																
BURLINGTON	101	1001.7	1014.5	10.0	-2.2	4.1	-1.1	21.7	30	-13.9	1	0	21	-2.8	64	55	-12	20	10	1	28	T	0.6	33	12.5	S	7	5	14	11	6.4	60
VIRGINIA																																
LYNCHBURG	279			18.9	6.1	12.4	-1.1	27.8	23+	-4.4	3	0	4			36	-44	8	11	5	0	0			13.9	NW	13	5	13	12	6.6	53
NORFOLK	8	1014.9	1016.0	17.8	7.2	12.5	-1.9	28.9	18	-0.6	4	0	1	5.6	66	56	-25	14	15	3	0	0	0.4	3	14.8	S	15	7	10	13	6.5	54
RICHMOND	49	1010.2	1016.3	18.3	6.1	12.2	-2.3	28.9	18	-2.8	1	0	4	4.4	66	54	-26	23	14	2	0	0	0.4	31	13.4	NW	13	7	8	15	6.7	52
ROANOKE	350	973.6	1015.7	18.9	6.7	12.7	-0.8	27.8	23	-2.8	3	0	2	4.4	62	43	-36	11	12	4	0	0	1.4	27	14.3	33	9	5	12	13	6.6	
WASHINGTON																																
OLYMPIA	59	1008.1	1015.5	15.6	3.3	9.4	-0.6	26.1	27	-2.8	11	0	10	5.0	76	92	17	59	12	1	0	0	1.4	21	15.6	22	30	2	7	21	8.1	
SEATTLE TACOMA	122	999.0	1015.5	14.4	5.0	9.7	0.2	25.0	27	1.1	6+	0	0	5.0	75	95	34	47	16	2	0	0	0.7	23	12.5	23	30	3	5	22	8.0	39
SPOKANE	718	929.2	1013.2	13.9	2.8	8.4	-0.1	22.8	27	-2.8	7	0	5	1.7	66	60	37	19	8	3	T	T	1.7	19	15.2	SW	20	6	7	17	6.9	54
STAMPEDE PASS R	1206			6.1	0.0	2.8	0.3	15.0	26	-5.0	6	0	19			102	-41	49	18	0	297	3353						3	7	20	8.0	
TATOOSH ISLAND R	31	1011.9	1014.9	11.1	6.1	8.6	-0.1	16.7	15	2.2	6	0	0	5.6	83	128	-5	26	17	0	0	0	1.5	16	25.5	SW	20	1	6	23	8.4	52
WALLA WALLA U	289			18.3	7.2	12.9	0.8	27.2	27	1.7	7	0	0			43	7	14	11	0	0	0			8.9	SE	14	9	5	16	6.4	64

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s							%
WASHINGTON																																
YAKIMA	321	974.9	1013.3	18.3	2.2	10.3	0.0	26.1	27	- 3.3	17	0	9	0.6	54	12	0	6	5	2	0	0	1.6	26	10.3	22	19+	5	10	15	7.1	
WEST INDIES																																
SAN JUAN P.R.	5	1013.9	1016.4	28.9	21.7	25.4	0.6	31.7	2	18.3	8	0	0	19.4	70	56	- 39	30	11	1	0	0	2.7	6	11.2	E	20+	9	17	4	4.6	80
SWAN ISLAND	9			29.4	25.0	27.2	-0.3	31.1	30+	23.3	17+	0	0			T	- 21	T	0	0	0	0						15	13	2	4.1	
WEST VIRGINIA																																
BECKLEY	763	927.5	1015.9	17.2	5.0	11.2		26.1	11	- 6.7	3	0	5	4.4	68	101	25	25	19	9	T	T	2.1	25	15.6	22	15+	2	7	21	7.9	
CHARLESTON	286	981.0	1015.3	20.0	6.1	12.8	-0.1	27.2	21+	- 5.6	3	0	5	6.1	68	164	71	46	18	12	T	0	1.6	25	14.3	23	12	4	10	16	7.3	
ELKINS	600	944.5	1015.9	16.7	2.8	9.6	-0.6	23.9	8	- 8.3	3	0	9	3.9	74	175	87	31	18	9	5	T	2.0	28	17.4	30	12	2	9	19	7.9	
HUNTINGTON	252	985.4	1015.5	20.0	7.2	13.4	0.3	28.3	21	- 3.3	3	0	2	6.7	68	144	51	39	17	9	0	0	1.0	27	16.1	32	8	2	11	17	7.4	
PARKERSBURG U	187			18.3	5.6	12.1	-0.2	26.1	30+	- 4.4	3	0	3			103	20	23	15	0	T	T			16.1	W	12					49
WISCONSIN																																
GREEN BAY	208	990.5	1016.7	9.4	0.0	4.7	-1.6	25.0	29	- 9.4	2	0	13	0.6	78	92	29	32	15	1	140	127	1.1	5	13.9	N	23	3	9	18	7.7	35
LA CROSSE	198	991.2	1016.3	11.7	1.1	6.4	-1.9	26.7	29	- 4.4	9	0	11			124	54	31	15	1	41	T	0.2	5	11.6	10	10	4	4	22	7.8	
MADISON	262	983.7	1015.6	12.2	0.6	6.5	-0.4	23.9	30	- 2.8	27+	0	13	1.7	75	75	9	22	16	3	20	T	1.0	7	13.9	SW	11	4	5	21	7.6	37
MILWAUKEE	205	990.9	1016.6	10.0	1.7	5.9	-0.5	21.7	29	- 1.7	3	0	8	1.7	77	88	24	21	13	3	104	51	1.3	3	16.5	SW	11	6	7	17	7.1	53
WYOMING																																
CASPER	1627	834.7	1012.5	13.9	1.1	7.7	1.5	23.9	30	- 3.3	18	0	14	- 3.3	52	24	- 19	11	11	0	185	76	3.1	25	19.7	23	13	3	11	16	7.5	
CHEYENNE	1867	809.7	1013.0	14.4	1.1	7.6	1.7	24.4	30	- 2.8	28+	0	16	- 4.4	50	14	- 33	7	8	1	64	51	3.4	29	25.5	W	17	7	6	17	6.5	68
LANDER	1696	826.3	1012.5	13.3	1.1	7.4	1.2	22.8	21	- 2.8	12+	0	10	- 3.3	52	41	- 22	13	9	1	361	152	1.7	26	23.2	SW	2	3	6	21	7.8	62
SHERIDAN	1208	876.4	1014.0	14.4	0.0	7.2	0.8	25.0	30	- 5.6	18+	0	16	- 0.6	62	17	- 38	8	10	0	94	T	2.2	31	20.6	SW	2	5	4	21	7.6	44

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.
A Maximum hourly average.
B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

State and station	Current season: This month	Current season: Period July through this month	Normals July through this month
ALABAMA			
BIRMINGHAM	85	2746	2542
HUNTSVILLE	87	3253	3051
MOBILE	4	1565	1560
MONTGOMERY	46	2228	2291
ALASKA			
ANCHORAGE PRK STRIP	806	10043	9957
ANCHORAGE	754	10110	
ANNETTE	661	6896	6258
BARROW	1885	18626	17772
BARTER ISLAND	1811	18398	17565
BETHEL	1148	12226	11988
COLD BAY	886	8431	8498
FAIRBANKS	1019	14042	13502
JUNEAU	813	8395	8093
KING SALMON	1009	10571	10262
KOTZEBUE	1506	14430	14412
MC GRATH	1064	13403	13377
NOME	1333	12782	12668
ST. PAUL ISLAND	1054	9739	9537
SHEMYA	867	8203	8154
YAKUTAT	870	9010	8025
ARIZONA			
FLAGSTAFF	768	6584	6535
PHOENIX	133	1800	1765
TUCSON	114	1831	1794
WINSLOW	363	4533	4686
YUMA	64	1115	974
ARKANSAS			
FORT SMITH	83	3425	3270
LITTLE ROCK	70	3113	3210
TEXARKANA	38	2499	2533
CALIFORNIA			
BAKERSFIELD	186	2241	2103
BISHOP	355	3859	4048
BLUE CANYON	669	5030	4915
BURBANK	225	1728	1547
EUREKA U	441	4065	3986
FRESNO	191	2422	2436
LONG BEACH	172	1698	1603
LOS ANGELES	198	1522	1624
LOS ANGLES U	168	1218	1263
MT SHASTA R	581	5130	5216
OAKLAND	263	2456	2600
RED BLUFF	219	2457	2468
SACRAMENTO	246	2613	2665
SANDBERG U	571	4183	3888
SAN DIEGO	138	1334	1319
SAN FRANCISCO	311	2764	2675
SAN FRANCISCO U	280	2519	2582
SANTA CATALINA	269	1960	1755
SANTA MARIA	286	2757	2569
STOCKTON	201	2512	2642
COLORADO			
ALAMOSA	689	8617	7921
COLORADO SPRINGS	497	5995	6020
DENVER	411	5722	5929
GRAND JUNCTION	334	5116	5474
PUEBLO	338	5207	5273
CONNECTICUT			
BRIDGEPORT	546	5577	5382
HARTFORD	518	6078	5971
NEW HAVEN	572	5703	5607
DELAWARE			
WILMINGTON	467	5062	4812
DIST.OF COLUMBIA			
WASH NATL AP	395	4393	4150
FLORIDA			
APALACHICOLA U	6	1161	1308
DAYTONA BEACH	9	695	879
FORT MYERS	0	196	442
JACKSONVILLE	10	1039	1239
KEY WEST	0	14	108
LAKELAND U	0	451	661
MIAMI	0	110	214
ORLANDO	0	454	766
PENSACOLA	9	1501	1463
TALLAHASSEE	25	1559	1485
TAMPA	2	546	683
WEST PALM BEACH	0	161	253
GEORGIA			
ATHENS	123	2784	2907
ATLANTA	110	2923	2936
AUGUSTA	84	2288	2397
COLUMBUS	45	2145	2383
MACON	63	2308	2136
ROME	108	3216	3292
SAVANNAH	66	1798	1819
IDAHO			
BOISE	435	5309	5483
IDAHO FALLS 42NW R	630	8018	8180
IDAHO FALLS 46W R	615	7675	7892
LEWISTON	380	5158	5213
POCATELLO	543	6344	6573
ILLINOIS			
CAIRO U	147	3872	3774
CHICAGO O HARE	545	6876	6307
CHICAGO MIDWAY	515	6217	5896
MOLINE	471	6514	6180
PEORIA	416	6269	5809
ROCKFORD	579	7117	[illegible]
SPRINGFIELD	320	5578	5275
INDIANA			
EVANSVILLE	254	4826	4367
FORT WAYNE	499	6326	5977
INDIANAPOLIS	323	5517	5483
SOUTH BEND	535	6455	6140
IOWA			
BURLINGTON	422	6255	5904
DES MOINES	509	7104	6376
DUBUQUE	582	7503	7038
SIOUX CITY	446	7307	6698
WATERLOO	612	7860	7037
KANSAS			
CONCORDIA	305	5633	5312
DODGE CITY	226	5055	4853
GOODLAND	349	5873	5863
TOPEKA	263	5297	5046
WICHITA	176	4617	4527
KENTUCKY			
COVINGTON	350	5068	[illegible]
LEXINGTON	277	4771	4578
LOUISVILLE	223	4505	4546
LOUISIANA			
ALEXANDRIA	35	2185	1921
BATON ROUGE	7	1605	1560
LAKE CHARLES	4	1437	1459
NEW ORLEANS	11	1406	1385
SHREVEPORT	28	2173	2184
MAINE			
CARIBOU	831	9226	9116
PORTLAND	710	7376	7028
MARYLAND			
BALTIMORE	433	4759	4564
MASSACHUSETTS			
BLUE HILL OBS R	645	6362	6032
BOSTON	617	5953	5390
NANTUCKET	709	5667	5378
PITTSFIELD	719	7324	7147
WORCESTER	658	6799	6587
MICHIGAN			
ALPENA	864	8136	7904
DETROIT	596	6165	5970
DETROIT M WAYNE CO	591	6666	5997
DETROIT WILLOW RUN	636	6767	5984
FLINT	660	7002	6968
GRAND RAPIDS	657	6991	
HOUGHTON LAKE	807	8193	
LANSING	667	7044	6567
MARQUETTE U	795	8165	7748
MUSKEGON	609	6589	6308
SAULT STE MARIE	864	8834	8370
MINNESOTA			
DULUTH	802	9886	9312
INTERNATIONAL FALLS	799	10642	9989
MINNEAPOLIS	[illegible]	8530	[illegible]
ROCHESTER	684	8713	[illegible]
ST CLOUD	722	9287	8448
MISSISSIPPI			
JACKSON	48	2327	
MERIDIAN	51	2436	2289
VICKSBURG U	20	2166	2041
MISSOURI			
COLUMBIA	248	4981	4913
KANSAS CITY	237	4899	4602
ST JOSEPH	290	5504	5249
ST LOUIS	250	5008	4764
SPRINGFIELD	180	4403	[illegible]
MONTANA			
BILLINGS	570	7360	6662
GLASGOW	690	9643	8511
GREAT FALLS	602	7750	7180
HAVRE	706	9456	8200
HELENA	612	7446	7553
KALISPELL	638	8101	7587
MILES CITY	606	8694	7346
MISSOULA	602	7917	7515
NEBRASKA			
GRAND ISLAND	422	6848	6274
LINCOLN U	387	6401	5663
NORFOLK	473	7293	6698
NORTH PLATTE	405	6694	6379
OMAHA	361	6391	6024
SCOTTSBLUFF	414	6440	6313
VALENTINE	496	7347	[illegible]
NEVADA			
ELKO	596	6559	[illegible]
ELY	684	6966	7052
LAS VEGAS	220	2618	2703
RENO	454	5011	5786
WINNEMUCCA	504	5741	6245
NEW HAMPSHIRE			
CONCORD	704	7288	7010
MT WASHINGTON OBS	1397	12861	12284
NEW JERSEY			
ATLANTIC CITY	485	5160	4664
ATLANTIC CITY U	492	4643	4528
NEWARK	442	4954	4741
TRENTON U	461	5008	4847
NEW MEXICO			
ALBUQUERQUE	[illegible]	4174	4267
CLAYTON	312	4927	4954
RATON	496	5995	5864
ROSWELL	126	3511	3762
SILVER CITY	296	3831	3618
NEW YORK			
ALBANY	679	6907	6591
BINGHAMTON	734	6965	6874
BUFFALO	706	[illegible]	6655
NEW YORK U	426	4860	4744
J.F. KENNEDY	496	5020	5040
NEW YORK LA GUARDIA	426	4779	4681
ROCHESTER	706	6718	[illegible]
SYRACUSE	676	6624	6463
	676	6624	6463
NORTH CAROLINA			
ASHEVILLE	232		
CAPE HATTERAS R	296	2701	2587
CHARLOTTE	128	3185	3169
GREENSBORO	215	3747	3758
RALEIGH	232	3590	3359
WILMINGTON	131	2323	2347
NORTH DAKOTA			
BISMARCK	684	9741	8405
FARGO	695	9920	8795
WILLISTON	717	10073	8745
OHIO			
AKRON	524	6088	5796
CINCINNATI OBS	296	4863	4679
CLEVELAND	576	6073	6025
COLUMBUS	403	5554	5462
DAYTON	405	5408	5425
MANSFIELD	567	6248	6098
TOLEDO	538	6519	6192
YOUNGSTOWN	589	6348	6109
OKLAHOMA			
OKLAHOMA CITY	71	3789	3691
TULSA	73	3673	3813
OREGON			
ASTORIA	466	4566	4592
BURNS U	573	6337	6414
EUGENE	389	4113	4312
MEACHAM	684	[illegible]	7008
MEDFORD	346	4135	4688
PENDLETON	357	4940	4859
PORTLAND	388	4549	4285
SALEM	433	4481	4337
SEXTON SUMMIT R	668	5585	5510
PENNSYLVANIA			
ALLENTOWN	526	5759	5619
ERIE	696	6301	6103
HARRISBURG	441	5384	5115
PHILADELPHIA	475	5113	4974
PITTSBURGH	476	5677	5753
PITTSBURGH U	428	5114	4917
READING U	442	5022	4840
SCRANTON	582	6118	6026
WILLIAMSPORT	611	6142	5733
RHODE ISLAND			
BLOCK ISLAND	669	5630	5361
PROVIDENCE	581	5842	5667
SOUTH CAROLINA			
CHARLESTON	95	2007	2033
CHARLESTON U	76	1696	1794
COLUMBIA	93	2445	2484
FLORENCE	125	2502	2387
GNVLE-SPARTANBURG	147	3051	2961
SOUTH DAKOTA			
ABERDEEN	635	9345	8088
HURON	579	8657	7848
RAPID CITY	534	7223	6893
SIOUX FALLS	568	8256	7491
TENNESSEE			
BRISTOL	223	4067	4075
CHATTANOOGA	130	3417	3229
KNOXVILLE	125	3506	3451
MEMPHIS	72	3181	3210
NASHVILLE	168	3714	3538
TENNESSEE			
OAK RIDGE	[illegible]	[illegible]	3761
TEXAS			
ABILENE	59	2482	2624
AMARILLO	194	4025	3929
AUSTIN	12	1770	1711
BROWNSVILLE	0	673	600
CORPUS CHRISTI	[illegible]	1070	914
DALLAS	31	2390	2357
DEL RIO	4	1584	
EL PASO	54	2586	2700
FORT WORTH	36	2564	2405
GALVESTON U	2	1181	1235
HOUSTON U	0	1123	[illegible]
HOUSTON	[illegible]	1294	1396
	0	1294	1396
LUBBOCK	107	3363	3547
MIDLAND	52	2536	2591
PORT ARTHUR	3	1417	1447
SAN ANGELO	31	2321	2255
SAN ANTONIO	13	1715	1546
VICTORIA	[illegible]	1269	1173
WACO	15	2030	2030
WICHITA FALLS	47	3092	2826
UTAH			
MILFORD	523	5878	6131
SALT LAKE CITY	414	5544	5735
WENDOVER	385	5310	5550
VERMONT			
BURLINGTON	766	7871	7826
VIRGINIA			
LYNCHBURG	321	4382	4088
NORFOLK	320	3525	3384
RICHMOND	339	[illegible]	3812
ROANOKE	305	4268	4085
WASHINGTON			
OLYMPIA	470	5229	4752
SEATTLE TACOMA	459	4650	4691
SPOKANE	528	6713	6232
STAMPEDE PASS R	829	8409	8146
TATOOSH ISLAND R	522	5184	4955
WALLA WALLA U	292	4588	4583
YAKIMA	430	5814	5652
WEST VIRGINIA			
BECKLEY	379	5278	
CHARLESTON	299	4555	4371
HUNTINGTON	264	4539	[illegible]
PARKERSBURG U	333	4855	4633
WISCONSIN			
GREEN BAY	733	7946	7595
LA CROSSE	640	7999	7275
MADISON	631	7745	7451
MILWAUKEE	664	7282	7128
WYOMING			
CASPER	569	7416	6900
CHEYENNE	569	[illegible]	6795
LANDER	582	7108	7336
SHERIDAN	594	7647	7167

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

APRIL 1965

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				∅ ALL OTHER			
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE	
								PROPERTY	CROPS			PROPERTY	CROPS			PROPERTY	CROPS			PROPERTY	CROPS			PROPERTY	CROPS			PROPERTY	CROPS
Alabama	1	1	0	1	5	0	1	3	2	0	1	4	0																
Alaska *																													
Arizona *																													
Arkansas	4	4	6	204+	7	0	0	5	0					0	1	0	0									0	0	5	3
California	2	2	0	0	2																								
Colorado *																													
Connecticut *																													
Delaware										0	0	4	0																
Florida						0	0	0	?					0	1	0	0												
Georgia	4	4	0	0	5	0	0	4	4	0	0	5	0																
Hawaii																										0	0	°4	C
Idaho								3						1	1														
Illinois	9	3	6	77	7	0	0	3	0	1	0	6	0	0	0	5	0												
Indiana	20	4	137	1725	8	0	0	4	2	0	2	4	0																
Iowa	4	2	1	1	6	0	2	5	0	0	1	6	0	1	0	4	0									0	0	4	0
Kansas	1	1	0	0	4	0	0	5	0					0	0	4	0												
Kentucky	2	2	0	0	5			?	?			4	?	1	0													R ?	?
Louisiana						0	0	5	4																				
Maine *																													
Maryland										0	2	4	0																
Massachusetts																										D 0	0	0	0
Michigan	T15	1	53	792	9	0	0	4	0	0	5	5	0	0	0	4	0												
Minnesota																										A12	229	8	0
Mississippi						0	0	6	5					0	0	4	0												
Missouri	12	3	0	20	5	0	0	4	3	0	3	4	3	0	1	0	0												
Montana *																													
Nebraska						0	0	5	0	0	0	5	0																
Nevada *																													
New Hampshire																										D 0	0	0	0
New Jersey										1																			
New Mexico	1	1	0	0	3																								
New York												4				4													
North Carolina	2	2	0	1	5	0	0	4	5	0	0	5	0	0	0	5	0												
North Dakota *																													
Ohio	15	3	57	600	7					0	0	4	0	1	0	4	0												
Oklahoma	21	7	0	2	6	0	0	5	4	0	3	4	0	0	0	2	0									0	0	4	0
Oregon *																													
Pacific Area *																													
Pennsylvania										0	2	6	0	0	0	4	0												
Puerto Rico *																													
Rhode Island *																													
South Carolina	1	1	0	0	5	0	0	4	4					0	0	4	0												
South Dakota *																													
Tennessee	4	1	1	50	6	0	0	?	?	0	S	5	?	0	0	4	0									0	0	4	5
Texas	7	3	1	3	5	0	2	6	6	0	7	5	0													1	0	4	0
Utah										0	0	4	0																
Vermont *																													
U. S. Virgin Is.*																													
Virginia *																													
Washington *																													
West Virginia	3	2	0	3	5					0	1	4	0																
Wisconsin	6	1	3	65	7																								
Wyoming N																													

°	Includes crop damage
C	Crop damage
S	Several
A	Related to flooding
R	Rain, minor flooding
N	No report received by printing deadline
T	Possibly more due to long path lengths and night darkness preventing observing individual tornadoes
D	Dust Devil

*	No occurrence of storms or unusual weather phenomena.
‡	Includes heavy sleet storm.
#	Freezing drizzle and freezing rain, commonly known as glaze.
∅	For breakdown of "All Others", and for detailed listing of other storms, see the U. S. Weather Bureau monthly publication STORM DATA.

† Storm damages are placed in categories varying from 1 to 9 as follows:

1	Less than \$50
2	\$50 to \$500
3	\$500 to \$5,000
4	\$5,000 to \$50,000
5	\$50,000 to \$500,000
6	\$500,000 to \$5,000,000
7	\$5,000,000 to \$50,000,000
8	\$50,000,000 to \$500,000,000
9	\$500,000,000 to \$5,000,000,000

THE SPRING FLOODS OF MARCH-MAY 1965 IN THE UPPER MISSISSIPPI, MISSOURI AND RED RIVER OF THE NORTH BASINS

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APRIL 1965

INTRODUCTION

Severe flooding began during the first part of March along a number of tributaries in the Upper Mississippi Basin in southern Minnesota, western Iowa, and southwestern Wisconsin. Flooding was particularly severe in the Zumbro and Root River Basins in Minnesota and on the Cedar and lower Boyer Rivers in Iowa where record high stages were observed.

The big spring floods of 1965 began in earnest during April. These were major floods with record to near record stages reported over most of the upper Mississippi and portions of the Missouri and Red River of the North Basins. This was the greatest flood in more than 100 years along the upper Mississippi River for a distance of nearly 700 miles. Loss of life and property was minimized by protective action taken as a result of advance warnings. Nevertheless, property damages will range from $100 million to $150 million, with a toll of at least 15 lives.

FLOOD AREA AND BASIN DESCRIPTIONS

The flood area covered portions of three major basins, namely: the Upper Mississippi, the Missouri, and the Red River of the North. It covered portions of seven states: Minnesota, Wisconsin, Iowa, Illinois, Missouri, and the Dakotas. The flood in the Mississippi extended from its headwaters in northern Minnesota almost to its confluence with the Illinois and Missouri Rivers. Severe flooding in the Missouri Basin was confined mostly to the Big Sioux and Floyd Rivers in Iowa. More than 100,000 acres of land were inundated. The area of severe flooding, including dates of crests are given in Figure 9.

The Mississippi drains an area of 1,243,700 sq. mi., or 41% of the area of continental United States (excluding Alaska). It is divided into six major divisions. The Upper Mississippi Basin drains an area of 188,000 sq. mi., or 15.1% of the whole Mississippi System; the Missouri Basin drains an area of 529,400 sq. mi., or 42.6% of the whole system; however, less than 5% of the Missouri Basin had severe flooding during the spring of 1965.

The other important basin with major flooding during April 1965 was the Red River of the North. It adjoins the Mississippi System on the north but is not a part of the system. It drains northward. At the International Boundary its drainage area is 40,200 sq. mi. (36,200, excluding the closed Devils Lake Basin), or about 1% of the area of the conterminous United States.

ANTECEDENT CONDITIONS

Upper Mississippi Basin.--Record subzero temperatures occurred at many stations in the Upper Mississippi Basin in Minnesota and northwestern Wisconsin as early as November 27, 1964. The ground froze rapidly. Moderate to heavy rain occurred over Wisconsin and most of Minnesota on December 10, 1964, changing to snow north of the Minneapolis-St. Paul, Minn., area. Air holes in the topsoil were filled with water and frozen solid. Temperatures during December and January varied from moderate to very cold. Frost penetration was deeper than normal, particularly throughout the southern half of Minnesota and Wisconsin. Frozen ground in those areas ranged from 2 to 4 feet deep.

Heavy rains occurred over Minnesota and Wisconsin during the beginning of February, changing to snow on February 9. The rain suspended in the snowpack froze making the water equivalent of the snow very high. At the end of February and by the first of March, warmer weather and rain occurred over the basin south of Minneapolis, Minn. Some of the winter snowpack melted during this period causing heavy runoff with record floods on some tributary streams in southern Minnesota. Throughout the remainder of March, heavy snowfall combined with unusually low temperatures resulted in a very deep snow cover by the end of the month. This snow cover equalled or exceeded that of 1952 and 1960 -- years of great floods.

Missouri Basin.--There was very little accumulation of snow in the Missouri Basin above Sioux City, Iowa, in South Dakota during the first half of January. During the remainder of January, snow was frequent, but generally light. At the end of January, the snow cover varied from 4 to 8 inches in most of the northern half of South Dakota to 2 to 4 inches in southern South Dakota, northwestern Iowa, and southwestern Minnesota. Frequent melting periods kept the snow cover depleted from the Black Hills southward and southeastward toward Valentine Nebr. Elsewhere in South Dakota and on east through the State, January was quite cold and there was little or no melting. Rivers were frozen; the Missouri was covered with rough ice from Yankton, S. Dak., to well below Omaha, Nebr. Snow was light and scattered during February from the Missouri River in South Dakota westward to the Black Hills. There were only brief accumulations of snow in this area during February. From eastern South Dakota into southwestern Minnesota and northwestern Iowa, 6 to 12 inches of snow occurred between February 9 and 11. A strong warming trend on February 27 and 28, with maximum temperatures rising into the 40's, caused rapid melting of snow cover in northwest Iowa and southeast South Dakota, with 1 to 2 feet of flooding on the Floyd River in Iowa.

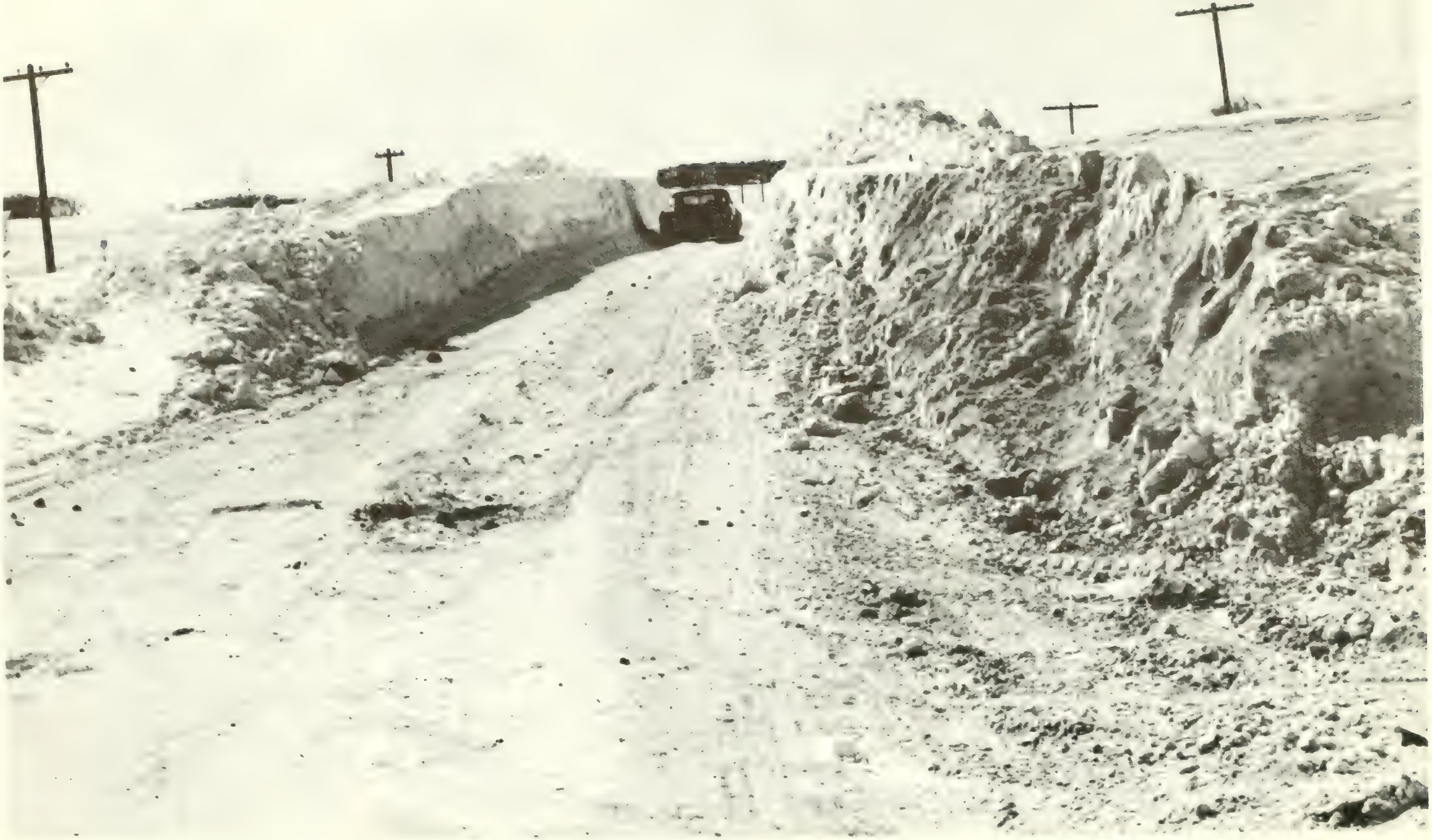
Brief periods of warming in March melted most of the snow cover from Sioux City to the Sand Hills in Nebraska and to the Black Hills in South Dakota. Dry soil absorbed the melting snow in these areas.

Red River of the North Basin.--The severe cold weather conditions during the fall of 1964, before the first snowfall, were conducive to the development of severe flooding during the spring of 1965. The cold weather caused deep frost penetration in the ground before the first snow. The accumulation of snow during the winter months, especially over the Red Lake River Basin was heavy. Of the conditions usually considered important to severe flooding, the only one missing was heavy precipitation during the fall months.

CAUSES OF THE SPRING FLOODS

Upper Mississippi Basin.--The greatest floods in the upper Mississippi Valley are caused primarily by runoff from melting snow. The 1965 flood was no exception. With only normal seasonal precipitation, or less, what were the principal factors which contributed to the highest water in the recorded history of the upper Mississippi?

Much of the deep snow mantle, which at the end of March lay over Minnesota, Wisconsin, and northern Iowa, represented precipitation that occurred during



Highway 19, near Gibbon, Minn., March 23, 1965: Eight-foot drifts block one lane of Highway 19 near Gibbon, Minn., a week after the season's worst blizzard on St. Patrick's Day, March 17, 1965. (Courtesy St. Paul Dispatch and Pioneer Press.)

that month. Parts of Minnesota and Wisconsin received 300% of normal March precipitation. In many areas in Minnesota, March snowfall exceeded previous alltime records. At St. Cloud, Minn., a record 51.7 inches of snow was recorded. This exceeded the previous record of 36 inches in March 1916 and 1917 by nearly 16 inches and the March normal snowfall of 9.9 inches by nearly 42 inches. The depth of snow on the ground as of March 30, 1965, is given in figure 7. Water equivalent of the snow cover ranged up to over 9 inches (fig. 8).

Except for a brief period early in the month, temperatures were as much as 10° below normal for March, maintaining the snow cover intact. Below normal temperatures continued into the first few days of April reaching maxima in the upper 30's to lower 40's and dropping to freezing levels at night.

In central Iowa, only 5 days during March had temperatures that were normal or slightly above. Des Moines, Iowa, had the second coldest March of record. In only three other years was March snowfall over the States heavier than that of March 1965. Most of the snow occurred in two storms, on March 1 and 2, and on March 17 and 18. The first of these two storms caused considerable ice and sleet across the southern and central counties of Iowa and 6 to 10 inches of snow in the northern counties. The second storm was more intense across the northern counties of Iowa with 4 to 12 inches of new snow reported. Strong winds drifted the snow to the roofs in north-central Iowa, while adjacent fields were swept clear. It was also cold and snowy in the Illinois portion of the Upper Mississippi Basin during March. Only once in more than 50 years had it been as cold or snowy.

A warming trend during the first 2 weeks or so of April melted most of the snow, beginning in Iowa, extreme southern Minnesota, and southwestern Wisconsin. The temperature reached 77° at Sioux City, Iowa, on April 10. Above average precipitation occurred over Minnesota during the week beginning April 4, with 24-hour amounts averaging over an inch in the central and southern parts of the State on the morning of April 5. At the same time, almost 2 inches of rain fell over eastern Iowa.

Missouri Basin.--The 1965 spring floods in the Missouri Basin, as in the Upper Mississippi Basin, were caused by the rapid melting of a heavy snow cover. Heavy rain at the peak of the snowmelt contributed to the runoff to produce serious flooding in northwestern Iowa.

At the end of March 1965, 4 to 12 inches of continuous snow cover, extended from the northeastern quarter of South Dakota, down across southwestern Minnesota and into the border counties of northwestern Iowa. The heaviest snow was in Minnesota.

On March 31 and April 1, maximum temperatures reached from the upper 40's to the upper 50's, from Sioux City, Iowa, to the Minnesota line. This caused heavy melting on the Floyd and the Big Sioux Rivers in northwestern Iowa. Cooler weather in northeastern South Dakota and southwestern Minnesota caused melting in those areas to be delayed for a few days, until rain hastened the process. One to 2 inches of rain fell over most of the Floyd and Big Sioux drainage, from April 2 to 6.

A snow survey of the Little Sioux Basin in Iowa on March 26-29, showed the water equivalent to range from 6 to 8 inches in the Spirit Lake, Iowa, area, to 2 inches at Spencer, Iowa, to over 3 inches at Cherokee, Iowa, to less than 1 inch in Oto, Iowa, area. Showers and thunderstorms over the Little Sioux Basin during the late afternoon and night of April 1-2 and during the nights of April 5-6, 7-8 , and 9-10 prolonged the flooding.

Red River of the North Basin.--Floods in the Red River of the North Basin occur primarily during the spring and are caused chiefly by melting snow. Antecedent conditions were favorable for the development of severe spring floods during 1965. Considerably higher crests result along the tributaries and the main stem of the river when snowmelt is accompanied by a period of prolonged heavy rains. Heavy widespread rains did occur in the Red River Valley during April. The rainfall over a few days ranged from 1.22 inches at Ada, Minn., to 3.09 inches at Walhalla, N. Dak.

THE FLOODS

Record to near record floods occurred during the spring runoff period in tributaries of the Mississippi, Missouri, and Red River of the North Rivers. Along the Mississippi, for a distance of nearly 700 miles, this was the highest water ever reported. See Tables 1 and 2 and Figures 1 to 6.

Table 1 presents in tabular form a comparison of the present flood with other major floods. The period the streams were in flood during March, April, and May, are shown.

Table 2 lists major floods in order of magnitude for selected points in the upper Mississippi, Missouri, and Red River of the North Basins.

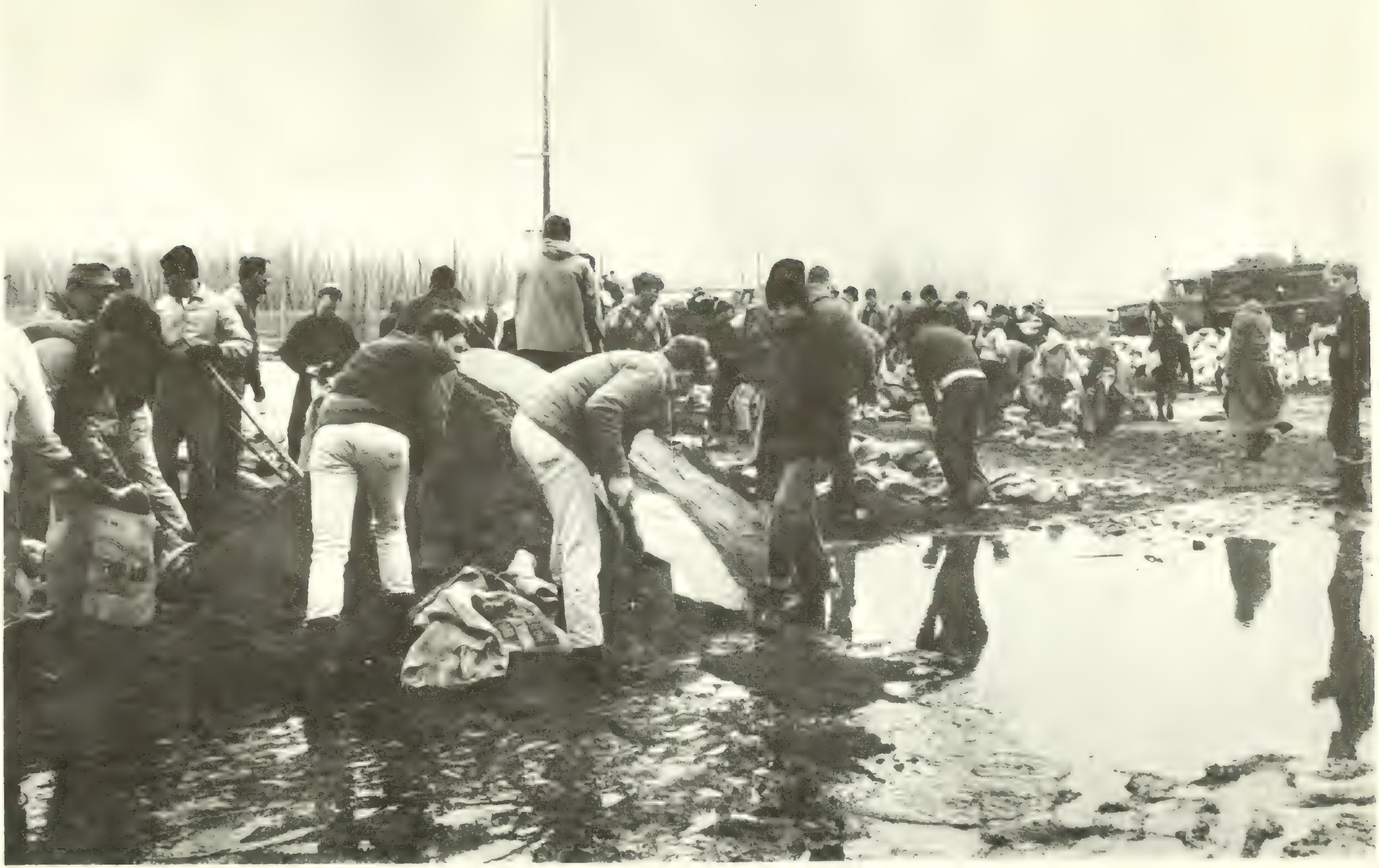
Figures 1 to 6 show river stage hydrographs for stations in the upper Mississippi and the Red River of the North Basins beginning with the April rise. A comparison of the crests with the previous highest stage of record is indicated on most of the graphs.

Upper Mississippi Basin Floods - March 1965.--The first high water bulletin for the Zumbro, Whitewater, Root, and upper Iowa Rivers in Minnesota was issued by the Weather Bureau on February 28. By 6 a.m., March 1, moderate to heavy rain was occurring over southeastern Minnesota and southwestern Wisconsin. By midafternoon, the rain changed to snow. At Rochester, Minn., 1.46 inches of precipitation occurred during this period.

The South Fork of the Zumbro River rose rapidly to a record crest of 19.12 feet at Rochester, Minn., by 6:30 p.m., March 1. The previous record stage of 18.5 feet occurred March 29, 1962. The Zumbro River rose to a near record crest of 28.4 feet at Zumbro Falls, Minn., on March 2, and a record crest of 45.75 feet at Theilman, Minn., on the same date. The previous record stage of 43.43 feet occurred in July 1951. Flood stage at this point is 38 feet. The Root River in Minnesota rose rapidly to record stages on March 2. Because of alternating periods of freezing and thawing the rise along the Kickapoo River in southwest Wisconsin extended over a longer period, March 1 through March 11.

Near record stages occurred on the Pecatonica River in Wisconsin and on the Turkey River in Iowa during the first part of March. Most of the winter snow cover was depleted during the last few days of February. The rapid melting of this snow cover accompanied by a 1-inch rainfall during the period caused the rivers to rise rapidly, beginning March 1. The ice in the rivers broke up and moved out rapidly forming only temporary jams. Flood damage was minor since mostly unplanted farmland and pastures were involved. The same areas that were flooded in February were inundated.

High temperatures near the end of February resulted



Minnesota River at Chaska, Minn., April 10, 1965. Stage, 31.65 feet. Crest, 34.25 feet on April 13, 1965.

Teenagers turned out to protect the City's sewage disposal plant. (Courtesy St. Paul *Dispatch and Pioneer Press.*)

in rapid snowmelt, causing rapid rises on the middle reaches of the Des Moines River and throughout the Cedar River in Iowa. Ice jams, from thick blocks of ice formed during the cold winter, complicated the problems for many communities. At Charles City, Iowa, on the Cedar River, an ice jam below the gaging station caused the water level to rise to a stage of 21.6 feet, equaling the previous record stage of March 1961. At Des Moines, Iowa, a major ice jam, which lasted through March, formed on the Raccoon River a short distance upstream from the water works. Downstream on the Des Moines River a major ice jam below Keosauqua caused a crest 2.7 feet above flood stage on March 5. Further upstream a major ice jam between Chillicothe and Tracy, Iowa, caused high readings at Eddyville and Tracy. Downstream from the ice jams, at Ottumwa, Iowa, the crest, on March 6, was below flood stage.

Rapid rises occurred on the South, Middle, North Raccoon, and Skunk Rivers in Iowa from heavy rains during the night of March 16 and the morning of March 17. The rainfall was heaviest across the middle portions of the Des Moines Basin with amounts ranging from 1 1/4 to 1 1/2 inches. Farther north, snows accumulated over a wide area in northern Iowa.

Moderate to heavy rains on March 16, plus some snowmelt, caused minor flooding on the Fox and Illinois Rivers in Illinois and on the Salt River at New London, Mo. Actual flooding was limited to farmlands immediately adjacent to the rivers. No appreciable damage was reported.

Flooding occurred along the main stem of the Mississippi in the reach from Hannibal, Mo., to Winfield, Mo., between March 18 and 21. Flooding was minor and limited to farmlands immediately adjacent to the river.

April 1965.--One of the worst flood disasters in a century developed in the Upper Mississippi Basin during April. It was born in the swirling blizzards of an abnormally long and bitter winter. It was nurtured by a combination of climatic conditions which forced an early runoff of melting snow before the ground was sufficiently thawed to absorb the runoff.

Southeastern Minnesota got the first taste of the severe floods that were to ravage the southern half of the State. One by one, the tributaries of the Minnesota River spilled over their banks as the heavy snow cover melted and ran off over the frozen ground. The flow from the Watonwan, Le Sueur, Blue Earth, and Cottonwood Rivers raised the Minnesota River to a near record stage of 29.07 feet at Mankato, Minn., on April 9. This was the highest stage at Mankato since April 1881 when a stage of 29.9 feet was recorded. The community worked feverishly to protect itself. From Mankato, the swollen Minnesota pushed northeastward bringing record crests to, and isolating, St. Peter, Henderson, Carver, Chaska, Shakopee, and Savage, Minn., before emptying into the Mississippi River.

As the Minnesota River carried its near record to record flood crests downstream, the Mississippi tributaries in south-central Minnesota began overflowing their banks. The Crow River reached a near record stage of 18.4 feet at Delano, Minn., on April 13, 10.4 feet above flood stage. Further downstream at Rockford, Minn., a record crest of 19.28 feet was reached on April 15. This was over 3 feet above the record crest of 16.24 feet in April 1952.

The St. Croix River reached bankfull stage at Stillwater, Minn., on April 12. Six days later it reached a record crest of 94.1 feet, nearly 4.5 feet above the previous crest of April 1952. Convicts from the Minnesota state penitentiary worked long and hard to construct emergency dikes to save the business district from complete inundation. Many families in the area were evacuated.

The Cottonwood River at New Ulm, Minn., was in flood from April 6 to 16. During that period it exceeded the previous record stage of 16.94 feet twice. The second crest of 34.3 feet on April 12 exceeded the record crest of 1947 by nearly 17.5 feet.

The South Fork of the Zumbro River at Rochester, Minn., which suffered record flooding early in March had comparatively minor flooding during April. It fluctuated from above to below flood stage during the period from April 4 to 9. Four flood crests occurred during that period with the highest crest of 13.55 feet (flood stage 12 feet) occurring on April 6. Flooding along the main stem of the Zumbro was more severe and approached within 1 1/4 feet of the record March flood stage at Theilman, Minn., on April 7. This crest, and the ones on April 5 and April 8, exceeded the previous record stage of 43.43 feet which occurred in July 1951.

The Root River, which experienced record flooding during March, exceeded flood stage by 0.5 to 2.5 feet during the first half of April. It approached within 1 1/2 feet of the record March crest of 50.8 feet at Hokah, Minn., on April 6 and 7.

The upper Iowa River near Dorchester, Iowa, was out of its banks from April 3 to 9. It receded below bankfull stage briefly on April 4 and was back above flood stage again on April 5. The highest flood crest of the four reported during April was 17.5 feet (flood stage 14 feet) on April 6. This was less than one-half foot below the March 1 crest of 17.85 feet.

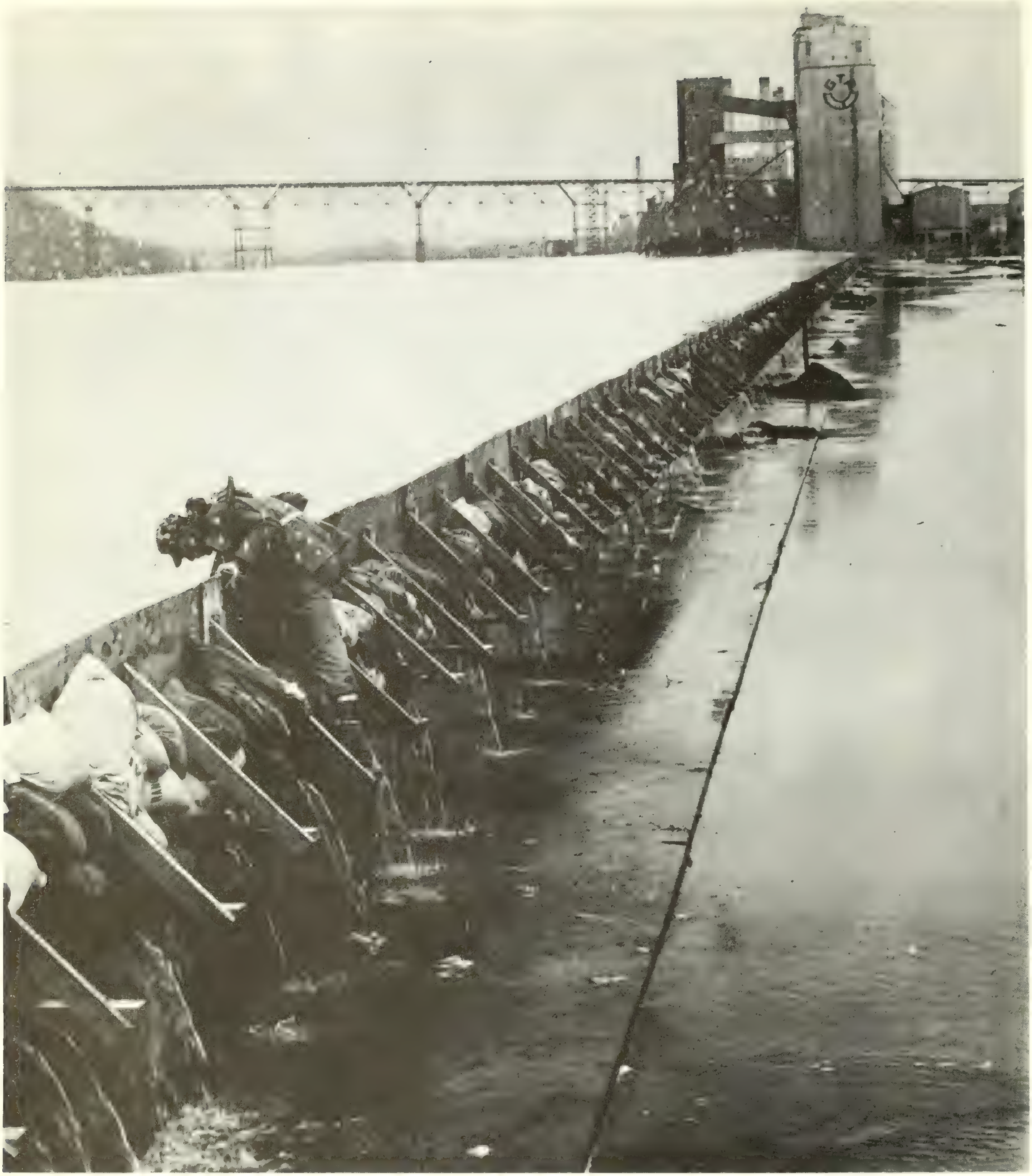
The Kickapoo River in Wisconsin exceeded flood stage by up to 2.3 feet during the first half of April. The flooding during March was 1 to 1.5 feet higher than in April but 2 to 2.5 feet below the previous maximum stage.

The Wisconsin River reached bankfull stage at Wisconsin Rapids, Wis., on April 13, but did not rise any higher. Farther downstream at Portage, it exceeded flood stage by nearly 1.5 feet on April 16.

Minor flooding occurred on the Turkey and Wapsipinicon Rivers in Iowa and on the Pecatonica and Rock Rivers in southern Wisconsin and Illinois. Flood damage was negligible as higher stages had been reached in the same areas in February and March. Only unplanted farmland and pastures were involved.

Major flooding occurred on streams in the interior sections of Iowa during April. The East Fork of the Des Moines River reached a record height at Humbolt, Iowa, and equalled the previous record at Estherville, Iowa. At Boone and Des Moines, Iowa, on the Des Moines, it was the second highest crest of record. Farther downstream, it was the third highest of record. On the Iowa River it was the highest of record at Wapello and the second highest of record at Marshalltown, Iowa. On other streams in Iowa, the crests were the third and fourth highest of record. Cities and towns along the river banks received ample warming from the Weather Bureau to prepare for the floods. So thorough were the preparations that, even though critical stages were reached, there were no major overflows that had not been anticipated.

A general period of showers and thunderstorms over most of Missouri and Illinois from April 3 to 6 produced general rises in all tributary streams in the two States to bankfull or slightly above during the first



Mississippi River at St. Paul, Minn., April 15, 1965. Stage, 25.5 feet. Crest, 26.0 feet, on April 16, 1965.

Checking the wall and the water. Shepard Road dike is checked by a workman. Water sprays through wooden topping on concrete main dike. (Courtesy St. Paul Dispatch and Pioneer Press.)

half of the month. General rains on the 15th produced some marked rises on most rivers and prolonged the flooding on the Illinois River and some of its tributaries. A third period of general rain on the 24th and 25th produced second crests above flood stage on the Illinois. Exceptionally intense rainfall, totaling from 2 to 4 inches in the upper portion of the Kaskaskia, produced a crest of 20.2 feet, 2 feet above flood stage, at Vandalia, Ill., on the 28th. The Big Muddy River at Murphysboro, Ill., was out of its banks from the 9th to the 22d.

Mississippi River Flood - April 1965 --Cold, rain, more cold, rain and snow, rain and snow, more snow, warm temperatures, and finally rain were the sequence of weather events that produced the highest water ever reported along the upper Mississippi River. This unusual weather led to unprecedented flooding along the Mississippi, which exceeded flood levels at all gaging stations from Libby, Minn., to Caruthersville, Mo., (below the mouth of the Ohio River). The only exception was St. Louis, Mo., where the crest came within 1.2 feet of flood stage on April 17. New record high stages were established from Fort Ripley, Minn., to Hannibal, Mo., a distance of 672 miles, during the period, April 16 to May 3. All gaging stations from St. Paul, Minn., to Muscatine, Iowa, experienced crest stages 1.5 to 4.5 feet above previous record flood peaks. The river was at a level higher than the previous maximum for an average of 13 days from St. Paul, Minn., to Burlington, Iowa. Some localities experienced overflow for as much as 43 successive days.

At the time the Mississippi was cresting at St. Paul, Minn., on April 16, contributions from downstream tributaries had already pushed the river up to levels approaching those attained during the major floods of 1947 and 1960 in the reach from Keithsburg, Ill., to Louisiana, Mo. A crest of 16.5 feet was observed at Keithsburg on April 17. The river then fell only slightly (0.6 foot) at Keithsburg before it began to rise again, reaching a second peak of 20.36 feet when the upstream crest arrived on April 27.

The crest became very flat as it progressed downstream so that near-crest conditions prevailed approximately 48 hours in advance of and following the time of the peak stage. As the upstream rise approached the Quincy, Ill., reach of the river, major levee failures resulted in a temporary reduction in stage. The river rose again after filling in back of the breaks. However, the upstream crest, when it arrived in the Quincy, Ill.,-Hannibal, Mo., area on May 3-4, was not as high as the crest that had already occurred on May 1, just prior to a major levee failure at Quincy.

May 1965.--Streams in the Upper Mississippi Basin that had reached record to near record crests during April were in recession during May, except for minor rises due to heavy precipitation.

The Crow River, which had reached a record crest of 19.28 feet at Rockford, Minn., on April 15, was back within its banks at all points by May 4.

The Minnesota River had receded within its banks in the reach and above Mankato, Minn., by May 1. In the reach below, where record crests occurred on April 12-14, it receded within its banks by May 17, except at Savage, Minn., where it continued in flood until June 20. Three rises occurred during May on the Minnesota River and its tributaries upstream from Mankato, Minn. The Cottonwood River near New Ulm, Minn., came closest to reaching flood stage (11 feet) on May 9 when it crested at 10.7 feet. The main stem of the Minnesota approached within 4 to 5 feet of flood stage on May 12, 19, and 30. These rises were caused by heavy rains on May 9, 16, and 23.

The Chippewa River at Durand, Wis., crested 4 feet below flood stage on May 11 and 2.5 feet below flood stage on May 19. The increased flow along the Chippewa produced a slight rise along the Mississippi River from its confluence near Alma, Wis., through La Crosse.

Frequent thundershowers throughout central Iowa produced minor flooding on the Raccoon and Des Moines Rivers during the latter part of May. The showers on May 25 totaled 3 inches or more in the area from Carroll to Iowa Falls, Iowa. The North Raccoon at Jefferson, Iowa, crested nearly 5 feet above flood stage.

In Illinois, minor flooding on the Kaskaskia and Illinois Rivers, which began in April, continued into May. General rains of 1 to 2 inches on May 6-10 prolonged the high stages. At some points on the Illinois, secondary crests above flood stage were recorded but they were lower than the April crests. The Vermillion River at Lowell, Ill., was slightly above flood stage on May 5-8.

Mississippi River Flood - May 1965.--The main stem of the Mississippi River, which reached the highest level of record in April was in recession from its mouth to below Burlington, Iowa, on May 1. It had receded within its banks at a few upstream points, (Minneapolis, Hastings, and Wabasha, Minn., and Alma, Wis.) by May 1. It was still above record levels in the beginning of the month in the reach from McGregor, Iowa, to below Burlington, Iowa, a distance of more than 230 miles. It remained above the previous record stage at Burlington, Iowa, for a total of 13 days, and above flood stage for a total of 36 days before receding within its banks on May 16. In the reach from Hannibal, Mo., to Clarksville, Mo., the Mississippi was out of its banks for a total of 43 days. In the reach below the Missouri River, there was no flooding during May. The Mississippi was back within its banks at all points on May 19. Perhaps the 1965 flood can be called the "worst" because of its magnitude in Iowa, Minnesota, and in parts of Wisconsin, Illinois, and Missouri. In other years floods have been more severe in nearly all basins of the Mississippi System.

Heavy rains on May 23-25 produced a rise over the upper Mississippi River, cresting at 9.65 feet at Fort Ripley, Minn., on May 28 (flood stage 10 feet) after receding to 8.35 feet on May 19. The combination of the rises on the Minnesota River and the upper Mississippi River resulted in the main stem rising at both Minneapolis and St. Paul, Minn., during the last week in May.

As the Mississippi River was receding from a crest of 10.5 feet at St. Paul, Minn., (flood stage 14 ft.) on the morning of May 31, heavy showers occurred over the area around 9 p.m. that evening. By early June 1, 7.44 inches of rain had fallen at South St. Paul. Stillwater, Minn., recorded 7.98 inches during the same period.

Missouri Basin Floods - March 1965.--There were two periods of flooding on the Floyd River in Iowa during March. The first rise was due to runoff from snowmelt. Mild weather during the last 2 days of February caused considerable thawing over the lower half of the Floyd River Basin and ice breakup. Another warm period on March 14-15 caused most of the remaining winter snow to melt and the ice to break up. Heavy runoff caused the Floyd to rise 2 1/2 to 3 feet above flood stage. The ice jammed and lodged. The Big Sioux River below Sioux Falls, S. Dak., rose to about three-quarters bankfull stage during this period. The ice broke loose from the banks, during this rise, but remained intact. In central and western South Dakota, the soil absorbed the small amount of melted snow. The rises on streams were minor.

Melting snow and accompanying light to moderate precipitation caused most tributaries of the Elkhorn River in Nebraska to run near bankfull stage during the first 7 days of March. The Elkhorn was at bankfull stage from West Point, Nebr., to the mouth from March 1 to 16. Overflow occurred in the vicinity of ice jams between West Point and Scribner, Nebr. The North Fork was near bankfull on March 1-4, between Pierce and Norfolk, Nebr. Snow depths over the eastern portion of the basin ranged from 4 to 8 inches in the beginning of March. Snow depths diminished to a trace from Norfolk westward. A snow survey on March 8 indicated a water content of about 1 inch in the heaviest snow cover near Lyons and Fremont, Nebr. Damages were confined mostly to pasturelands along the lower reaches of the Elkhorn. Some damage resulted to fences and a few homes in the town of Waterloo, Nebr. A few persons were evacuated from their homes.

A mild period on February 26-28, accompanied by some rain on the 28th caused rapid snowmelt and rapid runoff with severe flooding in the lower reaches of the Boyer River in western Iowa. The ground was still frozen to considerable depth, and practically all of the snowmelt was surface runoff. The high volume of water tore loose some of the ice in the stream, causing many ice jams. Many families in the southern and eastern parts of Missouri Valley, Iowa, were evacuated. Colder weather set in March 1 and remained for 4 days. Ice Jams continued at the mouth of the Boyer River impounding the water which poured into sections of that community and blocked main highways leading into it. Many additional families were evacuated from their homes by March 3. By March 5, the water receded about 1 foot, but the remaining water in the lowland portions of the town froze. The threat due to ice jams finally ended on March 17, when mild weather and rains caused the Boyer River to rise and clear out the ice jams. Flood damage was heavy. Over 200 homes reported water over the first floor to a maximum depth of 5 1/2 feet. Some residents were still removing foot-thick ice floes from their yards on March 22.

Light to mderate overflows developed on the Big Blue River from near DeWitt, Nebr., downstream into Tuttle Creek Reservoir, near Manhattan, Kans., on the night of February 28 - March 1. The Black Vermillion River at Frankfort, Kans., overflowed moderately during the first 2 days of March. Flooding occurred in the upper Kansas River Valley on Mill Creek at Paxico, Kans., and on Vermillion Creek at Wamego, Kans. Heavy snowmelt runoff during the latter part of February, augmented by rainfall of around an inch, caused the Big Blue River to rise up to over 4 feet above flood stage in the reach between Beatrice, Nebr., and Blue Rapids, Kans. Tributaries in the upper Kansas Basin rose to flood stage due to heavier rainfall, which exceeded 2 inches locally. The greater part of the snowmelt was released slowly by gradual daytime warming and nighttime freezing.

Minor overflow occurred on Stranger Creek at Easton, Kans., in the Kansas River Basin on March 17. Stages downstream rose to near bankfull at Tonganozie, Kans. A substantial rise of about two-thirds bankfull developed along the Marais des Cygnes in Kansas on March 17-19. The upper Republican River at Stratton, Nebr., rose to near flood stage on March 7 due to a brief ice jam. Losses were negligible from the minor overflow on Stranger Creek.

There were two periods of flooding in tributary streams in northwestern Missouri during March. The first rise occurred on March 1-4, and was due to rains of over an inch plus snowmelt. Minor flooding occurred intermittently along the Missouri below Nebraska City, Nebr. Minor flooding occurred on the Grand at Brunswick, Mo., on March 3 from water which backed up the mouth from the Missouri. The second rise was due to heavy rains during the night of March 16-17. This resulted in widespread overflow along most of the tributaries and minor intermittent flooding in the lower Missouri.

April 1965.--Runoff from melting snow in the Sage and Big Sandy Creeks in Hill County Mont., from April 12-17, resulted in flooding of lowlands. There was some damage to highways, culverts, and bridges. Flooding along the main stem of the Milk River was minor. Several sections of U. S. Highway No. 2 were covered with several inches of water for several hundred feet.

Rapid thawing of stream ice and low-level snowmelt throughout the lower Yellowstone River Basin in Montana during the period from April 1 to 7 caused localized ice jams. Flooding occurred along the Powder River in the vicinity of Broadus, Mont., and on the Yellowstone River from Billings to Sidney, Mont. A section of the Milwaukee Railroad track, west of Miles City, Mont., was washed out. Some damage resulted to summer cabins, recreational areas, roads, and bridges.

Mild weather on March 31 and April 1 caused heavy snowmelt and ice breakup on the Big Sioux and Floyd Rivers in northwestern Iowa. Cooler weather in northeastern South Dakota and southwestern Minnesota delayed melting in those areas for a few days. One to 2 inches of rain over most of the Floyd and Big Sioux Rivers on April 2-6 hastened the melting of the snow cover. The Floyd River rose out of its banks 3 to 5.5 feet from March 31 to April 9. The previous record stages at Alton, Iowa, were exceeded on April 1 and 6. The Big Sioux River was out of its banks from the mouth of the Rock River to the edge of Sioux City, Iowa, throughout the first half of April. On April 8, it approached within 3/4 foot of the previous record stage of 21.56 feet recorded in April 1960 at Akron, Iowa.

Lowland flooding began along the Little Sioux River at Spencer, Iowa, on March 31. With the ground still frozen, practically all of the snowmelt was surface runoff into the frozen streams. The runoff caused the ice to break up, resulting in many local ice jams. Showers and thundershowers, totaling 1/2 to 3/4 inch occurred in the basin during the late afternoon and night of April 1-2. Additional showers and thundershowers (0.8 to 1.8 inches) occurred during the night of April 5 - 6. This rain completely dissipated the ice. Record stages were reached on the Little Sioux at Linn Grove, Peterson, Cherokee, and Turin, Iowa, between April 6 and 8. The Flooding continued through April 22 at Linn Grove, Iowa.

Melting snow in southwestern Iowa and northwestern Missouri on April 1 followed by repeated moderate to heavy rains during the first 2 weeks of April caused prolonged flooding, especially along the Grand River in Missouri. The Grand was out of its banks at Sumner, Mo., for 7 days and at Brunswick for 8 days. Crests ranged from 1 to 4.5 feet above flood stage.

Rainfall ranging from 3 to 4 inches on April 2 - 3 over the Osage and Sac Rivers in Missouri caused 2 to 4 feet of flooding along those streams during the first part of April. Minor damages were reported along the Sac.

THE SPRING FLOODS OF MARCH-MAY 1965 IN THE UPPER MISSISSIPPI, MISSOURI AND RED RIVER OF THE NORTH BASINS

Minor flooding occurred along the main stem of the Missouri at Hermann and St. Charles, Mo., on April 6-14.

May 1965.--Minor rises occurred on the Elkhorn at and below West Point, Nebr., on May 9-11, when the river ran near bankfull. Heavy rains on May 25 over the central and southeastern portions of the Elkhorn Basin caused brief overflow on some of the smaller tributaries. Below Winslow, Nebr., the river ran near bankfull on May 25-27. No damage was reported.

Locally heavy rains during the afternoon of May 25 over the upper and middle reaches of the Little Sioux River and the Boyer River in northwestern Iowa resulted in some slight overflows. Flooding at Linn Grove, Iowa, was minor in comparison to the record flooding during April. The Boyer River, near Denison, Iowa, was out of its banks for a brief period on May 25. Two bridges were washed out. Locally heavy rains during the night of May 25 over parts of the Loup River Basin in Nebraska resulted in some slight overflows in the lower reaches. Locally heavy rains on May 21 caused more than 2 feet of overflow on Salt Creek at Ashland, Nebr., on May 22. Some county roads were inundated. Mill Creek, which flows into the Platte River at Louisville, Nebr., overflowed its banks from the heavy rain. Several families were evacuated from their homes for a short period.

Major tributary flooding occurred on Beaver Creek in northwest Kansas on May 24-26, which extended downstream to the vicinity of Danbury, Nebr., on May 27. The Little Blue River at Deweese, Nebr., exceeded the previous record stage of 13.3 feet recorded on June 17, 1957, by 1.3 feet on May 22. This was the most extensive local overflow in 45 years. The only flooding on the Big Blue was at Crete, Nebr., on May 22-27. Minor overflows occurred on the Republican at Orleans, Nebr., on May 27 and on the West Fork Big Blue at Dorchester, Nebr., on May 25. Turkey Creek was out of its banks at Wilber, Nebr., on May 24-27, with a crest over 3 feet above flood stage on May 24. The crest of 14.05 feet was 1.5 feet below the record crest of June 1957. This flooding was due to general rains of 2 to 5 inches, with local reports of 6 to 8 inches of rain on May 22. This was augmented by 1- to 3-inch rains on May 23 in extreme northwest Kansas. Comparatively heavy agricultural and highway losses were sustained in limited areas.

Heavy rain on May 7-8 resulted in minor flooding on the lower Grand on May 9-10. Heavy rain in southwest Iowa on the night of May 21-22 caused brief flooding on the lower Nishnabotna River on May 22.

Heavy rains in western Iowa and eastern Nebraska on May 22 brought rises to near flood stage along the Missouri above Boonville, Mo., on May 23. This was followed by general moderate rains on May 25-26, which caused the Missouri to rise over its banks at St. Joseph, Mo., on May 27.

Red River of the North Basin Floods - April 1965.--The Red River of the North which flows between Minnesota and North Dakota rose above flood stage at Wahpeton, N. Dak., on April 9. The flooding moved downstream to Fargo, N. Dak., by April 11. Flooding began along tributary streams on the same date. A record crest of 25.8 feet occurred on the Red Lake River at Crookston, Minn., on April 13, exceeding the previous record crest of 25.70 ft., which occurred in May 1950. The Sheyenne River exceeded the previous record stage at West Fargo, N. Dak., by 0.14 foot on April 19. Crests along the main stem of the Red River of the North in the reach from Fargo to Grand Forks, N. Dak., ranged from 13 to 17 feet above flood stage, but 5.5 to 10 feet below the previous record stages. Above Grand Forks, the crests ranged from 5.5 to 8.5 feet above flood stage. At Drayton, N. Dak., the Red River of the North approached the previous record stage of 41.58 feet which occurred in May 1950 by 1.2 feet.

May 1965.--The Red River of the North was in recession along its entire course on May 1. It was still above flood stage at Halstad, Minn., and Grand Forks, N. Dak., but receded within its banks before the end of the day. The stage at Drayton, N. Dak., on May 1 was 38.5 feet, 6.5 feet above flood stage, and at Pembina, N. Dak., it was 46.3 feet, 4.3 feet above flood stage. The Red River of the North was back within its banks at all points within the United States on May 8.

FLOOD DAMAGES

Flood damage figures are incomplete, but are expected to range between $100 million and $150 million. This is considerably more than the damages over the same area in the floods of 1951 and 1952, which totalled $18.5 million and $19 million respectively.

The total loss of life as compiled by the American Red Cross was 15. The greatest loss of life occurred in Minnesota, where floods took a toll of 13 lives. Over 700 persons were injured; about 60 of these were hospitalized.

More than 11,000 homes in Illinois, Iowa, Minnesota, Missouri, and North Dakota were damaged. Over 1,000 of these suffered major structural damage. In addition nearly 1,000 farm buildings received major damage. About 12,000 families suffered some loss. Approximately 150,000 workers and disaster victims received food and shelter from the American Red Cross.

The Corps of Engineers provided technical assistance and several hundred thousand sand bags for at least 100 communities.

Damage to crops and hayfields was heavy, consisting of soil erosion, wrecked fences, loss of crops, destruction of soil conservation structures, and deposits of debris. Cost of debris removal was estimated as high as $60 an acre.

A summary of flood damages for a few selected communities follows:

Mankato, Minn.,--Approximately 1,500 families were evacuated from homes in Mankato and North Mankato. A dozen businesses were shut down. The mayor estimated damages approximating $5 million.

St. Paul, Minn.,--More than 200 families were evacuated from their homes. A few businesses were forced to shut down, but most were back in operation by April 29. Early estimates placed structural damage at $700,000.

Winoma, Minn.,--Residents were evacuated from about 250 homes as a precautionary measure. Less than a dozen business places were shut down. Damage was estimated at $3 million. This includes the cost of building elaborate dikes.

In the Missouri Basin, damages in the Floyd and Big Sioux Basins were entirely rural. About 7,000 acres in the Floyd Basin and 42,000 acres in the Big Sioux Basin were flooded. Ice breakup and ice jamming caused serious damage to farm fences, water gates, and county and privately owned bridges. Semidormant legumes, winter wheat, and spring grass seedings were destroyed in the lower section due to the long duration of overflow. While the flooding was not as deep or extensive as in 1960 and 1962, the Big Sioux averaged about a mile wide from Hawarden, Iowa, to the northern edge of Sioux City. Thirty-five farmsteads were isolated by flood water, and many of them were flooded. In the Little Sioux Basin, considerable damage occurred in urban areas as well. At Cherokee, Iowa, the Corps of Engineers estimated damages at $666,000.

In the Red River of the North Basin, considerable damage occurred to city property and farmlands, especially in the reach north of Fargo-Moorhead. Extensive flooding of farmlands occurred with loss of some topsoil. The planting of spring crops was delayed. Some bridges were lost and roads damaged. Extensive sand-bagging was done to protect property at many locations.

FLOOD WARNINGS ISSUED BY THE WEATHER BUREAU

Effective forecasts, warnings, and advisories were issued by the Weather Bureau and given wide dissemination. An advisory on the flood potential in the Upper Mississippi Basin was issued as early as March 19 by Weather Bureau River Forecasters. On that date, flooding was predicted for all points along the Mississippi River as far downstream as Louisiana, Mo. Record flooding was indicated for the Crow and Rum Rivers. The Spring Outlook pointed out that if rainfall of 1 inch should fall just before or during the time of the forecasted crests, the resulting crests in other parts of the Mississippi Basin would be near those recorded in 1952. If more than 1 inch of rain occurred, the crests would be even higher.

An advisory on the flood potential in the Missouri Basin on the Floyd and Big Sioux Rivers in Iowa was issued on March 26, 2 weeks before the actual crests. On April 1 an advisory was issued on the Little Sioux Basin based on a snow survey made on March 26-29. These forecasts proved remarkably accurate. Daily advisories were continued throughout most of the flood period.

On the basis of the warnings the Minnesota Department of Civil Defense called a meeting on March 25 of State and Federal Agencies concerned to implement plans for protective measures against the major flooding expected in Minnesota within the next 2 to 3 weeks. On March 27, the South St. Paul stockyards began to build an earthen levee to protect the yards. It was completed within 10 days. This levee was large enough so that earth-moving equipment could travel on top of it. Its cost more than paid for itself, as the stockyards were dry and out of operation for only 10 days (April 10-19). (In the March 1952 flood, the stockyards were inundated). On March 29, the city of St. Paul, Minn., started to ready the flood wall and to begin preparations to add extensions should it become necessary. On March 31, the Red Cross, on the basis of Weather Bureau forecasts, moved several families from South St. Paul. On April 5-7, many families in Lilydale and Invergrove were evacuated. At points downstream along the Mississippi River, from St. Paul through La Crosse, the evacuation of residents from lowland areas was continuous from April 1 through April 6.

Forecasts for record flooding along the Mississippi River were issued on April 8. On that date, a crest of 27.0 feet was forecast to occur on April 16 at St. Paul. The river stage at that time was 5.6 feet. On the basis of this forecast, the city of St. Paul directed its employees to install plywood extension on top of the flood wall. These extensions were completed by April 11, 5 days before the expected record crest. The observed crest at St. Paul was 26.0 feet on April 16.

On April 9, forecasts were issued for the Mississippi River below St. Paul for stages exceeding the 1952 flood. At Winona, Minn., and La Crosse, Wis., the peak of the flood was forecast to occur on April 20-21. Both municipalities, on the basis of this forecast, prepared for this record flood by building protective dikes. Although there were minor failures, the dikes paid off and saved much misery and property loss.

Forecasts for the Red River of the North Basin, based on snow surveys, were issued in ample time to be of considerable value in planning the moving of property and evacuation of some people living in the flood plains.

Special bulletins concerning the expected flood conditions over the flood area were issued daily and disseminated by press, radio, and TV. Newspapers, radio and TV stations cooperated fully in keeping the public advised. Cities and towns along the river banks received adequate warning to prepare for the floods. Several cities secured supplies of sandbags for the anticipated floods. So thorough had been the preparation, that, even though critical stages were reached, there were no unexpected major overflows.

COMPARATIVE CREST STAGE DATA OF MAJOR FLOODS

TABLE 1. APRIL 1965

River and station	Flood stage	Above flood stages March-May 1965		Crest * March-May 1965		Previous Maximum Crest of record	
		From—	To—	Stage	Date	Stage	Date
Upper Mississippi Basin	*Ft.*			*Ft.*		*Ft.*	
Crow: Delano, Minn.	8	Apr. 9	May 4	18.40	Apr. 13		
Rockford, Minn.	10	Apr. 11	May 1	19.28	Apr. 15	16.24	Apr.13,1952
Rum: St. Francis (nr), Minn.	8	Apr. 17	Apr. 25	11.5	Apr. 19	11.03	Apr.13,1952
St. Croix: Stillwater, Minn.	87	Apr. 12	Apr. 29	94.1	Apr. 18	89.71	Apr.14,1952
Yellow Medicine: Granite Falls (nr), Minn.	6	Apr. 9	Apr. 17	9.8	Apr. 10	17.5	Jun. 1919
Redwood: Redwood Falls(nr), Minn.	6	Apr. 8	Apr. 14	J15.88	Apr. 8	P17.0	1917
Cottonwood: New Ulm(nr), Minn.	11	Apr. 6	Apr. 16	(J20.86	Apr. 8	16.94	Jul. 9,1947
				(34.3	Apr. 12		
Le Sueur: Rapidan (nr), Minn.	15	Apr. 6	Apr. 12	22.10	Apr. 8	22.5	May 22,1960
Minnesota: Montevideo, Minn.	14	Apr. 10	Apr. 26	16.64	Apr. 14	20.02	Apr.10,1952
Mankato, Minn.	19	Apr. 6	Apr. 23	29.07	Apr. 9	P29.9	Apr.26,1881
Carver, Minn.	18	Apr. 7	May 8	34.28	Apr. 12	28.31	Apr.16,1952
Chaska, Minn.	18	Apr. 7	May 9	34.25	Apr. 13	29.1	Apr.15,16, 1952
Savage, Minn.	698	Apr. 8	Jun. 20	719.35	Apr. 14	714.2	Apr.16,1952
Mendota, Minn.	699	Apr. 8	May 17	717.46	Apr. 16		
Chippewa: Durand, Wis.	11	(Apr. 7	Apr. 10	13.7	Apr. 9		
		(Apr. 11	Apr. 20	13.4	Apr. 15	P18.4	Sep.12,1884
South Fork Zumbro: Rochester, Minn.	12	(Mar. 1	Mar. 2	19.12	Mar. 1	18.5	Mar.29,1962
		(Apr. 4	Apr. 5	13.2	Apr. 5		
		(Apr. 6	Apr. 7	13.55	Apr. 6		
		(Apr. 7	Apr. 9	(12.4	Apr. 7		
				(13.3	Apr. 8		
Bear Creek: Rochester Belt Line, Minn.	8	Mar. 1	Mar. 1	9.8	Mar. 1		
Zumbro: Zumbro Falls, Minn.	18	Mar. 1	Mar. 3	28.4	Mar. 2	30.80	Jul.22,1951
		Apr. 4	Apr. 10	(27.25	Apr. 7		
				(26.0	Apr. 8		
Theilman, Minn.	38	Mar. 1	Mar. 4	45.75	Mar. 2	43.43	Jul.22,1951
		Apr. 4	Apr. 12	(41.0	Apr. 5		
				(44.2	Apr. 5		
				(44.51	Apr. 7		
				(44.2	Apr. 8		
Whitewater: Beaver (nr), Minn.	7	Apr. 3	Apr. 10	8.70	Apr. 4	10.75	Jun.13,1950
Trempealeau: Dodge, Wis.	7	Mar. 3	Mar. 5	8.1	Mar. 4	10.35	Apr. 4,1956
		Apr. 5	Apr. 13	9.06	Apr. 7		
Black: Galesville, Wis.	12	Apr. 12	Apr. 15	13.60	Apr. 13	14.31	Sep.11,1938
Root: Houston, Minn.	15	(Mar. 1	Mar. 3	19.5	Mar. 2	18.05	Sep.10 & 11, 1938
		(Apr. 4	Apr. 10	(15.5	Apr. 4		
				(16.1	Apr. 6		
				(17.07	Apr. 7		
				(17.05	Apr. 9		
Hokah, Minn.	47	Mar. 1	Mar. 4	50.8	Mar. 2	50.0	Mar.9,1950
		Apr. 1	Apr. 2	47.5	Apr. 2		
		Apr. 4	Apr. 13	(49.0	Apr. 4		
				(49.3	Apr. 6,7		
				(49.0	Apr. 12		
Upper Iowa: Dorchester (nr), Iowa	14	Mar. 1	Mar. 3	17.85	Mar. 1	22.20	Feb.28,1948
		Apr. 3	Apr. 4	16.05	Apr. 4		
		Apr. 5	Apr. 9	(17.5	Apr. 6		
				(16.80	Apr. 7		
				(17.25	Apr. 8		
Kickapoo: La Farge, Wis.	12	Mar. 2	Mar. 3	12.55	Mar. 2	P15.5	Aug. 1935
Soldiers Grove, Wis.	723	(Mar. 1	Mar. 8	726.0	Mar. 3		
		(Apr. 4	Apr. 13	(724.8	Apr. 8		
				(725.3	Apr. 12		
Gays Mills, Wis.	698	(Mar. 1	Mar. 8	(701.05	Mar. 3		
		(Apr. 5	Apr. 14	(698.8	Apr. 5		
				(698.9	Apr. 6		
				(698.6	Apr. 7		
				(699.1	Apr. 8		
				(699.7	Apr. 12		

COMPARATIVE CREST STAGE DATA OF MAJOR FLOODS

River and station	Flood stage	Above flood stages March-May 1965		Crest * March-May 1965		Previous Maximum Crest of record	
		From—	To—	Stage	Date	Stage	Date
Upper Mississippi Basin (Cont'd.)	*Ft.*			*Ft.*		*Ft.*	
Kickapoo (Cont'd.): Steuben, Wis.	8	(Mar. 1	Mar. 11	11.05	Mar. 3	13.66	Jul.22,1951
				11.2	Mar. 4		
				10.0	Mar. 6,8		
				9.6	Mar. 10		
		(Apr. 1	Apr. 16	(9.35	Apr. 7		
				(9.3	Apr. 9,11		
				(9.6	Apr. 13		
Wisconsin: Wisconsin Rapids, Wis.	12	Apr. 13	Apr. 13	12.0	Apr. 13	14.1	Mar.24,1935
Portage, Wis.	17	Apr. 15	Apr. 19	18.4	Apr. 16	20.5	Sep.14,1938
Turkey: Garber, Iowa	17	(Mar. 1	Mar. 3	26.0	Mar. 1	28.06	Feb.23,1922
		(Apr. 1	Apr. 1	18.95	Apr. 1		
Wapsipinicon: Independence, Iowa	12	Apr. 7	Apr. 8	12.3	Apr. 7	18.74	Jun.14,1947
De Witt, Iowa	10	Apr. 6	Apr. 17	11.1	Apr. 7	12.07	Jun.27,1944
East Branch Pecatonica: Blanchardville, Wis.	11	Mar. 1	Mar. 3	14.9	Mar. 2	15.74	Feb.28,1948
Pecatonica: Darlington, Wis.	11	Mar. 1	Mar. 3	14.7	Mar. 2	20.71	Jul.16,1950
		Mar. 2	Mar. 10	19.9	Mar. 4		
Martintown, Wis.	11	Apr. 1	Apr. 9	15.2	Apr. 4	20.24	Feb.29,1948
Freeport, Ill.	13	(Mar. 5	Mar. 9	14.3	Mar. 6		
		(Apr. 5	Apr. 7	13.3	Apr. 6	17.0	Mar.16,1929
Shirland, Ill.	10	Apr. 1	Apr. 12	13.9	Apr. 4	17.08	Apr. 3,1960
Rock: Joslin, Ill.	10	Apr. 2	Apr. 18	13.1	Apr. 8	16.23	Mar. 3,1948
Shell Rock: Marble Rock, Iowa	4	(Mar. 1	Mar. 3	9.3	Mar. 2	11.8	Mar.28,1961
		(Apr. 4	Apr. 15	E 8.9	Apr. 6		
Shell Rock, Iowa	12	(Mar. 1	Mar. 3	14.5	Mar. 2	16.26	Mar.28,1961
		(Apr. 2	Apr. 2				
		(Apr. 5	Apr. 14	15.1	Apr. 7		
Black Hawk Creek: Hudson, Iowa	12	Mar. 1	Mar. 3	15.3	Mar. 1	15.46	Feb.21,1953
West Fork Cedar: Finchford, Iowa	12	Mar. 3	Mar. 5	13.0	Mar. 3		
Cedar: Austin, Minn.	12	(Mar. 1	Mar. 1	18.0	Mar. 1		
		(Apr. 5	Apr. 10	16.2	Apr. 6		
Charles City, Iowa	12	(Mar. 1	Mar. 4	21.6	Mar. 2		
		(Apr. 5	Apr. 12	19.1	Apr. 7	21.60	Mar.27,1961
Janesville, Iowa	11	(Mar. 3	Mar. 5	16.4	Mar. 3		
		(Apr. 7	Apr. 11	14.3	Apr. 7		
Waterloo, Iowa	15	Apr. 6	Apr. 14	21.7	Apr. 8	21.86	Mar.29,1961
Cedar Rapids, Iowa	13	Apr. 8	Apr. 13	18.5	Apr. 10	20.1	Mar.19,1929
Iowa: Marshalltown, Iowa	13	(Mar. 1	Mar. 4	16.5	Mar. 2		
		(Apr. 1	Apr. 18	17.6	Apr. 6	17.74	Jun. 4,1918
Wapello, Iowa	10	(Mar. 4	Mar. 11	14.2	Mar. 5		
		(Apr. 7	Apr. 22	17.2	Apr. 13	17.02	Apr. 5,1960
		(Apr. 25	Apr. 27				
North Fork Skunk: Sigourney,Iowa	16	(Mar. 17	Mar. 17	18.15	Mar. 17		
		(Apr. 6	Apr. 6				
		(Apr. 8	Apr. 9	17.55	Apr. 8	25.33	Mar.31,1960
Skunk: Ames, Iowa	10	(Mar. 1	Mar. 1	10.9	Mar. 1		
		(Apr. 1	Apr. 2				
		(Apr. 5	Apr. 7	12.55	Apr. 6		
Oskaloosa, Iowa	15	(Mar. 4	Mar. 4	15.3	Mar. 4		
		(Mar. 17	Mar. 17	17.5	Mar. 17		
		(Apr 3	Apr. 13	19.85	Apr. 9	P25.8	May 23,1944
Augusta, Iowa	15	(Mar. 18	Mar. 19	16.95	Mar. 18		
		(Apr. 9	Apr. 13	16.45	Apr. 12	25.0	Apr. 3,1960
West Fork Des Moines: Humbolt, Iowa	8	Apr. 4	Apr. 17	13.9	Apr. 8	12.2	Jun.23,1947
East Fork Des Moines: Humbolt, Iowa	20	Apr. 6	Apr. 10	23.1	Apr. 9		
Boone: Webster City, Iowa	10	Apr. 5	Apr. 11	15.9	Apr. 6	P19.1	Jun.10,1918
North Raccoon: Jefferson, Iowa	10	(Apr. 1	Apr. 14	15.65	Apr. 4		
		(May 26	May 29	14.9	May 27	22.3	Jun.23,1947
South Raccoon: Redfield, Iowa	14	(Mar. 1	Mar. 2	15.0	Mar. 2		
		(Mar. 17	Mar. 17	19.65	Mar. 17		
		(Apr. 1	Apr. 2			29.04	Jul. 2,1958
		(Apr. 5	Apr. 6	17.0	Apr. 5		
Raccoon: Jefferson, Iowa	10	(Mar. 1	Mar. 4	13.85	Mar. 2		
		(Mar. 13	Mar. 19	12.1	Mar. 17		

COMPARATIVE CREST STAGE DATA OF MAJOR FLOODS

TABLE 1. (Cont'd.) APRIL 1965

River and station	Flood stage	Above flood stages March-May 1965		Crest * March-May 1965		Previous Maximum Crest of record	
		From–	To–	Stage	Date	Stage	Date
Upper Mississippi Basin (Cont'd.)	Ft.			Ft.		Ft.	
Raccoon (Cont'd.): Van Meter, Iowa	13	(Mar. 2	Mar. 2	15.2	Mar. 2		
		(Mar. 17	Mar. 18	18.2	Mar. 17	21.77	Jul. 3,1958
		(Apr. 1	Apr. 1				
		(Apr. 4	Apr. 11	18.4	Apr. 6		
Middle: Indianola (nr), Iowa	19	(Mar. 17	Mar. 17	20.45	Mar. 17		
		(Apr. 6	Apr. 6	21.0	Apr. 6	28.27	Jun.13,1947
South: Ackworth, Iowa	19	(Mar. 17	Mar. 17	25.0	Mar. 17		
		(Apr. 5	Apr. 5	22.8	Apr. 5	25.53	Mar.19,1962
Cedar Creek: Bussey, Iowa	16	Mar. 17	Mar. 17	19.1	Mar. 17	H28.45	Jun. 1946
Des Moines: Boone, Iowa	12	Apr. 3	Apr. 17	22.9	Apr. 9	25.3	Jun.22,1954
Des Moines (2nd Ave.) Iowa	23	Apr. 6	Apr. 16	28.7	Apr. 10	30.16	Jun.24,1954
Des Moines (SE 14th St.), Iowa	21	(Mar. 18	Mar. 18	21.5	Mar. 18		
		(Apr. 2	Apr. 19	29.8	Apr. 11	P30.5	May 31,1903
		(May 30	May 30	21.1	May 30		
Tracy, Iowa	14	(Mar. 3	Mar. 8	19.1	Mar. 5		
		(Mar. 17	Mar. 20	18.3	Mar. 18		
		(Apr. 2	Apr. 21	23.2	Apr. 11	26.5	Jun.14,1947
Eddyville, Iowa	15	(Mar. 4	Mar. 9	19.7	Mar. 5	28.1	Jun.14,1947
		(Mar. 16	Mar. 21	19.8	Mar. 19		
Ottumwa, Iowa	10	(Mar. 17	Mar. 21	12.6	Mar. 17	23.0	May 31,1903
		(Apr. 5	Apr. 21	18.3	Apr. 11		
		(May 30	May 30	10.0	May 30		
Keosauqua, Iowa	15	(Mar. 5	Mar. 7	17.7	Mar. 5		
		(Apr. 9	Apr. 16	19.4	Apr. 12	P27.85	Jun. 1,1903
Fox: Wayland, Mo.	15	Apr. 6	Apr. 6	15.9	Apr. 6	21.53	Jun.29,1933
Salt: New London, Mo.	19	(Mar. 18	Mar. 19	21.1	Mar. 18		
		(Apr. 7	Apr. 8	21.5	Apr. 7	29.92	Aug. 2,1958
Fox: Dayton, Ill.	12	(Mar. 21	Mar. 22	14.6	Mar. 21		
		(Mar. 25	Mar. 25	12.1	Mar. 25	32.04	Jan.30,1952
Vermilion: Lowell, Ill.	10	(Apr. 7	Apr. 7	10.1	Apr. 7		
		(May 5	May 8	10.25	May 8	15.30	Jul.15,1958
Sangamon: Riverton, Ill.	13	Apr. 13	Apr. 19	13.8	Apr. 17	31.52	May 19,1943
La Moine: Ripley, Ill.	22	Apr. 7	Apr. 11	23.8	Apr. 8	26.03	Apr.25,1944
Illinois: Morris, Ill.	13	(Apr. 7	Apr. 7	13.0	Apr. 7	P26.85	1866
		(Apr. 26	Apr. 27	16.0	Apr. 26		
LaSalle, Ill.	20	(Mar. 18	Mar. 19	20.95	Mar. 18	31.0	May 22,1943
		(Apr. 7	Apr. 17	21.9	Apr. 7		
		(Apr. 25	May 1	23.35	Apr. 26		
		(May 6	May 9	21.3	May 6		
Peoria, Ill.	18	(Apr. 11	Apr. 19	18.6	Apr. 12	28.6	May 23,1943
		(Apr. 27	May 4	19.4	Apr. 29		
		(May 8	May 11	18.3	May 9		
Havana, Ill.	14	(Mar. 20	Mar. 24	(14.45	Mar. 21	27.3	May 25,1943
		(Apr. 6	May 20	(17.2	Apr. 16		
				(17.4	Apr. 29		
Beardstown, Ill.	14	Apr. 7	May 20	(18.45	Apr. 17	29.7	May 26,27, 1943
				(17.72	May 2		
Meredosia, Ill.	10	Mar. 17	May 25	(12.3	Mar. 22	28.61	May 26,1943
				(17.65	Apr.18,19		
				(16.9	May 3		
Meramec: Pacific, Mo.	11	Apr. 8	Apr. 9	14.6	Apr. 8	P30.8	Aug.22,1915
Kaskaskia: Vandalia, Ill.	18	Apr. 27	Apr. 30	20.2	Apr. 28	27.39	Jun.29,1951
Carlyle, Ill.	21	May 3	May 5	21.4	May 4		
Big Muddy: Murphysboro, Ill.	16	Apr. 9	Apr. 22	17.4	Apr.12,13	36.01	Jan.28,1949
Mississippi: Libby, Minn.	13	Apr. 21	May 6	14.50	Apr. 24	20.02	May 17,1950
Aitkin, Minn.	12	Apr. 14	May 6	(14.4	Apr. 18		
				(14.5	Apr. 26	19.49	May 20,1950
Fort Ripley, Minn.	10	Apr. 12	May 4	13.55	Apr. 16	13.3	May 22,1950
Minneapolis, Minn.	16	(Apr. 12	Apr. 12	J16.6	Apr. 12		
		(Apr. 14	Apr. 22	20.0	Apr. 16		
St. Paul, Minn.	14	Apr. 10	May 2	26.0	Apr. 16	22.02	Apr.16,1952
Hastings, Minn.	18	Apr. 12	Apr. 28	25.40	Apr. 17	20.93	Apr.16,1952
Red Wing, Minn.	14	Apr. 12	May 1	20.9	Apr. 18	16.85	Apr.18,1952

COMPARATIVE CREST STAGE DATA OF MAJOR FLOODS

TABLE 1. (Cont'd.) APRIL 1965

River and station	Flood stage	Above flood stages March-May 1965		Crest * March-May 1965		Previous Maximum Crest of record	
		From–	To–	Stage	Date	Stage	Date
Upper Mississippi Basin (Cont'd.)	Ft.			Ft.		Ft.	
Mississippi (Cont'd.): Lake City, Minn.	14	Apr. 10	May 7	22.18	Apr. 19		
Wabasha, Minn.	16	Apr. 14	Apr. 27	20.05	Apr. 19	P17.1	Jun.18,1880
Alma, Wis.	16	Apr. 14	Apr. 27	19.85	Apr. 19		
Winona, Minn.	13	Apr. 10	May 4	20.71	Apr. 19	17.91	Apr.20,1952
La Crosse, Wis.	12	Apr. 9	May 6	17.9	Apr. 21	16.5	Jun.19,1880
Lansing, Iowa	18	Apr. 18	May 3	22.52	Apr. 22	P19.9	Jun.20 or 21,1880
McGregor, Iowa	18	Apr. 14	May 6	25.4	Apr. 24	21.10	Jun.22,1880
Guttenberg, Iowa	15	Apr. 12	May 9	23.65	Apr. 24	20.1	1880
Dubuque, Iowa	17	Apr. 13	May 11	26.81	Apr. 26	22.70	Apr.25,1952
Clinton, Iowa	16	Apr. 15	May 13	24.85	Apr. 28	20.92	Apr.28,1952
Davenport, Iowa	15	Apr. 16	May 12	22.48	Apr. 28	20.9	Mar.10,1868
Muscatine, Iowa	16	Apr. 13	May 14	24.81	Apr. 29	21.05	Apr.28,1952
Keithsburg, Ill.	12	Apr. 8	May 17	(16.5	Apr. 17		
				(20.36	Apr. 27	17.1	Apr.29,1951
Burlington, Iowa	15	Apr. 11	May 16	21.0	Apr. 30	18.94	Jun. 1851
Keokuk, Iowa	16	Apr. 10	May 13	22.14	May 1	21.83	Apr. 3,1960
Gregory Landing, Mo.	15	Apr. 7	May 15	(21.61	Apr. 16	22.31	Apr. 4,1960
				(22.71	May 1		
Quincy, Ill.	17	Apr. 7	May 17	(24.25	Apr. 17		
				(24.68	May 1	24.38	Apr. 4,1960
				(24.30	May 4		
Hannibal, Mo.	16	Mar. 19	Mar. 20	(17.2	Mar. 19		
		Apr. 6	May 18	(23.82	Apr. 17	24.1	Jun.10,1947
				(24.28	May 3		
Louisiana, Mo.	15	(Mar. 18	Mar. 20	16.7	Mar. 19		
		(Apr. 7	May 19	(21.6	Apr. 17	22.6	Jun.22,1947
				(22.10	May 1		
Clarksville, Mo.	25	(Mar. 18	Mar. 21	(26.8	Mar. 20		
		(Apr. 7	May 19	(31.9	Apr. 18	32.53	Jun.22,1947
				(32.2	May 2		
Winfield, Mo.	26	(Mar. 20	Mar. 21	(26.2	Mar. 21		
		(Apr. 8	May 19	(32.4	Apr. 9	33.64	Jun.24,1947
				(32.7	May 2		
Grafton, Ill.	18	Apr. 8	May 19	(23.8	Apr. 19		
				(23.4	May 2	P32.13	Jun. 1844
Alton, Ill.	21	Apr 8	May 14	(25.2	Apr. 17		
				(23.3	May 1	P36.94	Jun. 1844
Chester, Ill.	27	Apr. 9	Apr. 23	29.32	Apr. 17	P39.83	Jun.30,1844
Cape Girardeau, Mo.	32	Apr. 9	Apr. 24	34.40	Apr. 18	P42.53	Jul. 4,1844
Missouri Basin							
Milk: Havre, Mont.	14	Apr. 12	Apr. 16	15.6	Apr. 13	L19.30	Apr.12,1899
Hinsdale, Mont.	104	Apr. 13	Apr. 15	106.3	Apr. 14		
Nashua, Mont.	20	Apr. 14	Apr. 14	20.0	Apr. 14	31.38	Apr.18,1952
Rock: Rock Rapids, Iowa	9	Apr. 5	Apr. 7	12.0	Apr. 7		
Rock Valley, Iowa	11	Apr. 1	Apr. 9	14.0	Apr. 2	P17.0	1897
				15.0	Apr. 7		
Big Sioux: Brandon (nr), S. Dak.				16.0	Apr. 9		
Hawarden, Iowa	15	Apr. 2	Apr. 14	19.9	Apr. 8	22.3	Apr. 1,1960
Akron, Iowa	16	Apr. 2	Apr. 15	20.85	Apr. 8	21.56	Apr. 1,1960
Floyd: Alton, Iowa	12	Feb. 28	Mar. 1	13.0	Mar. 1		
		Mar. 13	Mar. 17	14.9	Mar. 16		
		Mar. 31	Apr. 7	(17.4	Apr. 1		
				(16.85	Apr. 4	17.0	Mar.28,1960
				(17.2	Apr. 6		
Le Mars, Iowa	19	Mar. 31	Apr. 8	E22.0	Apr. 1	P26.4	Jun. 8,1953
James, Iowa	16	Feb. 28	Mar. 2	18.4	Mar. 1		
		Mar. 13	Mar. 17	18.4	Mar. 16		
		Mar. 31	Apr. 9	20.2	Apr. 2	25.3	Jun. 8,1953
				19.55	Apr. 4		
				19.2	Apr. 7		

COMPARATIVE CREST STAGE DATA OF MAJOR FLOODS

River and station	Flood stage	Above flood stages March-May 1965		Crest * March-May 1965		Previous Maximum Crest of record	
		From–	To–	Stage	Date	Stage	Date
Missouri Basin (Cont'd.)	Ft.			Ft.		Ft.	
Little Sioux: Spencer, Iowa	10	Mar. 31	Apr. 19	17.2	Apr. 6	20.05	Jun. 8,1953
		May 27	May 27	10.3	May 27		
Linn Grove, Iowa	12	Mar. 31	Apr. 22	22.35	Apr. 6	20.9	Jun. 1953
		May 28	May 31	13.5	May 29		
Peterson, Iowa	15	Apr. 1	Apr. 16	#21.4	Apr. 6	20.90	Jun. 1953
Cherokee, Iowa	17	Mar. 31	Apr. 15	#27.1	Apr. 6	P25.7	1891
Correctionville, Iowa	19	Mar. 31	Apr. 15	#25.75	Apr. 7	P29.34	Jun.23 or 24,1891
Kennebec, Iowa	25	Apr. 6	Apr. 11	26.57	Apr. 8	26.63	Jun.21,1954
Turin, Iowa	25	Apr. 6	Apr. 10	26.16	Apr. 8	26.0	Mar. 1949
Elkhorn: Waterloo, Nebr.	15	Mar. 13	Mar. 15	15.5	Mar. 15	P16.6	Jun.12,1944
Salt Creek: Ashland, Nebr.	11	May 22	May 23	13.25	May 22	P21.9	Jul. 7,1908
West Nishnabotna: Randolph, Mo.	19	Mar. 1	Mar. 2	22.65	Mar. 1	24.8	Mar. 5,1949
		Mar. 17	Mar. 17	19.25	Mar. 17		
East Nishnabotna: Red Oak, Iowa	15	Mar. 17	Mar. 17	16.4	Mar. 17	23.23	Jun.13,1947
Nishnabotna: Hamburg, Iowa		Mar. 1	Mar. 4	#25.8	Mar. 2		
		Mar. 17	Mar. 18	#24.3	Mar. 17		
		Apr. 1	Apr. 1	21.8	Apr. 1	27.3	Mar. 7,1949
		Apr. 5	Apr. 6	22.0	Apr. 6		
		May 22	May 22	21.1	May 22		
One Hundred and Two: Rosendale, Mo.	13	Mar. 18	Mar. 18	#16.1	Mar. 18		
Platte: Agency, Mo.	20	Mar. 17	Mar. 19	22.7	Mar. 18	30.46	Jun.23,1947
Beaver Creek: Cedar Bluffs,Kans.	14	May 26	May 26	16.7	May 26	18.71	Jun.11,1960
Republican: Orleans, Nebr.	11	May 27	May 27	11.4	May 27	H14.00	Jun.23,1947
West Fork Big Blue: Dorchester, Nebr.	15	May 25	May 25	15.05	May 25	P24.8	Jul.10,1950
Turkey Creek: Wilber, Nebr.	11	May 24	May 27	14.05	May 24	P15.5	Jun. 1957
Little Blue: DeWeese (nr), Nebr.	8	May 22	May 26	(14.6	May 22	13.3	Jun.17,1957
				(11.55	May 25		
Fairbury (nr),Nebr.		May 24	May 25	12.1	May 25	17.6	Jun.27,1951
		May 27	May 27	10.3	May 27		
Black Vermilion: Frankfort, Kans.	19	Mar. 1	Mar. 2	26.2	Mar. 1	H30.2	Aug. 3,1948
Big Blue: Crete, Nebr.	16	May 22	May 27	20.2	May 23	28.74	Jul.10,1950
Beatrice, Nebr.	16	Mar. 1	Mar. 1	19.35	Mar. 1	28.3	Jun. 4,1951
Barneston, Nebr.	18	Mar. 1	Mar. 1	22.1	Mar. 1	34.3	Jun. 9,1941
Marysville, Kans.	35	Mar. 1	Mar. 1	35.8	Mar. 1	P45.39	Jun. 9,1941
Blue Rapids, Kans.	20	Mar. 1	Mar. 1	#23.8	Mar. 1	39.5	Jun.10,1941
Vermillion Creek: Wamego, Kans.	24	Mar. 1	Mar. 1	25.2	Mar. 1	P30.9	1915
Mill Creek: Paxico, Kans	19	Mar. 1	Mar. 1	19.1	Mar. 1	P34.7	Jul.12,1951
Stranger Creek: Easton, Kans	15	Mar. 17	Mar. 17	16.1	Mar. 17		
Grand: Pattonsburg, Mo.	25	Mar. 17	Mar. 18	27.75	Mar. 18	P34.25	Jun. 1947
Gallatin, Mo.	21	Mar. 18	Mar. 18	#22.05	Mar. 18	P40.0	Jul. 8,1909
Chillicothe, Mo.	24	Mar. 17	Mar. 19	#29.40	Mar. 18	33.8	Jun. 7,1947
		Apr. 11	Apr. 11	25.2	Apr. 11		
		May 9	May 9	24.4	May 9		
Sumner, Mo.	26	Mar. 15	Mar. 15	26.0	Mar. 15	39.5	Jun.7,8,1947
		Mar. 16	Mar. 21	32.3	Mar. 19		
		Apr. 6	Apr. 13	30.2	Apr. 7,9		
				30.35	Apr. 12		
		May 9	May 10	29.15	May 9		
Brunswick, Mo.	12	Mar. 3	Mar. 3	12.55	Mar. 3	26.1	Jul.17,1951
		Mar. 17	Mar. 22	16.6	Mar. 19		
		Apr. 6	Apr. 14	15.1	Apr. 8		
				14.55	Apr. 11		
Chariton: Rathbun (nr), Iowa	18	Apr. 17	Apr. 18	19.2	Apr. 17	H25.3	Mar.31,1960
Novinger, Mo.	20	Mar. 17	Mar. 17	#20.3	Mar. 17	H28.6	Jun. 1,1917
		Apr. 11	Apr. 11	20.8	Apr. 11		
Prairie Hill (nr), Mo.	15	Mar. 17	Mar. 18	#18.3	Mar. 17		
		Apr. 6	Apr. 6	17.7	Apr. 6		
		Apr. 11	Apr. 13	17.3	Apr. 12		
Blackwater: Blue Lick, Mo.	25	Mar. 20	Mar. 20	25.2	Mar. 20	H41.25	Nov.18,1928
		Apr. 6	Apr. 9	(26.3	Apr. 6		
				(25.5	Apr. 8		
		Apr. 11	Apr. 11	25.4	Apr. 11		

COMPARATIVE CREST STAGE DATA OF MAJOR FLOODS

TABLE 1. (Cont'd.)

River and station	Flood stage	Above flood stages March-May 1965		Crest * March-May 1965		Previous Maximum Crest of record	
		From—	To—	Stage	Date	Stage	Date
Missouri Basin (Cont'd.)	*Ft.*			*Ft.*		*Ft.*	
Sac: Stockton, Mo.	19	Apr. 4	Apr. 7	21.0	Apr. 5	31.8	May 19,1943
Osage: Schell City, Mo.	25	Apr. 6	Apr. 11	28.2	Apr. 8	45.1	Jun.17,1951
Osceola, Mo.	22	Apr. 6	Apr. 8	25.7	Apr. 6	41.5	May 21,1943
Gasconade: Hazlegreen, Mo.	21	Apr. 7	Apr. 7	21.0	Apr. 7	P30.6	Jan. 1916
Missouri: Rulo, Nebr.	17	Mar. 1	Mar. 2	#17.35	Apr. 1	25.6	Apr.22,1952
St. Joseph, Mo.	17	Mar. 1	Mar. 2	#19.1	Mar. 2	27.2	Apr.29,1881
		Mar. 18	Mar. 18	#17.2	Mar. 18		
		May 27	May 27	17.3	May 27		
Lexington, Mo.	22	Mar. 3	Mar. 3	#22.0	Mar. 3	P33.9	1844
Waverly, Mo.	18	Mar. 3	Mar. 3	#19.3	Mar. 3	28.2	Jul.14,1951
		Mar. 18	Mar. 19	#19.7	Mar. 19		
Hermann, Mo.	21	Mar. 20	Mar. 20	21.8	Mar. 20	P35.5	Jun. 1844
		Apr. 6	Apr. 13	23.5	Apr. 8		
St. Charles, Mo.	25	Mar. 20	Mar. 21	25.2	Mar. 21	P40.1	Jun.27,1844
		Apr. 7	Apr. 14	26.9	Apr. 10		
HUDSON BAY DRAINAGE							
Red River of the North Basin							
Sheyenne: West Fargo, N. Dak.	16	Apr. 11	Apr. 30	20.75	Apr. 19	20.61	May 11,1950
Red Lake: Crookston, Minn.	15	Apr. 11	Apr. 21	25.8	Apr. 13	25.70	May 7,1950
Red River of the North: Wahpeton, N. Dak.	10	Apr. 9	Apr. 14	14.34	Apr. 11	P17.0	Apr. 1897
Fargo, N. Dak.	17	Apr. 11	Apr. 24	30.55	Apr. 16	P40.1	Apr. 7,1897
Halstad, Minn.	24	Apr. 12	May 1	35.35	Apr. 17	P38.5	1897
Grand Forks, N. Dak.	28	Apr. 12	May 1	44.91	Apr. 17	P50.2	Apr.10,1897
Drayton, N. Dak.	32	Apr. 14	May 8	40.4	Apr. 22	41.58	May 12,1950
Pembina, N. Dak.	42	Apr. 16	May 7	47.4	Apr. 25	52.9	May 14,1950

* Provisional
E Estimated
# Highest Stage Reported
__ Exceeded previous Maximum Crest of Record
H High Water Mark
J Ice Jam
P Prior to Gage Readings
L Prior to Construction of Local Levees

THE SPRING FLOODS OF MARCH-MAY 1965 IN THE UPPER MISSISSIPPI, MISSOURI AND RED RIVER OF THE NORTH BASINS

TABLE 2. MAJOR FLOODS IN ORDER OF MAGNITUDE APRIL 1965

MISSISSIPPI RIVER

St. Paul, Minn.:
Zero of gage - 683.68 feet (1929 adj.)
Drainage area - 36,780 square miles
Flood Stage - 14 feet
Period of record - 1866-1965

Crest stage	Date
26.0	Apr. 16, 1965
22.0	Apr. 16, 1952
19.7	Apr. 29, 1881
18.8	Apr. 16, 1951
18.6(2)	July 23, 1867
18.0(2)	Apr. 16, 1875
18.0	Apr. 6, 1897
16.8	June 29, 1908
16.6	Apr. 6 and 9, 1916
16.4	Apr. 21, 1873

La Crosse, Wis.
Zero of gage - 625.83 feet (1929 adj.)
Drainage area - 62,840 square miles
Flood stage - 12 feet
Period of record - 1873-1965

Crest stage	Date
17.9	Apr. 21, 1965
16.5(1)	June 19, 1880
15.3	Apr. 20, 1952
14.9	Apr. 19, 1951
14.5	May 8-9, 1888
14.4	Oct. 17, 1881
14.2	Apr. 2, 1920
13.7	Apr. 17, 1922
13.7	Apr. 10, 1897
13.6	Apr. 28-29, 1916 and Apr. 18-20, 1888

Davenport, Iowa:
Zero of gage - 542.00 feet (1929 adj.).
Drainage area - 88,449 square miles
Flood stage - 15 feet
Period of record - 1860-1965

Crest stage	Date
22.5	Apr. 28, 1965
20.9	Mar. 10, 1868
19.4	June 27, 1892
18.6	Apr. 28, 1952
18.6	May 15-16, 1888
18.4	June 26, 1880
18.3	Apr. 28-29, 1951
17.7	Oct. 25-27, 1881
17.1	Apr. 23, 1922
17.1	Apr. 9, 1920

Keokuk, Iowa:
Zero of gage - 477.41 feet (1929 adj.)
Drainage area - 119,000 square miles
Flood stage - 16 feet
Period of record - 1868-1965

Crest stage	Date
22.1	May 1, 1965
21.8	Apr. 3, 1960
21.0(1)	June 16, 1851
20.85	May 27, 1944
20.25	May 12, 1951
20.2	June 8 and 20, 1947
19.65	May 16-17, 1888
19.6	June 5, 1903
19.3	Mar. 23, 1929
19.25	June 30, 1892

MISSISSIPPI RIVER (Cont'd.)

Hannibal, Mo.:
Zero of gage - 449.07 feet (1929 adj.)
Drainage area - 137,200 square miles
Flood stage - 16 feet
Period of record - 1878-1965

Crest stage	Date
24.3	May 3, 1965
24.1	June 9, 1947
22.6	May 13, 1951
22.5	May 28, 1944
22.5	June 8, 1903
22.1	Apr. 27, 1929
21.8	May 17, 1888
21.7	Apr. 25, 1952
21.6	Mar. 24, 1948
21.6(1)	June 1851

DES MOINES RIVER

Des Moines, Iowa:
Zero of gage - 773.84 feet (1929 adj.)
Drainage area - 6,245 square miles
Flood stage - 23 feet
Period of record - 1893-1965

Crest stage	Date
30.2	June 24, 1954
28.7	Apr. 10, 1965
27.3(3)	May 31, 1903
26.5	June 26, 1947
25.2	Apr. 1, 1960
25.2(3)	July 10, 1902
24.5	May 23, 1944
23.8	March 31, 1951
23.7	Apr. 10, 1951
23.4	June 17, 1944
23.4(3)	Apr. 3-4, 1933

Ottumwa, Iowa:
Zero of gage - 622.77 feet (1929 adj.)
Drainage area - 13,374 square miles
Flood stage - 9 feet
Period of record - 1917-1960

Crest stage	Date
20.2(5)	June 7, 1947
20.1	June 15, 1947
18.3	Apr. 11, 1965
17.5	Apr. 1, 1960
16.9	June 28, 1954
16.6	June 28, 1947
16.2(3)	Aug. 1, 1915
15.5	June 29, 1935
15.2	Apr. 4, 1951
14.8(2)	Mar. 23, 1948

BIG SIOUX RIVER

Akron, Iowa:
Zero of gage - 1,118.90 feet
Drainage area - 9,030 square miles
Flood stage - 16 feet
Period of record - 1926-1965

Crest stage	Date
21.6	Apr. 1, 1960
20.85	Apr. 8, 1965
20.0	June 22, 1954
19.8	June 21, 1957
19.8	Apr. 1, 1952
19.7	Apr. 6, 1951

TABLE 2. (Cont'd.)

BIG SIOUX RIVER (Cont'd.)

Akron, Iowa (Cont'd.):

Crest stage	Date
19.3	June 8, 1953
19.2	June 4, 1942
18.6	Mar. 12, 1936
18.6	Mar. 15, 1929

LITTLE SIOUX RIVER

Cherokee, Iowa:
Zero of gage - 1,150.0 feet
Drainage area - 2,182 square miles
Flood stage - 17 feet
Period of record - 1891-1965

Crest stage	Date
27.1	Apr. 6, 1965
25.7	1891
22.7	June 11, 1953
22.0	June 20, 1954

RED RIVER OF NORTH

Wahpeton, N. Dak.:
Zero of gage - 942.97 feet (1929 adj.)
Drainage area - 4,010 square miles
Flood stage - 10 feet
Period of record - 1917-1965

Crest stage	Date
17.0(1)	Apr. 1897
15.0	Apr. 12, 1952
14.8(1)	Spring 1916
14.8	Apr. 2, 1943
14.3	Apr. 11, 1965
14.0	Apr. 7, 1951
12.1	June 6, 1944
11.9	Apr. 12, 1947
11.6	Apr. 2, 1950
11.5	May 10, 1950

RED RIVER OF NORTH (Cont'd.)

Moorhead, Minn.:
Zero of gage - 861.33 feet (1929 adj.)
Drainage area - 6,800 square miles
Flood stage - 17 feet
Period of record - 1901-1965

Crest stage	Date
40.1(1)	Apr. 7, 1897
37.8(1)	Apr. 11, 1882
34.6	Apr. 16, 1952
34.3	Apr. 7, 1943
31.2	Apr. 6, 1916
29.8	Mar. 30-31, 1907
28.9	Apr. 15, 1947
28.6	July 12, 1916
27.2	Apr. 8, 1950
27.8	Apr. 12, 1951

Grand Forks, N. Dak.:
Zero of gage - 778.42 feet (1929 adj.)
Drainage area - 26,100 square miles(6)
Flood stage - 28 feet
Period of record - 1882-1965

Crest stage	Date
50.2(7)	Apr. 10, 1897
49.5	Apr. 21, 1882
45.6	May 12, 1950
45.5	Apr. 24, 1893
44.9	Apr. 17, 1965
41.7	Apr. 16, 1948
41.0	Apr. 17, 1916
41.0	Mar. 29, 1920
40.7	Apr. 22, 1947
40.6	Apr. 27, 1904 and Apr. 28, 1883

(1) From high water mark
(2) Incomplete record, may have been higher
(3) Adjusted to present datum
(4) Also in earlier year(s)
(5) Flood of May 31, 1903, may have reached 23.0 feet
(6) Excludes 3,940 square miles in Devils Lake drainage
(7) Legendary flood of 1852 probably was higher by 0.3 foot or more

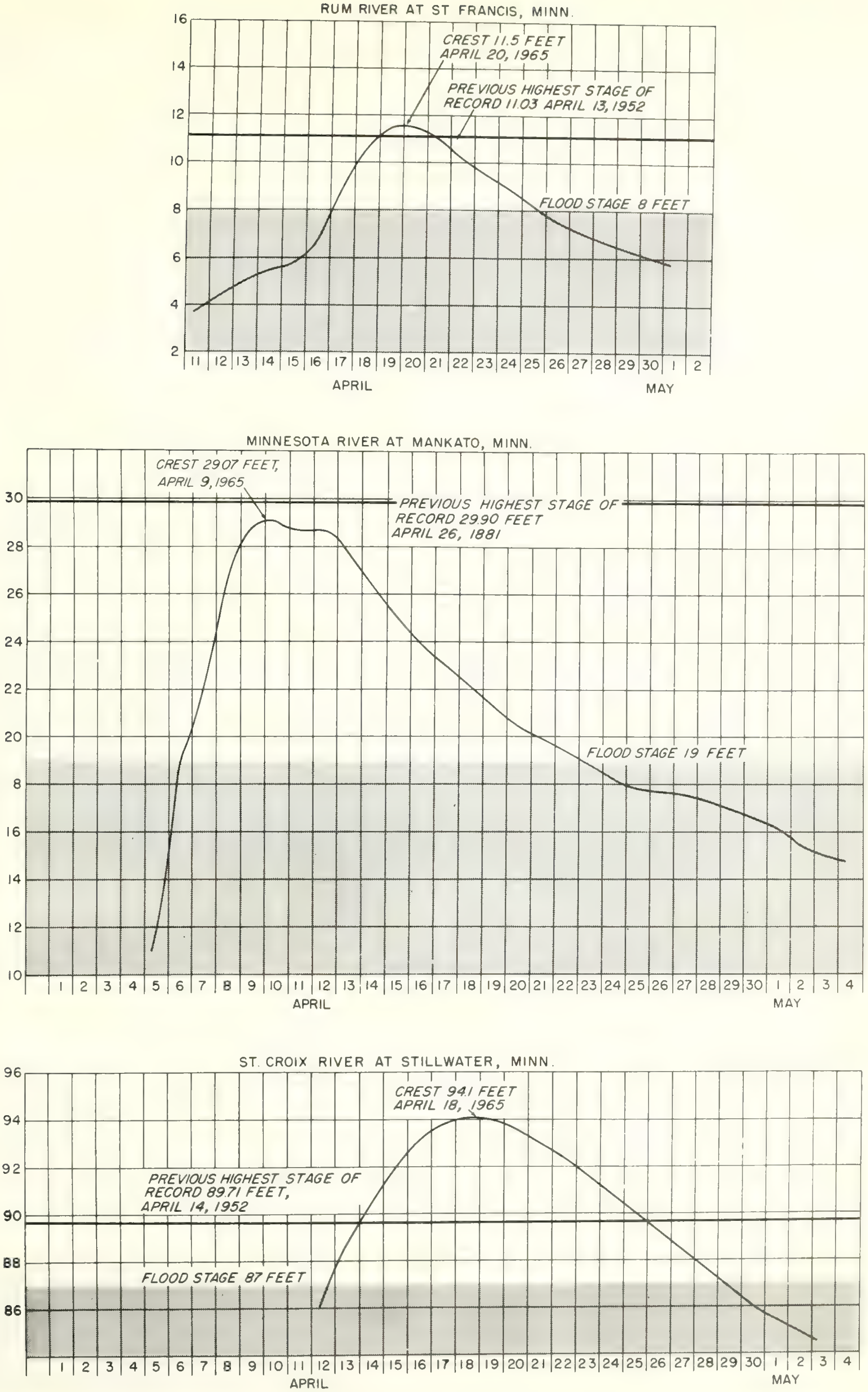
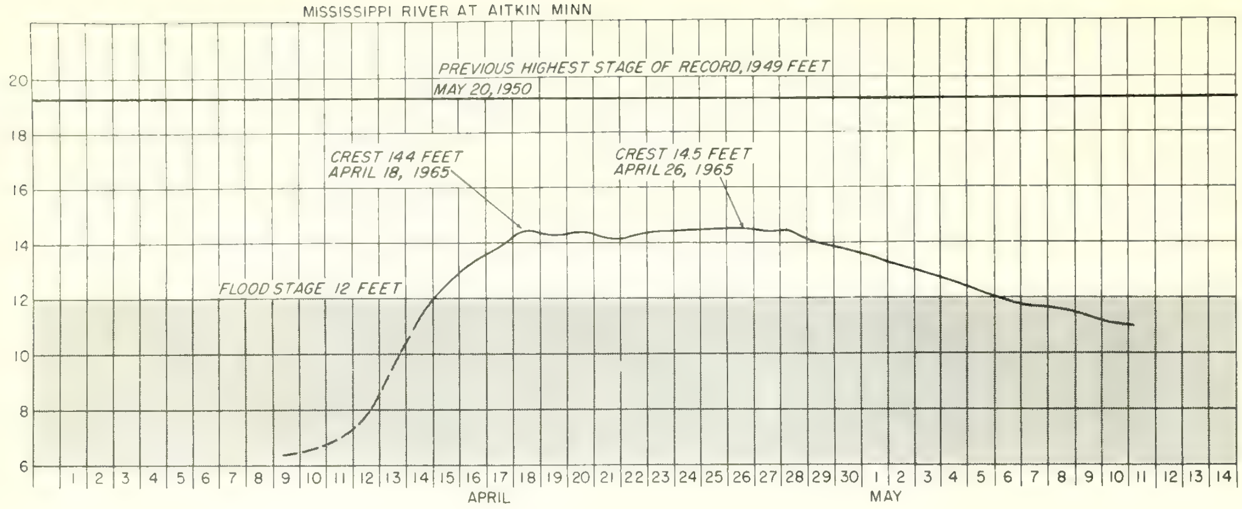
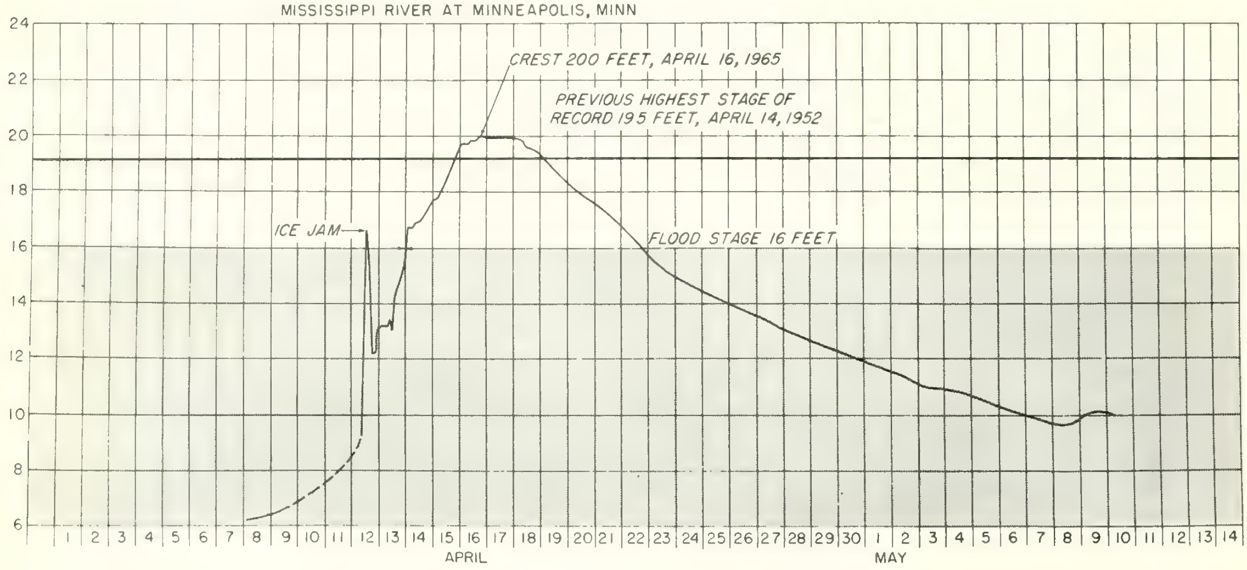


FIG. 1 RIVER STAGE HYDROGRAPHS, APRIL-MAY, 1965





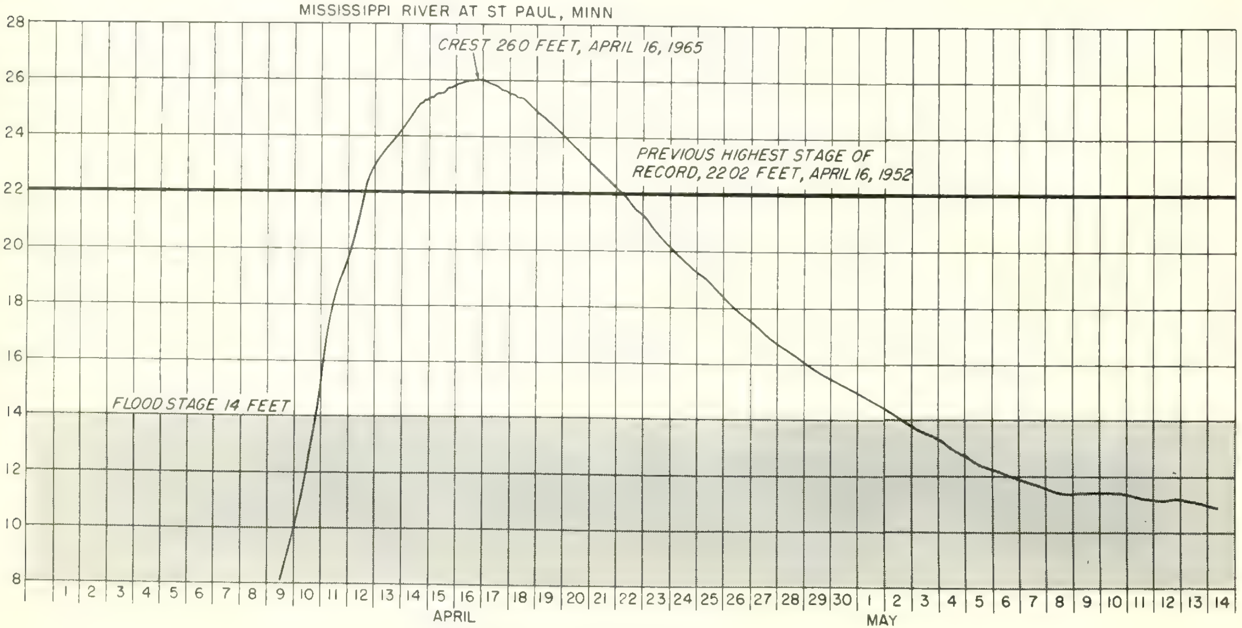
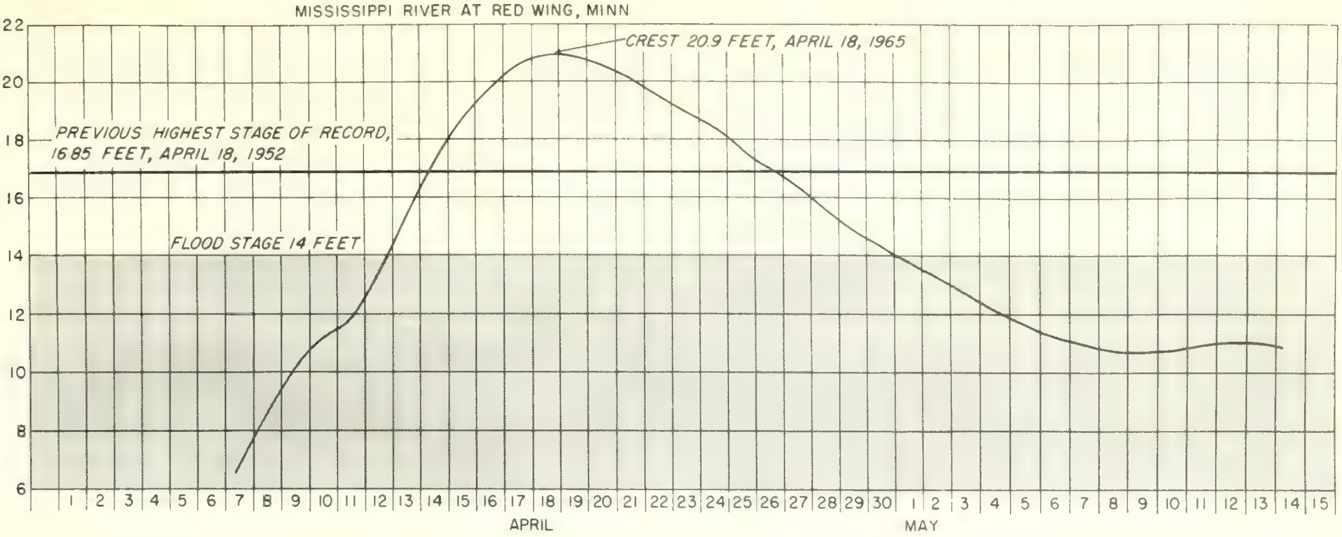
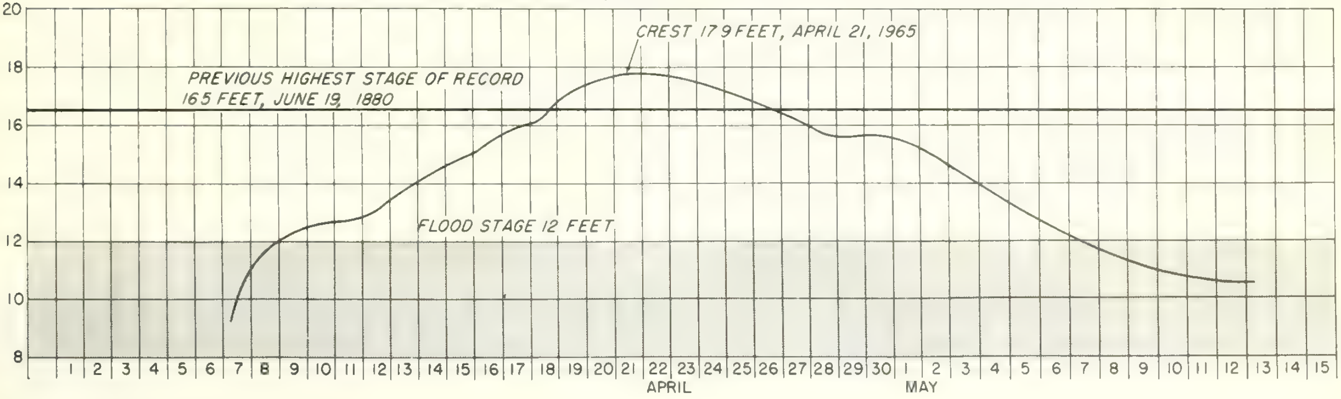


FIG 2 RIVER STAGE HYDROGRAPHS, APRIL-MAY 1965

MISSISSIPPI RIVER AT RED WING, MINN



MISSISSIPPI RIVER AT LA CROSSE, WISC



MISSISSIPPI RIVER AT McGREGOR, IOWA

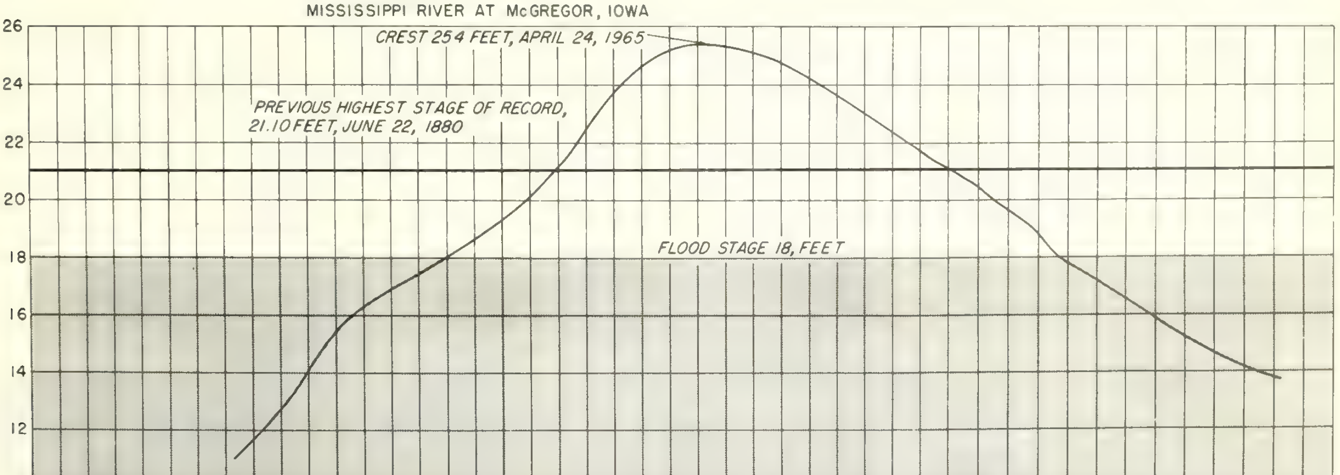


FIG. 3 RIVER STAGE HYDROGRAPHS, APRIL-MAY 1965

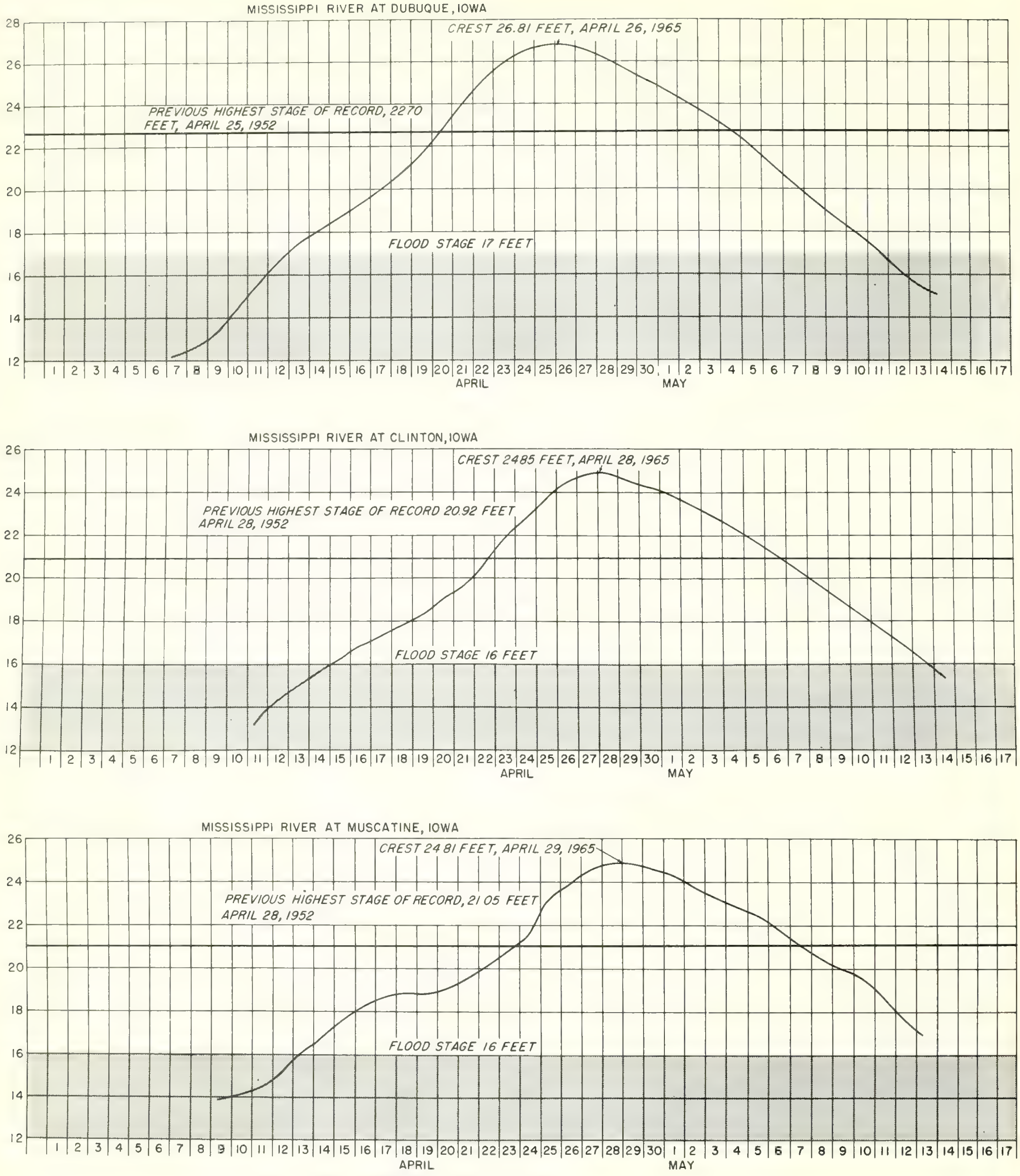


FIG. 4 RIVER STAGE HYDROGRAPHS, APRIL-MAY 1965

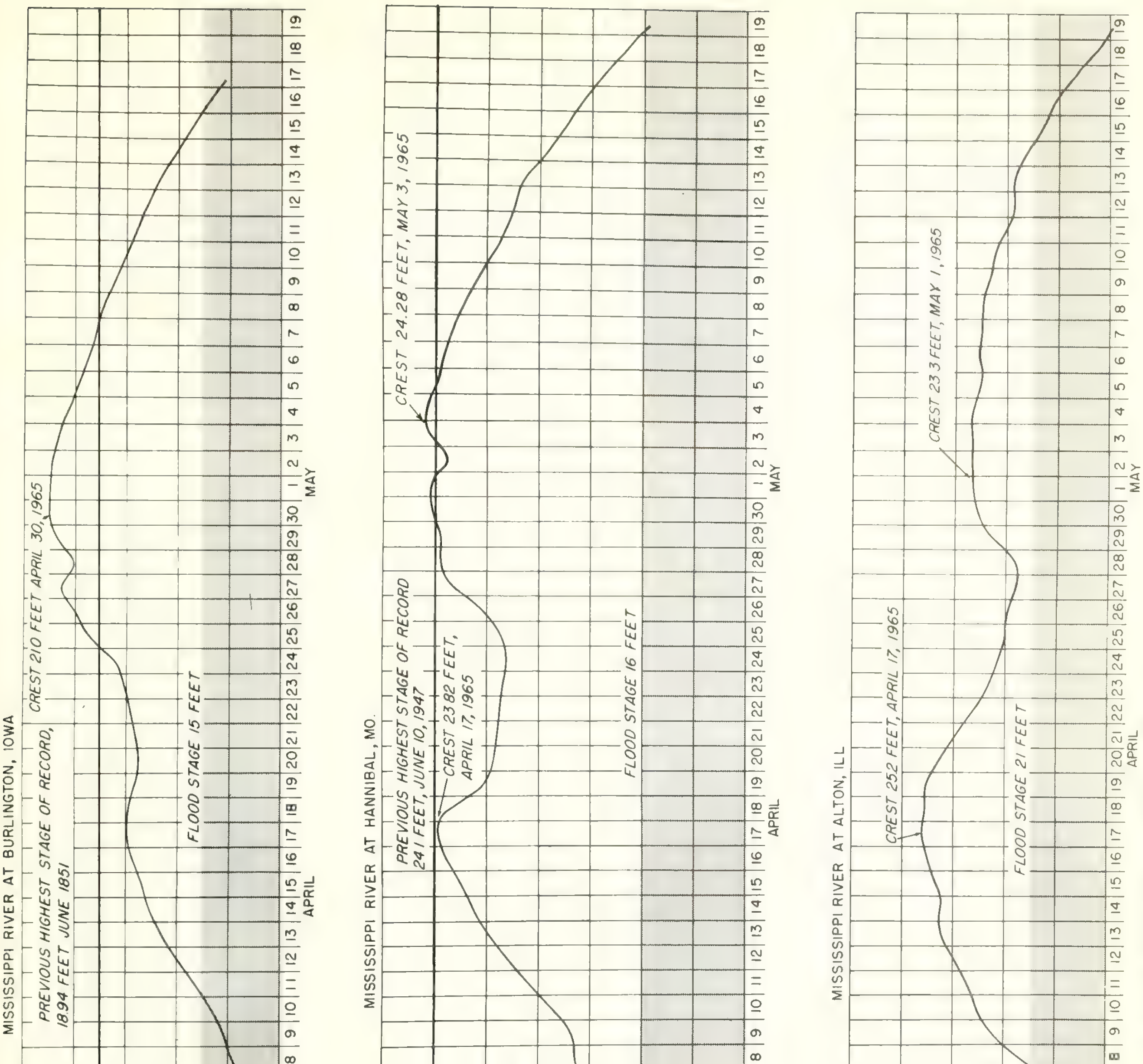
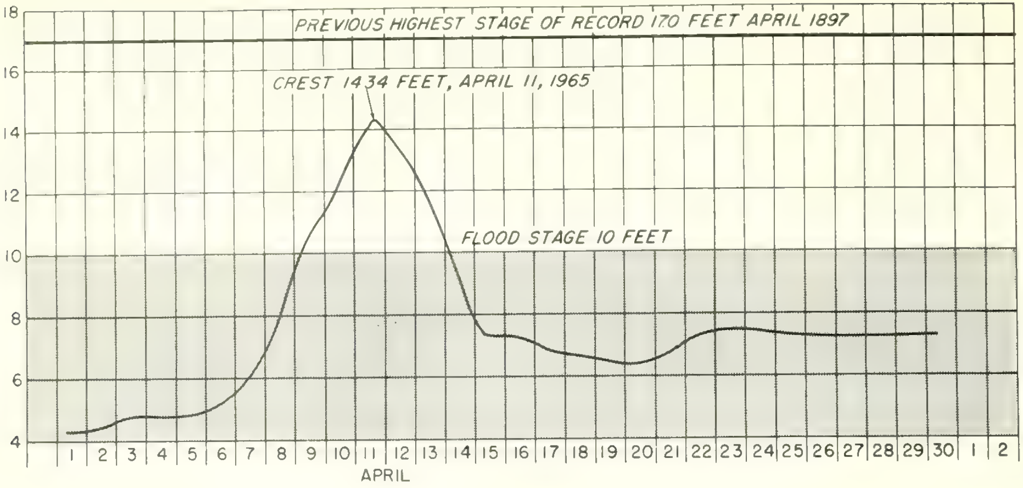
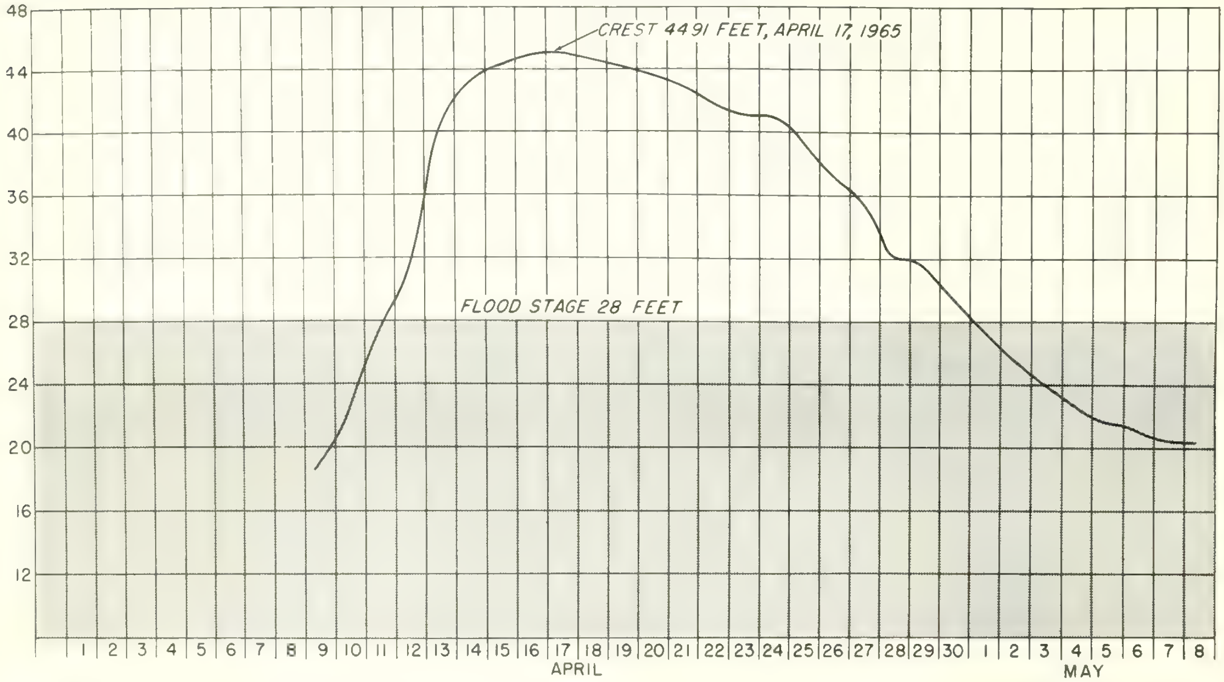


FIG 5 RIVER STAGE HYDROGRAPHS, APRIL-MAY 1965

RED RIVER OF THE NORTH AT WAHPETON, N DAK



RED RIVER OF THE NORTH AT GRAND FORKS, N DAK.



RED RIVER OF THE NORTH AT PEMBINA, N. DAK.

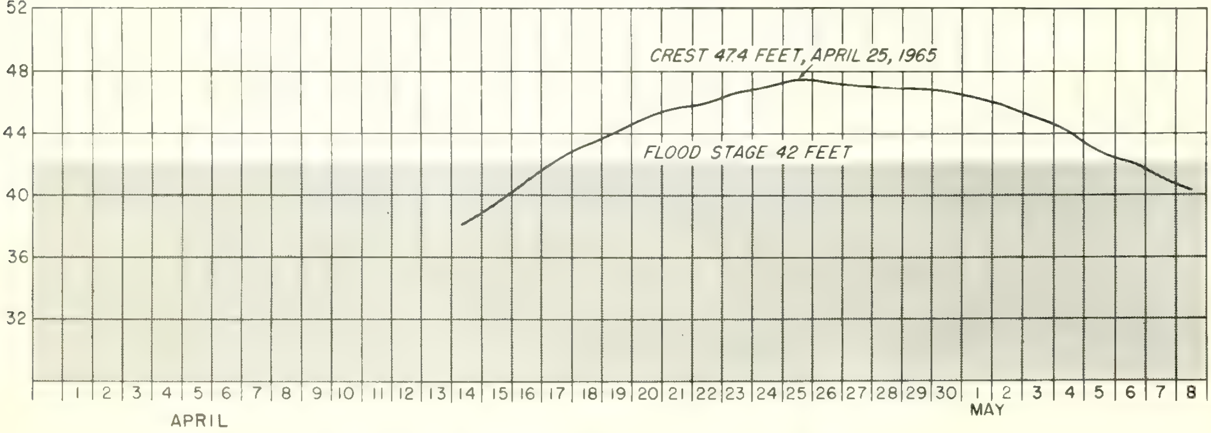


FIG. 6 RIVER STAGE HYDROGRAPHS APRIL–MAY 1965

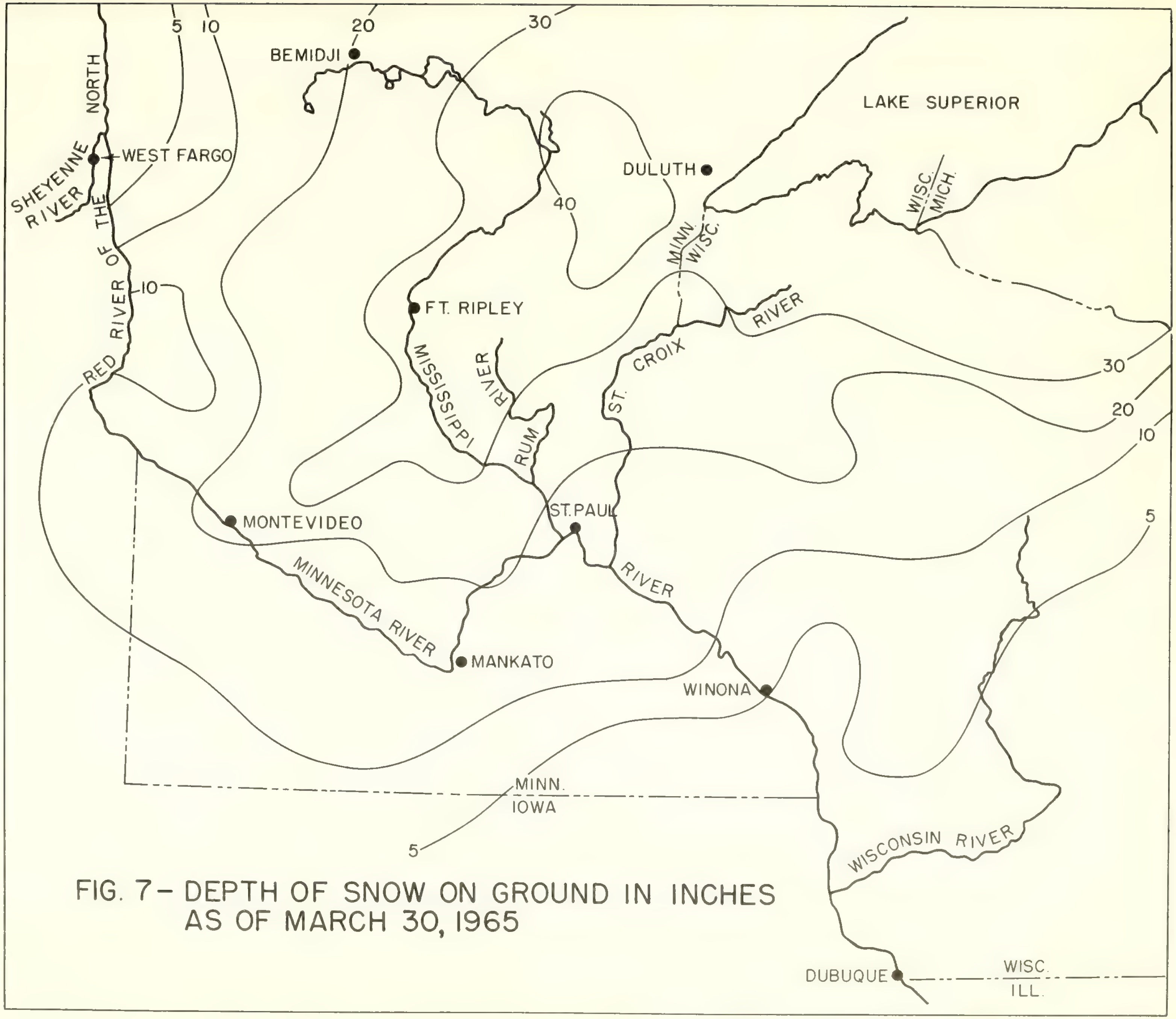


FIG. 7 – DEPTH OF SNOW ON GROUND IN INCHES AS OF MARCH 30, 1965

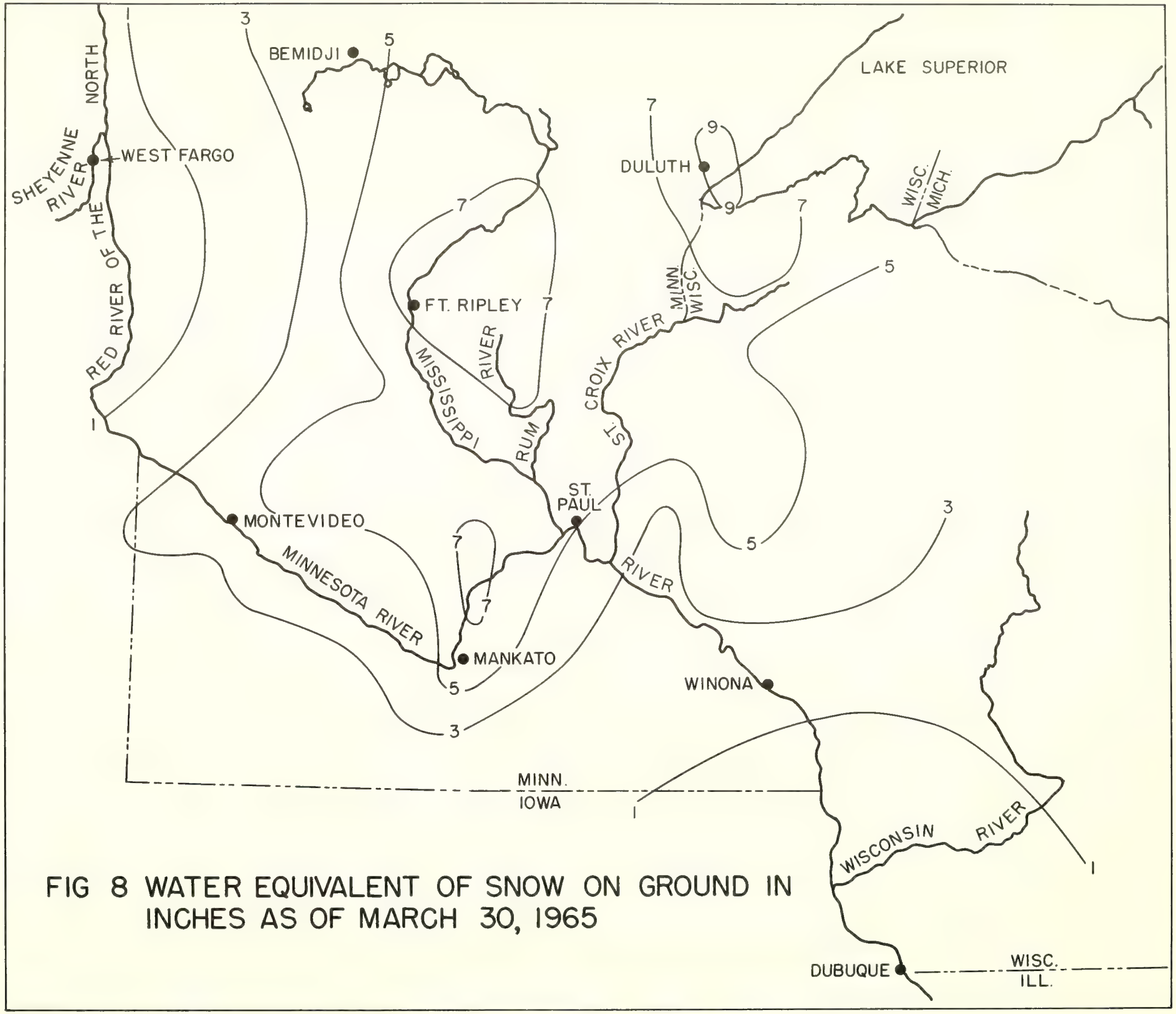


FIG 8 WATER EQUIVALENT OF SNOW ON GROUND IN INCHES AS OF MARCH 30, 1965

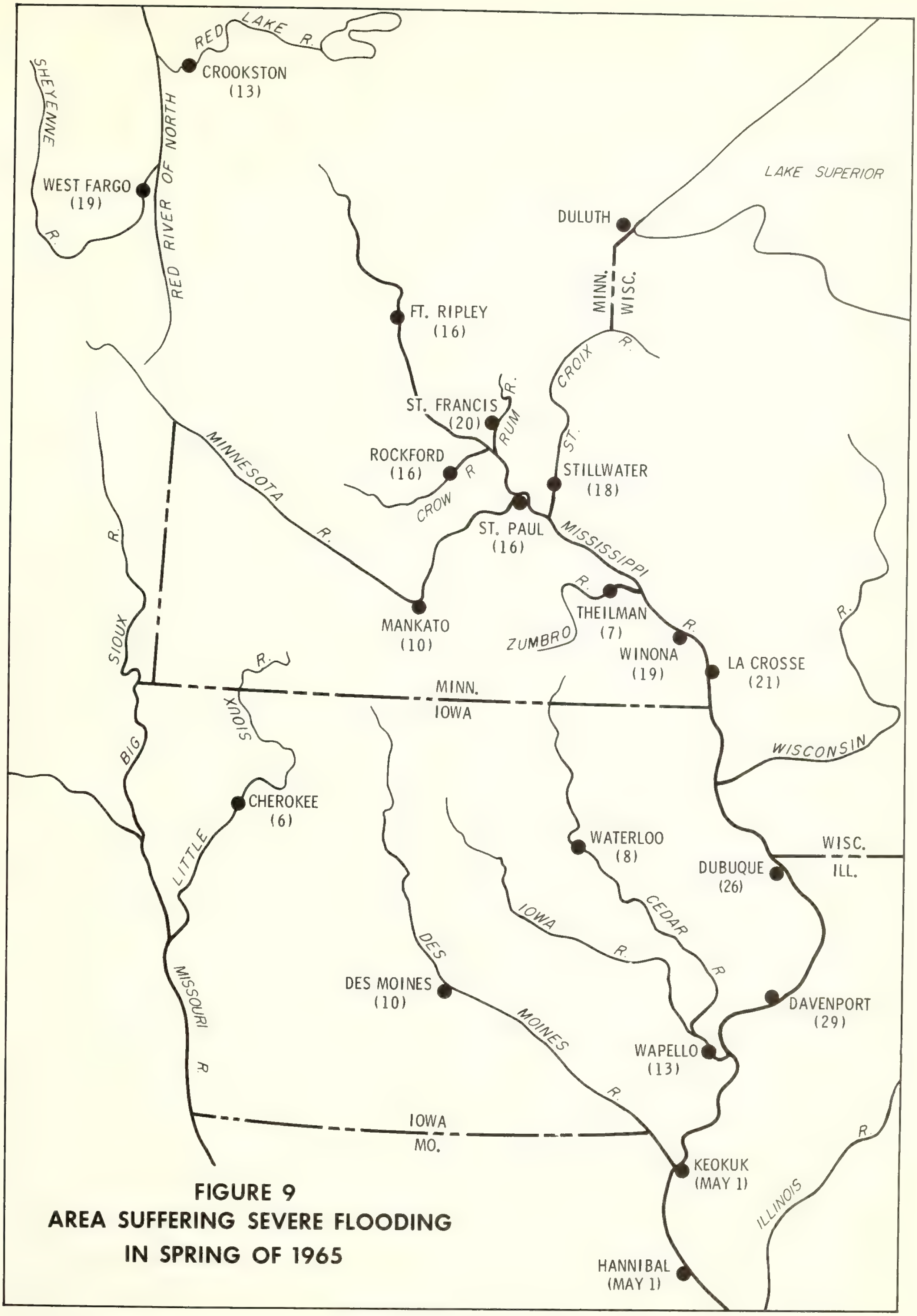


FIGURE 9
AREA SUFFERING SEVERE FLOODING
IN SPRING OF 1965

Figure below station name shows date crest occurred (April unless otherwise indicated).

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

RIVER AND FLOOD CONDITIONS REPORTED ELSEWHERE

APRIL 1965

ST. LAWRENCE DRAINAGE

Lake Michigan.--Minor flooding occurred on the Red Cedar River in Michigan on April 7 and 8. Snowmelt early in the month caused the Grand River to rise to generally 1 to 2 feet below bankfull stage on the 8th to the 14th. Some low areas near Grand Rapids, Mich., were flooded for nearly a week. No damages were reported.

Lake Huron.--The Pine River rose to bankfull stage at Alma, Mich., on the 12th. The Tittabawassee River exceeded flood stage by 3 feet at Midland, Mich., on the 13th. It was out of its banks from the 11th to the 14th.

Lake Erie.--Minor flooding occurred on the St. Mary's River at Decatur, Ind., on the 7th. No damage resulted. Two drownings were reported on the Maumee River at Fort Wayne, Ind., when two men attempted to go over the Anthony Boulevard dam in a canoe.

ATLANTIC SLOPE DRAINAGE

Near bankfull stages occurred on the lower Cape Fear and the upper and middle reaches of the Neuse Rivers in eastern North Carolina due to rainfall in the last week of April.

The Waccamaw River at Conway, S. C., rose to bankfull stage on the 2d and continued at that level for 3 days. It began receding on the 5th and reached a low level by the end of the month. The Pee Dee River at Peedee, S. C., went above flood stage on March 19 and receded below bankfull stage on April 9. The Black River at Kingstree, S. C., was out of its banks from March 19 to April 2. Heavy rains (2 to 3 inches) on April 26-27 caused 3 feet of overflow on the Broad River at Blair, S. C., on the 28th. It remained above flood level from the 27th to the 29th. Light lowland flooding occurred on the Congaree River below Columbia, S. C., during the last few days of the month. Moderate flooding occurred on the lower Santee, Lake Marion to the coast in the early part of the month. The North Fork of the Edisto at Orangeburg, S. C., was out of its banks from March 18 to April 10. Several crests occurred, the highest crest of 9.5 feet occurred on March 25. This was 1.5 feet above flood stage. A prolonged flood that began along the Edisto at Givhans, S. C., on February 15 continued until April 17. The only significant losses were along the Congaree below Columbia and along the lower Santee. These losses consisted principally of damage to swampland pastures and some low cropland and to interruption of lumbering operations.

This was the 10th consecutive month that flooding had been reported on some streams in Georgia. The Savannah River at Clyo, Ga., has been out of its banks since February 16. It was still above flood stage at the end of the month. Flooding has occurred on the Ogeechee River at Eden, Ga., from February 16 to April 16. The Ocmulgee and Oconee Rivers in Georgia that began overflowing during the latter part of March receded below flood stage on April 5. The Altamaha River at Charlotte, Ga., continued in flood from March 24 to April 11. All flooding during April was due to rainfall that occurred during the latter part of March.

EAST GULF OF MEXICO DRAINAGE

The Apalachicola River at Blountstown, Fla., crested on March 31 and April 1, nearly 5 feet above flood stage. It had been in flood continuously since February 9. Two other minor rises to bankfull or slightly over occurred on the 22d and 29th. Flash flooding developed on small streams from very heavy rains between Blountstown, Fla., and Quitman, Ga., on the morning of the 27th. Considerable water inundated low-lying areas. Damage was confined to washing of fields and roads.

The Oostanaula River at Resaca, Ga., and the Coosa River at Gadsden, Ala., that went above flood stage during the latter part of March receded within their banks on April 2. This flooding was due to rainfall of 4 to 6 inches from March 23 to 25. Widely scattered rains near the end of March caused some minor flooding on the Tombigbee River during the latter part of March and the first few days of April. Flooding continued at Jackson, Ala., from February 13 to April 14.

Rainfall during the last 6 days of March caused the Pearl River to rise above flood stage at Jackson, Miss., on March 30 and at Bogalusa, La., on April 1. The crest at Jackson, Miss., on April 5 was 8.6 feet above flood stage. It crested at Bogalusa, La., on the same date nearly 3 feet above flood stage. The Pearl was back within its banks at all points by April 14.

MISSISSIPPI SYSTEM

Ohio Basin.--Moderate to heavy rain on the 11th and 12th and again on the 24th and 25th caused the Hocking River in Ohio to rise to near flood stage. Minor flooding occurred on Paint Creek at Bourneville, Ohio, on the 9th, 11th, and 12th due to heavy thundershowers between the 8th and 12th. Scattered minor overflows occurred along the main stem of the Scioto on two occasions due to heavy thundershowers between the 8th and 12th and the 23d to the 27th. Land normally devoted to agriculture was flooded; however, there were no losses of labor or material.

Minor overflow occurred along the Green River in Kentucky during the latter part of March and the first few days of April. This flooding was due to heavy rains on March 25, 26, 29, and 30th. No damage was reported from the overflow, but spring work in the bottom lands was delayed.

Minor flooding occurred at numerous points along major streams in the Wabash Basin due to heavy rains on the 9th, 12th, and 25th. Overflow was confined to those areas which normally overflow several times during the year. Little or no damage resulted since there were no crops in these areas at this time of the year.

Minor flooding occurred along the main stem of the Cumberland River at Clarksville, Tenn., from March 30 to April 1. This flooding was due to heavy rains on March 25 and 26. Two periods of heavy rainfall during the first 10 days of April produced minor to moderate rises at headwater points.

Heavy rains (2.25 inches) on the 6th and 7th produced a rapid rise in the Little Pigeon River to nearly a foot above flood stage on the 7th. No damage resulted with only minor overflow in the lowlands. The flooding along the main stem of the Tennessee River during the latter part of March and the first few days of April was due to heavy rains from March 24 to 26.

Minor overflow occurred along the main stem of the Ohio River at and below Tell City, Ind., during the latter part of March and the first few days of April. Moderate rains near the middle of April brought another minor rise along the main stem with slightly lower crests than those earlier in the month. Flooding in the reach at and below Brookport, Ill., continued throughout most of April.

White Basin.--Showers and thunderstorms occurred over the Black River Basin in Arkansas from the afternoon of the 2d until the night of the 6th caused flooding at Black Rock from the 4th to the 14th. The rainfall ranged from 1.5 inches over the south portion to 3.5 inches over the north portion. The Black receded within its banks on the 14th. Another inch of rain over the basin on the 14th and 15th caused another overflow from the 16th to the 20th.

The Cache River at Patterson, Ark., was out of its banks from January 9 to April 28 for a total of 109 days. The upper portion of the basin received 2 to 2.5 inches of rain from April 2 through the night of the 5th.

Arkansas Basin.--Heavy rains on the 2d and 3d caused considerable lowland flooding on streams in northeastern Oklahoma and south-central and southeastern Kansas between the 2d and 8th. Many stations reported rainfall amounts over 4 inches during that period. The period of flooding ranged from a few hours on the Chikaskia River at Corbin, Kans., to 5 days on the Caney River at Ramona, Okla. No significant damage resulted from the overflows since the flooding was largely in the agricultural lowlands.

Minor flooding occurred on the St. Francis River at Fisk, Mo., and St. Francis, Ark., between the 7th and 18th. This flooding was due to heavy rains from the 3d to the 5th. The three-day totals ranged from 1.33 inches at Fredericktown, Mo., to 3.10 inches at Fisk, Mo. Damage was relatively light.

Heavy rains during the latter part of March caused the Big Black River to go out of its banks at Pickens, Miss., on March 30 and at Bovina, Miss., on March 31. Flooding continued until April 9 at Bovina. The Tallahatchie continued in minor flood from March 31 to April 5.

The main stem of the Mississippi exceeded flood stage in the reach immediately below the Ohio River at New Madrid and Caruthersville, Mo., between the 3d and the 26th. The crests exceeded flood stage by nearly 5 feet at New Madrid on the 10th and 11th and by 3.5 feet at Caruthersville on the 11th and 12th. Flood stage was not reached at points below, but some flooding occurred between levees and in the backwater area near Vicksburg, Miss. Access roads were under water near the Long Lake subdivision near Vicksburg, affecting activities of many families.

WEST GULF OF MEXICO DRAINAGE

Heavy rains towards the end of March caused the Calcasieu River to rise to above flood stage at Hineston, La., on March 31. It crested on April 2 nearly 2 feet above flood stage and receded within its banks on April 5.

The Sabine River below Logansport, La., was rising in the beginning of April from heavy rains during the latter part of March. The only place where the Sabine went out of its banks was at Deweyville, Tex., where only minor flooding occurred. No damage resulted.

The Trinity River was rising at Liberty, Tex., in the beginning of the month due to heavy rains on March 29 and 30. It rose above flood stage on the 5th, cresting slightly above flood stage on the 6th. Downstream at Moss Bluff, Tex., flooding persisted from April 1 to 13, with a crest of 2.5 feet above flood stage on the 8th.

The Navasota River at Easterly, Tex., rose above flood stage on March 31 and at Bryan, Tex., on April 1, due to more than 5 inches of rain on March 29 and 30. It crested nearly 5 feet above flood stage at Easterly, Tex., on April 1 and nearly 3 feet above bankfull stage at Bryan, Tex., on April 2.

GULF OF CALIFORNIA DRAINAGE

Local overflow occurred on the San Miguel River at Naturita, Colo., around the 24th due to snowmelt runoff. No damage was reported.

GREAT BASIN

Minor flooding occurred on Blacksmith Fork in the Logan, Utah, area and on Hobble Creek near Springville, Utah, on April 30 due to snowmelt runoff. Damage was negligible as flooding was confined to some fields and low areas.

PACIFIC SLOPE DRAINAGE

Sacramento Basin.--Two substantial rises occurred on the Sacramento River System in California during April. The first rise brought overflow at Colusa and Tisdale Wiers on the Sacramento, but no overflow at Fremont Weir. The second rise brought overflow at Tisdale and Fremont Weirs, but no overflow at Colusa Weir.

Columbia Basin.--Minor flooding occurred on the Coeur D'Alene River at Cataldo, Idaho, from the 21st to the 23d. The St. Joe River approached within 0.2 foot of flood stage at St. Marias, Idaho. Pine Creek near Pinehurst, Idaho, was out of its banks on the 21st and 22d. These rises were due to 1 to 3 inches of rainfall in 36 hours in the headwaters. Flood damage consisted mostly of erosion of secondary roads and minor slides. One secondary road bridge on West Fork of Pine Creek was washed out and several families were temporarily isolated.

Warm weather the last half of the month melted considerable snow, producing high flows from intermediate elevations. Flood stages were reached or exceeded on the Portneuf River at Pocatello, Idaho, from April 21 to May 1. The Clearwater River exceeded flood stage slightly on the 21st. The Payette River near Emmett, Idaho, was out of its banks from April 20 to May 1.

FLOOD STAGE DATA

(All dates in April unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
ST. LAWRENCE DRAINAGE	Ft.			Ft.	
Lake Michigan					
Red Cedar: Williamston, Mich.	7	7	8	7.7	7
East Lansing, Mich.	7	7	8	7.1	7
Lake Huron					
Pine: Alma, Mich.	9	12	12	9.0	12
Tittabawasee: Midland, Mich.	24	11	14	27.0	13
Lake Erie					
St. Marys: Decatur, Ind.	13	7	7	13.3	7
ATLANTIC SLOPE DRAINAGE					
Waccamaw: Conway, S. C.	7	2	5	7.0	3-5
Pee Dee: Peedee, S. C.	19	Mar. 19	9	23.0	Mar. 25
Black: Kingstree, S. C.	12	Mar. 19	2	13.0	Mar. 27
Broad: Blair, S. C.	14	27	29	17.2	28
North Fork Edisto: Orangeburg, S. C.	8	Mar. 18	10	(8.3 (9.5 (9.0 (8.7 (8.6	Mar. 20 Mar. 25 Mar. 29 2 6
Edisto: Givhans, S. C.	10	Feb. 15	17	(12.6 (13.85	Mar. 9 3
Savannah: Millhaven, Ga.	15	25	19	17.6	5
Clyo, Ga.	11	Feb. 16	1/	(14.1 (14.6 (16.5	Feb. 23 Mar. 12 5
Ogeechee: Dover, Ga.	7	Mar. 21	10	(8.7 (8.3	Mar. 28 2
Eden, Ga.	9	Feb. 16	16	(12.4 (11.8 (11.6	Feb.22-23 Mar. 30 5
Ocmulgee: Abbeville, Ga.	12	Mar. 25	5	(12.2 (12.5	Mar. 27 2,3
Oconee: Mount Vernon, Ga.	16	Mar. 29	5	17.9	2
Altamaha: Charlotte, Ga.	15	Mar. 24	11	17.7	1,2
Satilla: Waycross, Ga.	16	2	5	17.9	2
Atkinson, Ga.	13	Feb. 14	16	16.4 15.9	(Feb. 22 (Mar. 8 8
EAST GULF OF MEXICO DRAINAGE					
Apalachicola: Blountstown, Fla.	15	(Feb. 9 (22 (29	18 23 29	21.0 19.9 15.1 15.0	Feb. 21 Mar.31,1 23 29
Oostanaula: Resaca, Ga.	22	Mar. 27	2	27.2	Mar. 29
Coosa: Gadsden, Ala.	20	Mar. 28	2	22.7	Mar. 28
East Fork Tombigbee: Fulton,Miss.	16	Mar. 26	1	16.95	Mar. 31
Black Warrior: Warrior Lock & Dam, Ala.	30	Mar. 29	1	38.1	Mar. 31
Tombigbee: Amory, Miss.	20	Mar. 27	2	25.0	Mar. 30
Aberdeen, Miss.	34	Mar. 31	2	39.0	1
Demopolis Lock & Dam, Ala.	48	Mar. 31	4	49.6	2
Jackson Lock & Dam, Ala.	43	Feb. 13	14	(52.9 (46.6	Feb. 23 5,6
Pearl: Jackson, Miss.	18	Mar. 30	9	26.6	5
Bogalusa, La.	15	1	14	17.75	5
Ohio Basin					
Paint Creek: Bourneville, Ohio	10	(9 (11	9 12	12.4 12.1	9 12
Scioto: LaRue, Ohio	11	25	26	11.8	26
Circleville, Ohio	14	(10 (26	10 27	14.65 16.0	10 26
Piketon, Ohio	16	(10 (27	15 29	20.3 #18.7	13 28
Green: Munfordville, Ky.	28	Mar. 27	1	33.3	Mar. 31
Lock 6, Brownsville, Ky.	18	Mar. 28	2	22.9	Mar. 31
Lock 4, Woodbury, Ky.	33	Mar. 28	4	41.2	Mar. 31
Lock 2, Calhoun, Ky.	23	Mar. 29	11	28.6	5
Eagle Creek: Zionsville, Ind.	7	(6 (8	6 9	7.45 10.4	6 8
EAST GULF OF MEXICO DRAINAGE(Cont'd)	Ft.			Ft.	
Ohio Basin (Cont'd.)					
East Fork: Seymour, Ind.	14	27	27	14.7	27
White: Anderson, Ind.	10	12	13	10.6	12
Spencer, Ind.	14	(10 (27	12 27	16.0 14.1	11 27
Elliston, Ind.	18	(12 (17 (27	12 17 27	18.65 18.3 18.5	12 12 28
Edwardsport, Ind.	15	(13 (18 (28	14 19 29	15.8 15.7 15.5	14 18 29
Petersburg, Ind.	16	12	21	17.9	15
Hazleton, Ind.	16	27	1/	E18.0	29-30
Wabash: Wabash, Ind.	12	(7 (26	11 26	14.6 12.05	9 26
Lafayette, Ind.	11	7	16	(15.7 (16.95	8 10
Covington, Ind.	16	8	16	21.0	11
Montezuma, Ind.	14	6 26	18 1/	#20.9 #17.2	13 28-29
Terre Haute, Ind.	14	7 27	18 1/	17.5 15.4	13 29
Hutsonville, Ill.	20	14	18	20.8	16
Riverton, Ind.	18	15	18	#18.5	18
Vincennes, Ind.	16	16	20	17.15	18
Mt. Carmel, Ill.	17	16	22	#18.4	19
Cumberland: Clarksville, Tenn.	46	Mar. 30	1	49.0	Mar. 31
Little Pigeon Creek: Sevierville, Tenn.	9	7	7	9.7	7
Tennessee: Whitesburg, Ala.	11	Mar. 25	3	21.5	Mar. 30
Florence, Ala.	18	Mar. 26	4	24.7	Mar. 30
Savannah, Tenn.	80	Mar. 26	5	87.9	Mar. 31
Gilbertsville, Ky.	20	Mar. 26	23	35.1	1
Ohio: Tell City, Ind.	38	Mar. 30	3	40.1	1
Dam 47, Newburgh, Ind.	38	(Mar. 30 (15	5 18	42.3 39.3	2 17
Dam 48, Cypress, Ind.	38	Mar. 31	5	41.0	3
Mt. Vernon, Ind.	35	(Mar. 31 (16	6 19	37.8 35.5	3 18
Dam 49, Uniontown, Ky.	37	(2 (18	6 19	38.5 37.0	4 18
Shawneetown, Ill.	33	(Mar. 31 (14	9 23	38.3 36.6	4 19
Dam 50, Fords Ferry, Ky.	34	(Mar. 30 (12	11 24	41.6 39.1	5 19
Dam 51, Golconda, Ill.	40	3	7	41.1	5
Paducah, Ky.	39	Mar. 31	9	42.5	5
Dam 52, Brookport, Ill.	37	Mar. 30	23	44.5	5
Dam 53, Grand Chain, Ill.	42	Mar. 30	25	48.7	6-7
Cairo, Ill.	40	Mar. 31 May 3	27 May 4	(47.4 (47.0 40.2	8 16 May 4
White Basin					
Black: Black Rock, Ark.	14	4 16	14 20	16.3 14.8	6 19
Cache: Patterson, Ark.	7	Jan. 9	28	(9.0 (8.2 (8.3 (#9.3	Jan. 12 Feb. 28 Mar. 8 10
Arkansas Basin					
Chikaskia: Corbin, Kans.	10	3	3	12.2	3
Caney Creek: Copan, Okla.	21	2	7	24.0	4
Little Caney: Bartlesville,Okla.	13	5	5	14.2	5
Caney: Ramona, Okla	27	3	8	28.7	7
Verdigris: Independence, Kans.	30	3	5	40.2	5
Lenapah, Okla.	30	5	7	34.4	6
Neosho: Oswego, Kans.	17	3	5	#20.8	4

FLOOD STAGE DATA

(All dates in April unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
EAST GULF OF MEXICO DRAINAGE (Cont'd)	*Ft.*			*Ft.*	
Arkansas Basin (Cont'd.)					
Neosho (Cont'd.): Commerce, Okla.	15	3	7	19.3	5
Illinois: Tahlequah, Okla.	11	(4 (6	5 7	12.0 13.1	4 7
Lower Mississippi Basin					
St. Francis: Fisk, Mo.	20	7	12	21.9	10
St. Francis, Ark.	18	12	18	18.6	15-16
Tallahatchie: Swan Lake, Miss.	26	Mar. 31	5	26.5	2
Big Black: Pickens, Miss.	16	Mar. 30	7	#18.0	2
Bovina, Miss.	28	Mar. 31	9	#30.0	5
Mississippi: New Madrid, Mo.	32	3	25	36.9	10-11
Caruthersville, Mo.	32	3	26	35.5	11-12
WEST GULF OF MEXICO DRAINAGE					
Calcasieu: Hineston, La.	12	Mar. 31	5	13.9	2
Sabine: Deweyville, Tex.	14	5	9	14.1	7
Trinity: Liberty, Tex.	24	5	6	#24.15	6
WEST GULF OF MEXICO DRAINAGE(Cont'd)	*Ft.*			*Ft.*	
Trinity (Cont'd.): Moss Bluff, Tex.	4	1	13	6.5	8
Navasota: Easterly, Tex.	14	Mar. 31	4	18.9	1
Bryan (nr), Tex.	12	1	5	14.9	2
PACIFIC SLOPE DRAINAGE					
Sacramento Basin					
Sacramento: Colusa Weir, Calif.	62	10	11	63.5	10
Tisdale Weir, Calif.	45	(10 (20	12 24	47.0 47.1	10 22
Fremont Weir, Calif.	33	21	25	34.7	23
Columbia Basin					
Coeur D'Alene: Cataldo, Idaho	43	21	23	43.5	22
Portneuf: Pocatello, Idaho	5	21	May 1	6.5	30
Clearwater: Spalding, Idaho	18	21	21	18.2	21

* Provisional
# Highest Stage Observed
E Estimated
1/ Continued at end of month

RAWINSONDE DATA

Average monthly values

APRIL 1965

ALBANY, N. Y.
1006 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	86	2.1	77	279	2.7
1000	30	129			306	3.7
950	30	542	1.6	62	308	5.8
900	30	978	-.5	64	306	8.4
850	30	1,434	-2.6	64	313	12.8
800	30	1,914	-3.7	55	311	17.3
750	30	2,425	-4.8	45	304	21.6
700	30	2,965	-6.6	43	301	23.1
650	30	3,537	-9.4	41	293	25.6
600	30	4,156	-13.2	42	293	28.2
550	30	4,812	-17.4	42	293	32.8
500	30	5,522	-21.9	42	292	36.1
450	30	6,283	-27.3	38	291	38.7
400	30	7,127	-33.3	36	289	42.2
350	30	8,052	-40.2	37	290	47.0
300	30	9,087	-47.6		291	55.0
250	30	10,273	-53.9		291	61.6
200	30	11,698	-55.0		288	54.2
175	30	12,554	-53.5		288	48.6
150	30	13,546	-53.8		288	39.8
125	30	14,715	-54.6		285	35.2
100	30	16,139	-56.1		288	32.2
80	30	17,557	-56.3		288	23.3
70	30	18,403	-56.5		285	20.8
60	30	19,384	-55.7		291	15.7
50	30	20,547	-55.0		296	8.4
40	29	21,980	-53.7		289	5.4
30	29	23,834	-52.6		260	2.5
25	29	25,013	-51.6		258	3.5
20	26	26,462	-49.8		262	5.1
15	19	28,349	-46.4		255	6.6
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ALBUQUERQUE, N. MEX.
837 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	1,619	6.7	48	122	1.0
1000	30	128				
950	30	561				
900	30	1,017				
850	30	1,492				
800	30	1,993	8.0	38	279	4.7
750	30	2,522	4.6	41	255	10.3
700	30	3,081	.5	44	253	14.0
650	30	3,667	-3.9	43	247	18.1
600	30	4,299	-8.1	38	248	23.7
550	30	4,963	-12.7	36	246	30.1
500	30	5,690	-17.7	R34	243	35.4
450	30	6,464	-23.2	R34	243	40.6
400	30	7,323	-29.4	R34	241	48.0
350	30	8,263	-36.2	R28	243	51.9
300	30	9,315	-44.3		242	54.6
250	30	10,514	-52.8		243	58.3
200	30	11,933	-58.5		246	57.5
175	30	12,770	-59.5		247	49.7
150	30	13,733	-60.5		247	45.8
125	30	14,865	-62.1		249	41.4
100	30	16,239	-63.0		252	31.1
80	30	17,610	-63.8		251	18.1
70	30	18,428	-62.7		248	11.1
60	30	19,383	-61.0		255	5.8
50	29	20,518	-59.8		269	2.7
40	27	21,921	-57.6		9	2.5
30	27	23,746	-55.3		294	3.7
25	27	24,916	-53.0		287	4.3
20	25	26,359	-51.0		266	7.8
15	23	28,257	-45.4		275	13.4
10	■	30,930	-39.6			
7						

AMARILLO, TEXAS
890 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	1,095	8.4	58	230	5.1
1000	30	119				
950	30	551				
900	30	1,008				
850	30	1,482	12.0	43	246	11.5
800	30	1,988	10.1	38	264	14.8
750	30	2,516	7.2	33	262	18.5
700	30	3,085	3.3	33	252	21.4
650	30	3,677	-1.0	34	248	23.9
600	30	4,315	-5.8	35	248	28.4
550	30	4,986	-10.6	34	248	31.7
500	30	5,718	-16.1	32	249	32.4
450	30	6,495	-22.0	31	252	36.7
400	30	7,357	-28.6	32	253	41.0
350	30	8,299	-35.9	32	251	46.0
300	30	9,352	-43.8		251	52.3
250	30	10,552	-52.7		253	59.4
200	30	11,965	-59.6		252	60.0
175	30	12,797	-60.8		254	56.5
150	30	13,754	-61.4		255	55.2
125	30	14,881	-62.5		258	49.3
100	30	16,253	-63.8		257	34.0
80	30	17,616	-64.5		256	20.0
70	28	18,434	-63.9		253	13.0
60	28	19,385	-61.0		250	7.0
50	28	20,522	-59.7		268	4.1
40	28	21,924	-57.4		289	3.1
30	27	23,751	-55.0		307	1.9
25	25	24,925	-53.0		291	4.5
20	24	26,371	-50.1		284	7.6
15	21	28,271	-45.4		276	13.6
10	10	30,986	-38.6			
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ANCHORAGE, ALASKA
1006 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	29	2.4	58	160	1.2
1000	30	95			196	.6
950	30	505	.3	55	9	4.5
900	30	939	-2.3	58	36	4.9
850	30	1,391	-4.9	62	62	2.9
800	30	1,865	-7.7	66	124	3.3
750	30	2,365	-10.8	68	176	4.9
700	30	2,891	-13.7	67	200	3.1
650	30	3,451	-16.8	62	257	4.1
600	30	4,048	-20.6	61	279	6.6
550	30	4,682	-24.9	60	260	8.4
500	30	5,373	-29.7	56	262	10.3
450	30	6,114	-34.9	52	261	13.6
400	30	6,929	-40.5	53	263	16.7
350	30	7,828	-46.0		266	18.8
300	30	8,842	-50.4		271	22.3
250	30	10,025	-52.4		281	27.4
200	30	11,470	-51.7		277	26.0
175	30	12,337	-50.8		275	23.1
150	30	13,341	-50.4		271	22.3
125	30	14,532	-50.3		271	20.2
100	29	15,985	-51.3		272	18.5
80	29	17,433	-51.7		271	14.8
70	29	18,298	-51.6		278	13.4
60	29	19,299	-51.8		288	12.4
50	29	20,480	-51.9		288	11.1
40	29	21,926	-51.9		301	6.6
30	28	23,796	-51.6		323	5.8
25	28	24,979	-51.5		332	6.4
20	25	26,412	-51.1		345	9.9
15	17	28,349	-49.6		66	6.4
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* ANNETTE, ALASKA
1009 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	37	3.5	79	109	2.1
1000	30	109	4.1	75	124	2.7
950	30	522	2.3	72	131	5.4
900	30	961	-.5	71	152	8.4
850	30	1,416	-3.2	72	164	8.9
800	30	1,893	-6.1	71	180	8.4
750	30	2,394	-9.0	63	188	8.9
700	30	2,928	-11.9	56	193	8.7
650	30	3,488	-15.3	53	203	7.8
600	30	4,093	-19.0	52	218	9.7
550	30	4,730	-23.1	50	228	10.5
500	30	5,429	-27.6	46	237	12.0
450	30	6,169	-32.7	46	243	12.8
400	30	7,001	-38.4	44	251	16.7
350	30	7,908	-44.1		263	17.7
300	30	8,928	-49.8		290	16.5
250	30	10,109	-53.4		295	18.6
200	30	11,545	-52.8		293	16.9
175	29	12,411	-52.0		297	14.2
150	29	13,410	-51.8		294	12.8
125	29	14,591	-52.3		287	13.4
100	29	16,031	-53.2		288	12.0
80	29	17,465	-54.1		288	9.5
70	29	18,320	-54.0		282	7.8
60	29	19,311	-53.9		298	6.2
50	29	20,481	-53.8		310	6.2
40	29	21,914	-53.9		328	4.7
30	29	23,760	-54.0		5	5.2
25	29	24,931	-53.9		11	5.6
20	29	26,364	-53.7		20	6.8
15	29	28,215	-53.1		19	7.8
10	21	30,825	-51.4		357	10.1
7	7	33,125	-48.9			

ATHENS, GA.
989 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	246	11.7	89	301	1.4
1000	30	148				
950	30	580	13.3	74	286	7.4
900	30	1,035	12.6	62	285	10.3
850	30	1,514	10.7	54	287	12.2
800	30	2,018	8.5	53	284	16.7
750	30	2,545	5.6	45	286	19.2
700	30	3,110	2.3	39	287	20.0
650	30	3,701	-1.7	38	284	23.1
600	30	4,338	-5.9	34	284	28.0
550	30	5,009	-10.3	36	284	30.7
500	30	5,744	-14.9	33	285	37.3
450	30	6,526	-20.2	29	286	40.2
400	30	7,397	-26.5	30	285	44.1
350	30	8,347	-33.6	28	285	51.5
300	30	9,411	-41.8	34	285	55.6
250	30	10,621	-51.0		287	63.9
200	29	12,039	-60.0		288	68.2
175	29	12,869	-61.0		284	67.6
150	29	13,827	-60.8		292	63.3
125	29	14,955	-63.3		282	53.0
100	29	16,318	-65.2		282	41.0
80	27	17,670	-65.5		280	28.2
70	27	18,485	-63.7		287	20.2
60	27	19,435	-61.9		292	12.0
50	26	20,571	-59.0		331	7.4
40	25	21,982	-56.1		355	4.5
30	25	23,822	-53.3		11	2.9
25	25	25,000	-51.3		355	2.5
20	25	26,459	-48.2		337	3.7
15	16	28,383	-43.8		299	3.9
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* BARROW, ALASKA
1015 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	8	-17.4	77	316	1.9
1000	30	119	-17.0	77	308	2.5
950	30	511	-15.1	86	272	4.3
900	30	915	-13.7	80	267	6.0
850	30	1,349	-14.1	78	258	7.8
800	30	1,808	-15.7	74	257	7.8
750	30	2,293	-17.8	73	258	7.6
700	30	2,807	-20.3	73	262	8.7
650	30	3,354	-23.0	70	265	10.9
600	30	3,936	-26.1	64	275	10.5
550	30	4,560	-30.2	62	269	12.4
500	30	5,233	-34.5	61	281	9.7
450	30	5,959	-39.3	58	277	10.5
400	30	6,762	-44.6		273	12.2
350	30	7,645	-49.9		270	15.5
300	30	8,643	-53.9		265	16.3
250	30	9,810	-54.4		268	16.9
200	30	11,250	-51.2		270	18.3
175	30	12,119	-50.8		269	20.0
150	30	13,122	-50.7		272	21.4
125	29	14,304	-50.5		272	22.5
100	28	15,758	-50.0		274	22.3
80	28	17,216	-49.4		277	23.3
70	28	18,090	-49.5		285	22.0
60	28	19,099	-49.3		290	19.6
50	27	20,287	-48.6		296	18.5
40	27	21,753	-48.4		296	13.4
30	27	23,646	-48.3		299	10.3
25	26	24,870	-47.8		293	9.1
20	25	26,366	-47.3		313	6.8
15	24	28,271	-47.3		346	8.9
10	21	30,990	-45.3		48	12.2
7	7	33,551	-42.0			

BARTER IS., ALASKA
1014 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	29	15	-16.9	83	251	3.9
1000	29	122	-14.5	71	271	6.0
950	29	513	-12.8	73	274	6.8
900	29	925	-11.7	71	265	8.2
850	29	1,362	-12.7	66	265	8.5
800	29	1,823	-14.7	65	256	9.7
750	29	2,308	-16.8	65	260	11.5
700	29	2,826	-19.2	62	268	11.5
650	29	3,371	-21.8	56	268	13.8
600	29	3,959	-25.2	53	270	15.7
550	29	4,584	-29.0	51	274	17.1
500	29	5,262	-33.4	49	269	17.3
450	29	5,993	-38.3	45	271	16.5
400	29	6,795	-43.6	47	260	17.7
350	29	7,682	-49.1		264	21.6
300	29	8,683	-53.6		265	26.4
250	29	9,852	-53.8		269	27.0
200	29	11,293	-51.3		273	24.3
175	29	12,161	-50.8		271	25.6
150	29	13,165	-50.7		275	25.8
125	28	14,348	-50.7		276	26.8
100	28	15,804	-49.9		277	27.0
80	28	17,263	-50.0		281	25.6
70	27	18,126	-49.7		284	26.6
60	26	19,134	-49.5		288	26.8
50	25	20,317	-49.6		296	24.3
40	23	21,767	-49.3		295	24.9
30	22	23,644	-48.9		304	26.2
25	22	24,840	-49.1		317	21.0
20	19	26,317	-48.4		320	23.5
15	12	28,208	-47.3			
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BETHEL, ALASKA
1009 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	39	-3.9	81	255	3.5
1000	30	110			270	4.1
950	30	515	-4.4	72	248	5.1
900	30	940	-5.8	68	241	6.4
850	30	1,386	-7.3	67	247	8.5
800	30	1,857	-9.3	63	257	10.1
750	30	2,355	-11.5	58	261	10.7
700	30	2,881	-14.3	58	262	12.0
650	30	3,439	-17.1	56	263	14.6
600	30	4,036	-20.8	55	264	15.7
550	30	4,670	-24.8	52	263	17.3
500	30	5,363	-29.0	48	269	20.2
450	30	6,102	-34.2	47	269	22.1
400	30	6,923	-39.8	48	272	25.8
350	30	7,825	-45.0	42	262	28.6
300	30	8,845	-49.2		266	31.1
250	30	10,033	-51.6		269	35.2
200	30	11,479	-51.7		267	32.2
175	30	12,346	-51.0		265	28.7
150	30	13,351	-49.9		264	25.4
125	30	14,541	-50.5		264	21.6
100	30	15,994	-51.1		262	17.1
80	30	17,442	-51.4		261	16.1
70	30	18,308	-51.4		260	12.8
60	30	19,309	-51.6		266	10.3
50	30	20,491	-51.6		264	9.1
40	30	21,939	-51.5		277	6.0
30	29	23,817	-50.9		315	3.7
25	27	25,023	-50.4		10	1.6
20	26	26,479	-50.0		50	3.3
15	22	28,365	-49.3		37	6.8
10	■	30,988	-49.3			
7						

BISMARCK, N. DAK.
956 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	27	505	1.6	83	63	1.4
1000	27	139				
950	27	553			66	1.7
900	27	991	1.5	72	289	2.9
850	27	1,451	1.1	67	286	6.6
800	27	1,938	-.1	58	291	9.5
750	27	2,449	-2.5	53	299	11.3
700	27	2,998	-5.5	55	299	14.2
650	27	3,571	-8.6	53	296	16.9
600	27	4,193	-12.2	50	288	19.4
550	27	4,847	-16.5	46	286	21.4
500	27	5,563	-21.2	41	281	23.5
450	27	6,324	-27.0	38	281	25.6
400	27	7,172	-33.7	38	280	28.6
350	27	8,093	-41.1	32	280	29.5
300	27	9,122	-49.4		276	29.7
250	27	10,297	-55.9		274	35.5
200	27	11,709	-57.1		274	38.1
175	27	12,555	-56.5		271	37.1
150	27	13,536	-54.9		271	32.8
125	27	14,700	-55.5		277	29.5
100	27	16,119	-56.3		277	25.3
80	25	17,534	-56.8		280	19.8
70	24	18,382	-56.6		291	14.8
60	24	19,362	-56.0		293	11.7
50	24	20,522	-55.8		301	8.4
40	24	21,946	-54.8		338	6.0
30	23	23,788	-54.1		341	4.5
25	22	24,955	-53.3		355	1.9
20	22	26,398	-51.6		320	3.7
15	20	28,268	-49.4		280	7.2
10	12	30,951	-45.1			
7						

BOISE, IDAHO
913 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	868	6.4	78	137	3.7
1000	30	114				
950	30	540				
900	30	987	8.7	60	138	4.7
850	30	1,459	7.0	53	217	3.3
800	30	1,955	3.5	55	258	5.8
750	30	2,474	-.1	59	258	7.2
700	30	3,023	-4.3	62	251	8.0
650	30	3,599	-8.5	60	257	9.5
600	30	4,220	-12.5	54	264	10.9
550	30	4,875	-17.2	54	255	12.4
500	30	5,587	-22.3	52	245	14.0
450	30	6,345	-27.9	48	248	15.5
400	30	7,190	-34.1	43	251	16.1
350	30	8,111	-41.2	44	254	16.5
300	30	9,140	-49.1		257	17.7
250	30	10,316	-56.1		263	21.0
200	30	11,728	-57.2		261	26.6
175	30	12,575	-55.8		256	24.5
150	30	13,558	-55.3		255	21.4
125	30	14,720	-55.5		248	20.0
100	28	16,135	-56.2		253	14.2
80	27	17,553	-56.6		247	9.1
70	27	18,399	-56.8		240	7.4
60	27	19,373	-57.2		245	5.4
50	26	20,531	-57.1		276	1.7
40	26	21,946	-56.4		59	2.9
30	24	23,774	-55.5		54	5.1
25	20	24,942	-54.2		73	6.8
20	18	26,398	-52.2		52	6.4
15	11	28,231	-49.9			
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* BOOTHVILLE, LA.
1016 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	29	1	19.3	92	98	1.6
1000	29	142	19.9	87	141	3.1
950	29	584	17.8	71	150	5.4
900	29	1,046	16.7	51	192	5.8
850	29	1,531	14.8	44	224	7.8
800	29	2,042	12.4	40	231	9.9
750	29	2,579	9.2	39	237	10.5
700	29	3,148	5.8	35	251	12.2
650	29	3,749	1.9	39	256	13.2
600	28	4,394	-2.1	38	267	15.2
550	28	5,074	-6.8	38	272	18.5
500	28	5,817	-12.0	37	271	20.4
450	28	6,615	-17.5	29	275	25.4
400	28	7,488	-23.4	31	275	30.9
350	28	8,451	-30.4	30	274	38.1
300	28	9,528	-38.7	28	275	45.1
250	28	10,753	-48.5		275	50.3
200	28	12,186	-58.5		274	57.9
175	28	13,020	-61.4		276	54.6
150	28	13,973	-62.8		271	53.6
125	28	15,086	-66.3		271	47.8
100	27	16,424	-69.6		271	37.1
80	27	17,748	-70.8		273	25.3
70	26	18,540	-68.6		285	16.1
60	26	19,470	-65.0		306	4.1
50	26	20,594	-60.5		345	5.1
40	26	21,992	-57.4		28	6.6
30	26	23,830	-52.8		51	2.3
25	26	25,013	-50.4		356	1.6
20	26	26,479	-47.5		299	2.7
15	24	28,396	-43.7		289	6.4
10	18	31,137	-38.5		258	2.9
7						

* BROWNSVILLE, TEXAS
1012 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	7	20.0	90	139	5.8
1000	30	108	20.8	90	141	8.7
950	30	553	20.1	70	157	16.3
900	30	1,019	19.6	46	170	16.3
850	30	1,510	17.8	40	179	12.6
800	30	2,026	15.7	37	197	8.2
750	30	2,571	13.2	33	215	7.0
700	30	3,148	9.2	35	233	7.4
650	30	3,754	4.9	34	253	8.0
600	30	4,405	-.2	35	261	10.7
550	30	5,090	-5.4	36	273	13.6
500	30	5,836	-10.9	36	267	15.0
450	30	6,631	-16.5	38	264	19.0
400	30	7,513	-22.8	37	261	22.9
350	30	8,478	-30.1	37	263	30.1
300	30	9,557	-38.5	36	257	36.3
250	30	10,783	-48.5		257	44.1
200	30	12,216	-58.3		257	52.4
175	30	13,050	-61.5		255	55.6
150	30	13,998	-64.5		253	51.3
125	30	15,101	-68.4		254	43.1
100	30	16,424	-72.8		252	36.1
80	27	17,730	-74.4		255	20.4
70	26	18,508	-72.4		242	8.9
60	26	19,428	-67.1		148	3.3
50	26	20,544	-61.0		90	3.9
40	25	21,944	-56.6		65	8.0
30	24	23,784	-52.4		74	4.9
25	24	24,968	-50.3		67	3.7
20	24	26,434	-47.4		45	.8
15	23	28,353	-43.3		238	.8
10	23	31,112	-37.8		225	2.7
7	10	33,573	-34.4			

BUFFALO, N. Y.
990 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	218	1.7	80	233	2.7
1000	30	136				
950	30	550	2.5	60	248	2.5
900	30	986	1.0	56	289	6.2
850	30	1,444	-1.1	59	297	10.7
800	30	1,926	-2.5	52	295	15.2
750	30	2,437	-4.2	51	290	19.4
700	30	2,979	-6.8	53	290	23.5
650	30	3,550	-9.7	52	290	26.8
600	30	4,168	-13.1	50	291	31.7
550	30	4,823	-16.9	44	294	36.7
500	30	5,537	-21.3	40	292	41.0
450	30	6,300	-26.7	38	290	44.9
400	30	7,147	-32.6	38	295	45.1
350	30	8,073	-39.5	37	295	50.5
300	30	9,110	-47.0		293	61.8
250	30	10,298	-53.7		291	73.4
200	30	11,721	-55.8		294	63.7
175	30	12,571	-55.4		293	55.2
150	30	13,558	-54.3		291	48.8
125	30	14,724	-55.3		291	40.2
100	30	16,144	-56.2		289	35.2
80	30	17,558	-56.9		293	30.1
70	30	18,403	-56.9		295	21.4
60	30	19,379	-56.3		301	16.7
50	30	20,540	-55.2		305	12.0
40	30	21,969	-53.9		310	7.2
30	30	23,821	-52.7		306	5.6
25	27	24,996	-51.6		331	1.9
20	19	26,437	-49.4		268	4.3
15	9	28,334	-45.5			
10						
7						

*CANTON IS., PACIFIC AREA
+ 1009 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	4	29.8	70	65	9.9
1000	30	86	28.4	70	65	11.8
950	30	535	23.2	73	73	15.0
900	30	1,009	20.5	68	80	17.7
850	30	1,502	18.1	63	85	19.2
800	30	2,020	15.6	56	87	18.6
750	30	2,559	13.0	51	89	18.5
700	30	3,143	10.2	44	91	17.5
650	30	3,749	6.8	40	87	15.5
600	30	4,409	2.9	38	86	12.2
550	30	5,100	-1.3	37	97	13.8
500	30	5,862	-5.5	33	108	12.8
450	30	6,674	-10.2	28	104	11.7
400	30	7,579	-16.1	25	110	11.8
350	30	8,571	-23.1	25	117	16.5
300	30	9,681	-31.3	25	132	20.4
250	30	10,945	-41.7		140	24.9
200	30	12,419	-53.7		153	23.7
175	30	13,264	-60.4		161	17.9
150	30	14,208	-67.5		200	8.4
125	30	15,285	-75.3		254	10.1
100	30	16,554	-81.5		212	7.6
80	30	17,825	-75.2		231	3.5
70	30	18,606	-71.1		259	10.1
60	30	19,526	-67.5		269	18.8
50	30	20,632	-64.4		272	23.1
40	30	22,008	-61.0		267	12.8
30	29	23,808	-56.9		91	31.1
25	29	24,968	-54.6		91	50.3
20	24	26,401	-51.2		88	61.0
15	21	28,294	-45.0		91	71.3
10	13	31,039	-38.8		90	79.4
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

APRIL 1965

CAPE HATTERAS, N. C.
1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	4	11.1	84	331	2.7
1000	30	134	12.3	75	306	5.1
950	30	565	11.8	69	293	11.5
900	30	1,016	9.8	65	289	13.8
850	30	1,489	7.8	57	289	17.3
800	30	1,987	5.5	51	291	21.4
750	30	2,510	3.0	49	292	24.3
700	30	3,069	.2	44	292	28.2
650	30	3,656	- 3.3	42	289	30.5
600	30	4,289	- 6.6	37	287	36.5
550	30	4,955	-10.9	R33	287	37.9
500	30	5,690	-15.7	R33	289	41.2
450	30	6,468	-21.1	R34	289	47.2
400	30	7,336	-27.3	R33	292	50.9
350	30	8,284	-34.2	R30	294	55.4
300	30	9,345	-42.1	37	294	62.5
250	30	10,554	-51.0		294	74.2
200	30	11,978	-58.5		292	69.9
175	30	12,816	-59.3		291	66.8
150	30	13,781	-59.2		288	62.2
125	30	14,922	-59.9		287	52.6
100	30	16,310	-61.6		286	41.2
80	30	17,689	-62.1		288	24.5
70	30	18,514	-61.1		287	18.1
60	30	19,474	-59.9		306	9.1
50	30	20,616	-57.9		319	6.6
40	30	22,034	-54.5		46	.4
30	28	23,883	-52.0		100	1.4
25	27	25,067	-50.1		101	1.9
20	27	26,532	-47.4		105	1.0
15	27	28,454	-42.3		286	3.7
10	22	31,240	-35.6		263	12.4
7	8	33,701	-30.5			
5						

CARIBOU, ME.
990 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	191	- 1.2	76	296	3.9
1000	30	113				
950	30	523	- 1.8	64	312	6.0
900	30	951	- 3.6	60	323	8.4
850	30	1,401	- 5.7	60	322	10.1
800	30	1,874	- 7.7	57	318	11.8
750	30	2,376	- 9.6	54	308	15.3
700	30	2,906	-12.0	49	311	16.1
650	30	3,470	-14.9	45	305	18.3
600	30	4,072	-18.0	44	304	20.2
550	30	4,717	-21.9	41	294	22.5
500	30	5,413	-26.6	37	292	26.0
450	30	6,161	-31.7	34	289	28.0
400	30	6,991	-37.4	R29	291	31.3
350	30	7,901	-43.7	33	290	35.4
300	30	8,923	-49.3		286	39.0
250	30	10,110	-51.8		284	42.7
200	30	11,556	-51.5		280	40.2
175	30	12,423	-50.8		276	35.4
150	30	13,426	-51.0		280	33.6
125	28	14,606	-51.8		276	28.4
100	28	16,048	-53.1		273	25.3
80	28	17,488	-53.0		275	19.0
70	28	18,347	-53.4		270	14.4
60	28	19,342	-52.8		268	12.0
50	28	20,520	-52.3		265	6.0
40	28	21,965	-52.1		228	3.9
30	28	23,830	-51.5		192	3.7
25	26	25,015	-50.6		166	3.5
20	26	26,476	-48.6		163	3.7
15	21	28,377	-46.1		189	2.9
10	10	31,117	-39.6			
7	6	33,527	-36.5			
5						

CHARLESTON, S. C.
1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	13	13.2	87	300	1.6
1000	30	144	14.4	81	301	2.3
950	30	583	14.5	68	294	6.6
900	30	1,035	12.8	58	288	10.3
850	30	1,514	10.9	54	288	14.0
800	30	2,017	8.1	54	287	18.1
750	30	2,549	5.8	43	287	20.8
700	30	3,110	2.7	39	286	22.7
650	30	3,708	- 1.2	40	286	25.1
600	30	4,340	- 5.2	35	287	28.6
550	30	5,016	- 9.6	R32	290	33.0
500	30	5,748	-14.4	30	290	36.1
450	30	6,534	-19.9	R29	290	39.6
400	30	7,404	-25.9	R28	290	42.9
350	30	8,358	-32.9	R26	288	47.4
300	30	9,424	-41.1	R25	290	53.0
250	30	10,638	-50.5		292	61.6
200	30	12,060	-59.7		291	63.7
175	29	12,892	-61.6		291	62.5
150	29	13,847	-61.9		285	60.0
125	29	14,972	-63.4		283	55.0
100	29	16,335	-65.9		283	42.5
80	29	17,684	-66.4		285	29.5
70	29	18,495	-64.2		287	19.4
60	28	19,440	-62.7		293	12.6
50	28	20,571	-59.9		319	7.0
40	28	21,977	-56.3		17	3.1
30	28	23,821	-52.4		52	3.1
25	25	24,998	-50.8		34	1.6
20	18	26,470	-47.8		109	1.4
15	8	28,430	-42.1			
10						
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5						

CHIHUAHUA, MEXICO
856 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	29	1,428	13.4	29	211	2.5
1000	29	92				
950	29	533				
900	29	1,002				
850	29	1,490	14.4	27	214	2.9
800	29	2,003	14.1	25	235	8.2
750	29	2,537	10.4	27	239	12.0
700	29	3,113	7.0	27	237	21.6
650	29	3,713	3.3	R26	233	23.5
600	29	4,361	- 1.3	27	234	22.0
550	29	5,038	- 6.4	R23	238	24.9
500	29	5,785	-11.9	R23	239	27.6
450	29	6,573	-17.8	R27	240	30.5
400	29	7,453	-24.4	R30	247	32.4
350	29	8,411	-31.7	R30	250	37.3
300	29	9,481	-40.3	R27	250	41.0
250	28	10,700	-49.6		251	39.6
200	28	12,126	-59.0		250	45.1
175	28	12,957	-62.1		253	49.0
150	27	13,904	-63.3		253	52.6
125	27	15,019	-65.4		256	54.6
100	25	16,375	-67.5		258	43.1
80	21	17,706	-70.1		264	22.9
70	18	18,498	-68.2		272	10.7
60	15	19,427	-64.8		288	2.7
50	13	20,553	-60.9		223	1.7
40	13	21,955	-57.1		239	3.1
30	12	23,791	-54.2		166	.8
25	11	24,973	-51.9		68	.8
20	10	26,428	-48.9			
15	8	28,353	-44.7			
10						
7						
5						

* COLD BAY, ALASKA
1012 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	30	.4	79	248	2.1
1000	30	122			306	4.3
950	30	532	.0	65	299	5.6
900	30	965	- 2.2	71	290	7.6
850	30	1,417	- 3.8	61	285	12.0
800	30	1,895	- 5.6	55	297	12.8
750	30	2,395	- 8.2	55	290	12.6
700	30	2,932	-10.7	52	291	13.6
650	30	3,493	-13.4	56	278	14.2
600	30	4,104	-17.2	50	266	17.7
550	30	4,744	-21.3	46	268	20.8
500	30	5,448	-26.1	44	272	22.3
450	30	6,197	-31.5	44	271	23.3
400	30	7,026	-37.2	45	272	25.1
350	30	7,937	-42.9	47	272	28.2
300	30	8,965	-48.0		276	30.7
250	30	10,155	-51.8		263	34.0
200	30	11,593	-53.8		266	31.5
175	30	12,450	-53.5		262	26.4
150	30	13,446	-51.8		262	23.9
125	30	14,626	-52.6		266	17.7
100	30	16,065	-53.0		266	13.0
80	29	17,501	-53.5		255	7.0
70	29	18,360	-53.3		251	8.0
60	29	19,353	-52.9		244	5.6
50	29	20,529	-52.6		194	.8
40	28	21,968	-52.5		58	1.4
30	25	23,830	-52.1		56	2.9
25	24	25,014	-51.9		28	3.3
20	22	26,457	-51.4		74	4.1
15	22	28,328	-50.6		76	6.2
10	20	30,976	-49.3		62	10.1
7	13	33,326	-46.5			
5	6	35,604	-44.3			

COLUMBIA, MO.
986 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	238	9.8	78	166	1.9
1000	30	115				
950	30	541	10.5	70	232	8.4
900	30	994	10.9	61	254	16.1
850	30	1,470	9.5	54	270	17.9
800	30	1,971	7.1	46	273	19.0
750	30	2,496	4.0	44	275	22.5
700	30	3,057	.6	41	274	26.4
650	30	3,643	- 3.0	41	273	30.5
600	30	4,278	- 7.4	40	276	33.0
550	30	4,943	-11.9	34	275	36.9
500	30	5,674	-17.0	33	273	40.2
450	30	6,447	-22.6	30	274	43.7
400	30	7,310	-28.9	R30	273	47.6
350	30	8,251	-36.2	29	274	52.6
300	30	9,304	-44.0		272	57.1
250	30	10,505	-52.5		272	64.3
200	30	11,920	-59.9		271	66.0
175	30	12,751	-60.8		271	63.5
150	30	13,713	-59.2		274	57.7
125	30	14,854	-59.8		272	46.4
100	30	16,245	-61.2		271	32.4
80	30	17,629	-61.5		273	23.1
70	30	18,457	-60.6		277	18.5
60	30	19,419	-59.8		285	13.2
50	28	20,563	-58.2		299	7.4
40	28	21,974	-56.5		314	4.3
30	26	23,813	-54.2		332	4.9
25	25	24,986	-52.6		315	2.9
20	22	26,440	-50.1		290	7.0
15	20	28,344	-46.0		282	11.3
10						

CORPUS CHRISTI, TEXAS
1012 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	27	6	21.1	84	122	6.6
1000	27	108	20.2	85	131	9.7
950	27	546	18.8	74	161	15.0
900	27	1,015	18.3	56	172	14.2
850	27	1,504	17.3	45	184	11.8
800	27	2,020	14.8	44	205	9.1
750	27	2,555	12.0	41	213	9.5
700	27	3,137	8.6	43	222	9.1
650	26	3,737	4.3	40	234	8.9
600	26	4,393	- .8	46	248	13.0
550	26	5,067	- 5.9	46	258	17.3
500	26	5,821	-11.0	43	263	20.4
450	26	6,609	-16.7	45	264	23.5
400	25	7,498	-22.9	43	262	28.2
350	25	8,462	-30.3	44	262	33.8
300	25	9,539	-38.8	46	259	38.7
250	25	10,764	-48.7		257	45.8
200	25	12,194	-59.0		259	54.2
175	25	13,025	-62.0		258	55.4
150	24	13,972	-63.6		259	51.3
125	22	15,084	-66.4		257	46.2
100	19	16,417	-69.6		258	41.0
80	16	17,737	-72.1		252	22.9
70	14	18,519	-71.2		255	13.4
60	11	19,426	-66.2		246	8.9
50	9	20,542	-62.3			
40	9	21,937	-57.4			
30	8	23,768	-53.7			
25	8	24,948	-50.6			
20	8	26,412	-48.2			
15	6	28,314	-45.2			
10						

DAYTON, OHIO
980 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	297	5.7	80	35	1.6
1000	30	132				
950	30	556	7.0	66	209	3.7
900	30	998	6.4	61	262	10.9
850	30	1,466	4.6	61	276	15.9
800	30	1,959	2.8	52	278	22.1
750	30	2,480	.4	50	280	26.0
700	30	3,031	- 2.7	50	284	29.9
650	30	3,614	- 5.9	48	282	34.0
600	30	4,239	- 9.6	45	283	39.2
550	30	4,902	-13.4	39	285	42.0
500	30	5,625	-18.3	42	288	46.6
450	30	6,399	-23.9	42	287	49.5
400	30	7,253	-30.1	41	285	54.2
350	30	8,190	-37.3	38	284	59.2
300	30	9,236	-45.5		284	67.6
250	30	10,430	-53.5		286	75.8
200	30	11,844	-59.2		284	74.6
175	30	12,679	-59.1		287	67.8
150	30	13,648	-58.2		286	54.4
125	30	14,795	-58.7		283	44.3
100	30	16,192	-59.8		282	34.4
80	30	17,582	-60.5		283	26.6
70	30	18,414	-59.8		287	19.6
60	30	19,377	-59.2		294	13.6
50	30	20,521	-57.9		304	8.5
40	30	21,933	-56.2		342	3.5
30	30	23,769	-54.0		2	1.9
25	30	24,942	-52.5		295	2.3
20	27	26,388	-50.4		278	4.1
15	17	28,267	-45.7		269	9.1
10						

DEL RIO, TEXAS
977 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	314	17.7	78	116	4.7
1000	30	113				
950	30	554	18.1	73	132	10.3
900	30	1,017	17.5	64	161	13.2
850	30	1,505	15.9	55	186	11.8
800	30	2,018	14.3	41	198	10.1
750	30	2,557	11.2	37	220	11.8
700	30	3,133	7.4	38	238	12.8
650	30	3,735	2.6	34	250	14.8
600	30	4,381	- 2.2	34	250	18.5
550	30	5,059	- 7.4	36	248	24.5
500	30	5,801	-12.9	R29	253	27.8
450	30	6,590	-18.4	R26	253	31.9
400	30	7,466	-24.9	R29	253	35.9
350	30	8,424	-31.8	R28	253	41.2
300	30	9,495	-40.1	R27	252	49.0
250	30	10,714	-49.7		250	58.5
200	30	12,142	-58.9		250	65.3
175	30	12,974	-61.6		250	66.4
150	30	13,924	-63.6		249	64.5
125	30	15,036	-66.4		252	54.0
100	30	16,377	-69.3		256	39.0
80	30	17,702	-71.3		242	22.9
70	30	18,494	-68.8		238	12.0
60	30	19,427	-64.0		231	3.3
50	29	20,551	-60.5		129	3.1
40	29	21,953	-57.1		55	4.3
30	29	23,787	-53.6		44	3.5
25	29	24,966	-51.1		16	3.3
20	29	26,427	-47.9		309	1.7
15	28	28,346	-42.6		291	2.3
10	12	31,105	-36.2			

DENVER, COLO.
836 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	1,611	4.8	63	241	2.1
1000	30	120				
950	30	545				
900	30	995				
850	30	1,471				
800	30	1,968	5.8	50	269	4.5
750	30	2,491	2.8	49	271	8.5
700	30	3,048	- 1.3	47	259	14.0
650	30	3,633	- 5.4	47	266	17.9
600	30	4,258	- 9.5	47	265	19.2
550	30	4,921	-14.1	44	259	20.6
500	30	5,642	-19.0	39	255	25.6
450	30	6,413	-25.1	38	253	28.7
400	30	7,261	-31.8	37	250	34.2
350	30	8,192	-38.6	36	246	40.6
300	30	9,233	-46.3		243	47.6
250	30	10,423	-54.1		246	52.4
200	30	11,838	-58.1		250	49.7
175	30	12,676	-59.3		249	47.6
150	30	13,644	-58.1		251	44.7
125	30	14,791	-58.6		252	33.2
100	30	16,189	-59.7		254	24.7
80	30	17,586	-60.3		263	15.3
70	30	18,417	-60.3		262	9.9
60	29	19,382	-59.2		267	7.4
50	29	20,527	-58.6		281	1.9
40	29	21,936	-57.0		323	2.1
30	27	23,774	-55.0		359	3.7
25	27	24,943	-53.7		349	2.7
20	26	26,390	-51.4		318	2.3
15	23	28,274	-47.6		277	7.2
10	8	30,963	-41.9			

DODGE CITY, KANS.
922 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	792	7.9	72	231	3.5
1000	30	116				
950	30	544				
900	30	995	11.3	54	243	7.2
850	30	1,473	11.8	40	264	11.1
800	30	1,978	9.4	37	262	14.8
750	30	2,509	6.0	34	264	17.5
700	30	3,071	2.1	34	261	19.2
650	30	3,662	- 2.2	33	258	21.0
600	30	4,295	- 6.9	37	258	24.1
550	30	4,963	-12.0	40	255	29.7
500	30	5,691	-17.4	40	256	33.8
450	30	6,464	-23.1	40	255	39.4
400	30	7,324	-29.5	37	253	44.3
350	30	8,263	-36.9	35	252	49.3
300	30	9,311	-45.0		250	52.4
250	30	10,506	-53.5		250	58.9
200	30	11,918	-59.8		255	58.7
175	30	12,748	-61.3		256	57.9
150	30	13,706	-60.3		259	54.8
125	30	14,843	-60.8		262	42.0
100	30	16,226	-62.1		259	28.4
80	30	17,602	-62.7		263	15.7
70	30	18,425	-62.2		258	12.0
60	30	19,381	-60.4		268	8.0
50	30	20,519	-59.3		306	3.3
40	30	21,922	-57.4		331	3.3
30	29	23,750	-55.2		333	3.7
25	28	24,925	-53.3		334	1.7
20	27	26,371	-50.7		268	5.8
15	21	28,273	-46.5		264	14.0
10						

EL PASO, TEXAS
882 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	1,193	12.1	31	293	2.1
1000	30	117				
950	30	554				
900	30	1,020				
850	30	1,499	14.2	28	283	4.1
800	30	2,007	10.9	30	262	8.7
750	30	2,536	7.1	32	249	14.6
700	30	3,107	3.2	31	240	19.4
650	30	3,697	- .9	28	241	23.5
600	30	4,338	- 5.4	R26	240	28.6
550	30	5,006	-10.2	R24	241	32.6
500	30	5,743	-15.2	R26	244	37.7
450	30	6,525	-20.9	R27	242	41.2
400	30	7,392	-27.5	R28	243	44.7
350	30	8,340	-33.4	R28	241	47.0
300	30	9,400	-42.8		241	51.9
250	30	10,606	-52.1		241	59.4
200	30	12,021	-60.6		244	64.1
175	30	12,849	-62.3		246	61.6
150	30	13,801	-62.0		249	61.2
125	30	14,925	-63.6		251	50.9
100	30	16,287	-65.6		250	36.9
80	30	17,636	-67.3		233	21.0
70	30	18,443	-64.9		242	13.4
60	29	19,388	-63.2		254	4.9
50	29	20,516	-60.4		155	.6
40	28	21,918	-57.9		57	4.7
30	27	23,747	-54.8		24	5.8
25	27	24,919	-52.5		19	5.1
20	25	26,371	-49.0		305	2.1
15	20	28,278	-44.0		352	3.5
10						

ELY, NEV.
806 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	1,908	1.0	72	185	5.6
1000	30	136				
950	30	561				
900	30	1,011				
850	30	1,476				
800	30	1,969			188	4.9
750	30	2,489	.4	59	183	6.0
700	30	3,039	- 3.5	59	231	8.2
650	30	3,622	- 7.5	58	242	12.4
600	30	4,239	-11.5	54	248	13.2
550	30	4,900	-15.9	47	250	14.2
500	30	5,612	-21.0	42	252	15.3
450	30	6,377	-26.7	39	249	16.3
400	30	7,220	-33.3	37	246	18.8
350	29	8,142	-40.4	38	245	20.2
300	29	9,176	-47.7		248	26.2
250	29	10,364	-53.7		249	32.6
200	29	11,784	-57.3		254	33.4
175	29	12,628	-57.7		254	31.9
150	29	13,600	-57.3		250	30.7
125	29	14,754	-57.3		251	23.7
100	29	16,161	-58.4		240	18.8
80	29	17,562	-58.9		242	12.4
70	28	18,401	-58.5		235	10.3
60	28	19,369	-58.7		237	5.2
50	28	20,514	-58.5		267	2.3
40	28	21,920	-57.5		299	.8
30	26	23,750	-56.2		17	1.7
25	25	24,913	-54.9		357	1.7
20	23	26,350	-52.3		27	2.5
15	15	28,218	-48.2		284	7.2
10						

EMPALME, MEXICO
1012 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	12	15.2	69	337	3.7
1000	30	109	18.2	59	339	3.3
950	30	549	20.1	47	347	4.3
900	30	1,016	17.9	46	324	4.5
850	30	1,502	15.0	44	253	4.7
800	30	2,013	12.2	34	219	9.3
750	30	2,547	9.2	30	218	12.4
700	30	3,119	5.7	27	225	15.2
650	30	3,716	1.9	28	228	20.2
600	30	4,360	- 2.8	30	236	23.7
550	30	5,036	- 7.5	31	240	27.6
500	30	5,779	-12.8	31	243	32.2
450	30	6,568	-19.0	31	245	33.6
400	30	7,442	-25.6	33	244	37.1
350	30	8,395	-33.0	34	244	42.3
300	30	9,461	-41.2	40	246	48.6
250	30	10,671	-51.1		242	54.4
200	30	12,091	-60.0		241	62.7
175	30	12,921	-61.7		246	62.5
150	30	13,873	-63.3		244	58.9
125	30	14,994	-65.0		243	52.8
100	29	16,343	-68.7		241	41.2
80	27	17,676	-69.1		232	24.3
70	27	18,477	-66.7		240	15.2
60	27	19,415	-65.0		240	6.6
50	26	20,537	-60.6		142	1.6
40	26	21,938	-57.6		80	5.2
30	24	23,773	-53.8		68	3.7
25	20	24,947	-52.0		47	2.3
20	17	26,404	-49.4		286	1.9
15	9	28,295	-45.7			
10						

* FAIRBANKS, ALASKA
997 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	135	- 3.1	68	316	2.5
1000	30	107			259	5.4
950	30	511	- 3.3	59	273	2.1
900	30	939	- 5.5	61	245	5.2
850	30	1,386	- 8.0	67	257	9.3
800	30	1,854	-10.7	66	249	10.9
750	30	2,345	-13.3	67	245	11.3
700	30	2,871	-16.2	64	257	13.0
650	30	3,420	-19.4	60	263	14.2
600	30	4,016	-23.1	59	264	16.5
550	30	4,643	-27.2	59	261	16.9
500	30	5,329	-31.4	59	261	19.4
450	30	6,061	-36.3	55	266	20.2
400	30	6,875	-41.7	51	269	21.6
350	29	7,756	-47.8		264	22.9
300	29	8,762	-52.2		269	26.8
250	29	9,936	-53.3		268	26.6
200	28	11,367	-50.9		273	26.4
175	28	12,237	-50.2		270	25.6
150	28	13,244	-49.8		271	26.6
125	28	14,437	-49.8		273	25.8
100	28	15,896	-50.4		270	26.8
80	28	17,349	-50.7		276	27.0
70	28	18,218	-51.2		280	26.0
60	28	19,219	-51.1		280	24.9
50	28	20,403	-51.2		287	19.4
40	27	21,850	-50.9		287	16.9
30	27	23,721	-50.7		291	14.4
25	27	24,909	-50.5		304	15.7
20	23	26,348	-50.6		326	17.1
15	17	28,207	-50.3		333	21.0
10	13	30,999	-47.4		331	10.7

See reference note at end of table

RAWINSONDE DATA

Average monthly values

APRIL 1965

Standard pressure surface (mb.)	FLINT, MICH. 988 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	234	1.9	77	110	1.4
1000	30	137				
950	30	552	2.0	63	124	2.1
900	30	987	1.4	58	240	3.5
850	30	1,447	.3	57	275	8.7
800	30	1,932	- 1.2	56	290	13.8
750	30	2,441	- 3.0	52	289	18.6
700	30	2,990	- 5.1	48	289	24.7
650	30	3,566	- 9.9	47	290	28.6
600	30	4,188	-11.5	44	287	32.6
550	30	4,849	-15.8	44	286	35.5
500	30	5,562	-20.7	43	284	41.6
450	30	6,325	-26.1	43	284	45.5
400	30	7,175	-32.2	43	285	51.9
350	30	8,104	-39.0	40	285	58.3
300	30	9,144	-46.3		283	66.2
250	30	10,336	-53.0		280	75.2
200	30	11,758	-56.9		282	70.9
175	30	12,605	-56.2		283	61.4
150	30	13,585	-55.6		285	55.4
125	30	14,745	-56.0		286	43.9
100	30	16,159	-57.1		285	34.0
80	30	17,571	-57.3		290	28.2
70	30	18,414	-57.1		291	21.2
60	30	19,391	-57.0		295	13.0
50	30	20,547	-56.2		307	9.3
40	30	21,968	-55.1		320	5.6
30	30	23,812	-53.4		356	1.9
25	29	24,991	-52.0		302	1.7
20	27	26,443	-50.2		276	2.7
15	19	28,328	-46.8		258	5.8
10						
7						

Standard pressure surface (mb.)	FORT WORTH, TEXAS 994 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	180	15.9	82	193	2.5
1000	30	128				
950	30	570	16.9	67	193	9.7
900	30	1,026	15.5	59	211	9.9
850	30	1,510	14.1	49	232	9.9
800	30	2,020	11.9	41	243	11.5
750	30	2,558	8.9	38	256	12.2
700	30	3,126	5.3	36	262	14.4
650	30	3,725	.8	35	261	17.1
600	30	4,364	- 3.9	36	262	20.0
550	30	5,037	- 9.0	38	261	24.3
500	30	5,776	-14.5	38	260	27.2
450	30	6,561	-20.5	36	259	31.5
400	30	7,429	-26.3	35	261	38.9
350	30	8,381	-33.4	35	262	44.1
300	30	9,445	-41.4	37	258	50.5
250	30	10,658	-50.8		258	58.1
200	30	12,080	-59.9		258	66.2
175	30	12,909	-61.7		260	65.7
150	30	13,863	-62.0		261	63.7
125	30	14,986	-63.9		264	54.2
100	30	16,343	-66.7		260	38.1
80	30	17,689	-67.4		255	25.3
70	30	18,497	-64.6		256	15.3
60	30	19,444	-62.6		258	4.3
50	30	20,576	-60.1		265	.2
40	30	21,978	-57.0		20	2.7
30	30	23,813	-53.7		346	2.5
25	29	24,990	-51.6		330	3.3
20	29	26,448	-48.3		294	4.7
15	23	28,349	-43.6		274	7.2
10						
7						

Standard pressure surface (mb.)	GLASGOW, MONT. 933 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	696	1.7	83	104	4.7
1000	30	129				
950	30	545				
900	30	984	2.2	75	308	.4
850	30	1,446	2.0	67	292	4.1
800	30	1,933	.1	64	300	7.2
750	30	2,443	- 2.4	58	286	9.3
700	30	2,993	- 5.5	56	278	10.9
650	30	3,564	- 8.7	51	280	13.0
600	30	4,188	-12.7	48	285	14.6
550	30	4,839	-17.1	43	281	17.3
500	30	5,555	-22.2	43	279	18.6
450	30	6,310	-28.0	40	285	21.2
400	30	7,155	-34.6	39	280	22.7
350	30	8,074	-41.8	40	275	23.9
300	30	9,100	-50.0		275	22.9
250	30	10,269	-57.4		280	25.1
200	30	11,673	-57.8		275	25.4
175	30	12,519	-55.8		274	25.6
150	30	13,502	-54.9		274	22.7
125	30	14,667	-55.0		274	21.0
100	29	16,091	-55.6		272	19.2
80	29	17,512	-55.7		278	14.8
70	29	18,361	-56.1		282	10.5
60	29	19,340	-55.8		286	8.0
50	29	20,499	-55.9		299	6.0
40	29	21,920	-55.2		314	3.7
30	28	23,756	-54.3		7	4.5
25	27	24,931	-53.4		8	4.7
20	26	26,366	-52.1		16	3.5
15	25	28,236	-50.0		339	3.5
10	21	30,886	-46.3		281	18.5
7	6	33,095	-42.8			

Standard pressure surface (mb.)	* GRAND JUNCTION, COLO. 851 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	1,474	7.3	58	128	4.9
1000	30	120				
950	30	548				
900	30	1,005				
850	30	1,480			128	6.8
800	30	1,979	6.1	50	154	8.4
750	30	2,504	2.4	52	191	7.4
700	30	3,058	- 1.9	58	225	9.9
650	30	3,642	- 6.4	62	234	14.6
600	30	4,264	-10.8	61	236	17.1
550	30	4,926	-15.3	56	237	19.8
500	30	5,641	-20.3	48	236	23.7
450	29	6,408	-25.9	42	241	27.4
400	29	7,256	-32.3	38	240	30.3
350	28	8,185	-39.6	R33	245	32.2
300	28	9,222	-46.8		246	38.7
250	28	10,411	-53.7		255	39.6
200	28	11,831	-57.4		255	38.1
175	28	12,672	-58.2		253	38.1
150	28	13,642	-57.7		248	35.2
125	28	14,792	-58.3		245	32.2
100	28	16,188	-60.0		248	25.6
80	28	17,582	-60.1		248	18.1
70	28	18,413	-60.3		251	13.2
60	27	19,373	-59.7		258	9.1
50	27	20,514	-59.1		265	4.3
40	23	21,917	-57.8		328	2.9
30	23	23,739	-55.9		336	3.5
25	22	24,902	-54.4		292	4.1
20	21	26,340	-52.4		302	3.1
15	19	28,219	-48.2		268	6.4
10	18	30,916	-42.6		274	16.7
7	9	33,366	-37.6			

Standard pressure surface (mb.)	* 1/GREAT FALLS, MONT. 885 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	1,123	2.9	78	247	4.1
1000	30	117				
950	30	539				
900	30	986				
850	30	1,447	3.7	56	247	10.5
800	30	1,937	1.2	57	269	9.3
750	30	2,451	- 2.0	60	271	9.3
700	30	2,999	- 5.5	61	280	10.9
650	30	3,577	- 9.0	60	279	12.6
600	30	4,194	-12.7	53	276	13.2
550	30	4,851	-17.4	52	271	14.2
500	30	5,559	-22.5	48	264	13.6
450	30	6,322	-28.1	49	262	15.0
400	30	7,160	-34.4	45	262	15.9
350	30	8,079	-41.8	44	262	17.5
300	30	9,105	-50.0		262	21.6
250	30	10,278	-57.0		266	23.1
200	29	11,685	-58.0		267	24.3
175	29	12,530	-56.0		262	21.4
150	29	13,513	-55.1		260	21.6
125	29	14,676	-55.4		267	19.2
100	29	16,097	-56.0		264	16.7
80	29	17,516	-56.2		265	14.0
70	29	18,363	-56.5		271	9.5
60	29	19,340	-56.2		273	7.6
50	28	20,496	-56.3		290	5.2
40	28	21,915	-55.8		342	2.5
30	26	23,748	-55.2		35	5.2
25	25	24,925	-54.1		43	7.6
20	25	26,362	-52.7		42	10.7
15	23	28,244	-50.3		45	9.5
10	18	30,905	-46.2		7	7.8
7	5	33,193	-42.5			

Standard pressure surface (mb.)	GREEN BAY, WIS. 990 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	210	1.0	85	34	2.1
1000	30	132				
950	30	544	1.5	70	75	2.9
900	30	979	.2	67	74	.6
850	30	1,437	- .4	62	273	5.4
800	30	1,921	- 1.4	57	282	10.5
750	30	2,429	- 3.4	54	289	14.6
700	30	2,976	- 6.3	49	289	17.7
650	30	3,548	- 9.0	49	290	23.5
600	30	4,169	-12.5	49	293	27.4
550	30	4,824	-17.0	47	292	30.7
500	30	5,535	-21.7	44	291	35.2
450	30	6,299	-27.2	41	286	41.2
400	30	7,140	-33.1	39	285	46.6
350	30	8,066	-40.0	40	282	52.4
300	30	9,102	-47.0		279	59.8
250	30	10,291	-53.4		279	66.8
200	30	11,715	-56.4		275	61.2
175	30	12,564	-55.8		280	54.6
150	30	13,548	-54.9		285	48.6
125	30	14,712	-55.6		283	39.0
100	30	16,129	-56.6		285	30.3
80	30	17,542	-57.1		290	24.5
70	30	18,386	-57.0		291	20.4
60	30	19,363	-56.8		301	14.6
50	30	20,519	-56.4		324	10.3
40	30	21,938	-55.5		342	4.5
30	30	23,778	-54.0		10	3.5
25	28	24,954	-52.6		16	2.7
20	26	26,399	-50.7		262	3.1
15	17	28,309	-46.8		249	5.1
10	7	31,059	-40.7			
7						

Standard pressure surface (mb.)	GREENSBORO, N. C. 985 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	273	9.1	84	281	1.7
1000	30	144				
950	30	572	10.6	68	294	5.8
900	30	1,023	10.2	55	293	10.5
850	30	1,497	7.7	58	297	16.1
800	30	1,995	5.5	57	291	21.0
750	30	2,521	3.0	53	289	24.1
700	30	3,078	.3	50	293	28.6
650	30	3,666	- 3.0	47	292	33.0
600	30	4,300	- 6.7	44	291	36.1
550	30	4,969	-11.1	39	292	37.3
500	30	5,701	-15.9	35	292	41.4
450	30	6,484	-21.4	32	291	43.5
400	30	7,346	-27.8	32	286	48.6
350	29	8,288	-34.8	31	286	54.2
300	29	9,346	-42.8		286	60.8
250	29	10,552	-51.8		289	65.9
200	29	11,970	-59.6		289	68.4
175	29	12,802	-60.3		290	63.7
150	29	13,767	-59.0		285	57.7
125	29	14,904	-61.0		283	50.1
100	29	16,285	-62.3		281	38.5
80	29	17,659	-62.8		286	24.9
70	29	18,482	-62.0		286	19.0
60	29	19,437	-60.9		287	12.8
50	29	20,576	-58.4		301	6.8
40	28	21,988	-55.7		303	4.7
30	28	23,829	-53.2		309	2.5
25	28	25,007	-51.6		270	4.9
20	27	26,460	-49.0		279	7.2
15	20	28,358	-44.8		270	15.2
10	7	31,079	-39.4			
7						

Standard pressure surface (mb.)	GUAM, MARIANA IS. 1000 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	111	24.2	87	92	6.4
1000	30	110			88	7.0
950	30	558	21.8	85	85	15.7
900	30	1,027	19.2	74	90	17.1
850	30	1,517	17.0	61	85	15.0
800	30	2,033	15.3	44	83	14.4
750	30	2,576	13.1	36	82	11.3
700	30	3,154	10.2	28	86	10.7
650	30	3,765	6.8	24	82	9.1
600	30	4,419	3.0	25	78	8.7
550	30	5,117	- 1.2	24	76	7.4
500	30	5,871	- 5.6	22	77	6.2
450	30	6,687	-10.7	22	71	5.8
400	30	7,586	-16.6	24	56	2.7
350	30	8,576	-23.4	24	333	2.7
300	30	9,685	-32.1	26	281	5.4
250	30	10,944	-42.3		240	8.7
200	30	12,413	-54.4		237	12.4
175	30	13,255	-61.3		231	12.4
150	30	14,194	-68.9		226	12.4
125	30	15,262	-76.8		230	6.6
100	28	16,526	-81.2		1	1.6
80	26	17,782	-79.5		33	3.9
70	25	18,548	-74.9		312	2.3
60	24	19,453	-70.1		293	2.9
50	24	20,552	-64.6		75	1.0
40	23	21,936	-59.1		89	11.1
30	23	23,762	-54.5		90	24.9
25	23	24,936	-52.2		90	34.8
20	20	26,394	-48.6		88	43.1
15	14	28,308	-44.5		82	49.5
10	11	31,067	-38.6			
7	5	33,534	-35.5			

Standard pressure surface (mb.)	HILO, HAWAII 1015 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	11	19.8	89	232	5.4
1000	30	142	21.0	84	217	4.3
950	30	582	18.2	87	135	5.6
900	30	1,047	15.2	87	124	7.2
850	30	1,530	12.5	84	122	7.0
800	30	2,037	10.1	73	143	6.0
750	30	2,572	8.3	56	154	3.7
700	30	3,141	6.1	40	190	3.5
650	30	3,742	2.9	37	215	3.9
600	30	4,388	- .8	34	251	7.0
550	30	5,072	- 5.1	34	249	10.9
500	30	5,820	-10.0	34	256	13.6
450	30	6,619	-15.8	34	258	18.1
400	30	7,501	-21.6	34	257	23.9
350	30	8,471	-28.7	33	260	31.1
300	30	9,556	-37.2	32	261	40.2
250	30	10,791	-46.6		264	55.2
200	30	12,237	-56.7		265	68.2
175	29	13,076	-61.9		269	70.7
150	29	14,018	-66.8		272	65.1
125	29	15,108	-71.1		270	53.8
100	26	16,420	-73.9		272	35.5
80	24	17,723	-72.4		269	17.1
70	24	18,513	-69.6		264	8.7
60	24	19,440	-65.2		314	1.0
50	24	20,563	-61.3		88	4.5
40	24	21,959	-57.7		90	9.5
30	24	23,793	-53.4		92	15.0
25	22	24,977	-51.1		85	18.3
20	20	26,442	-47.9		84	20.4
15	13	28,363	-44.8		88	21.0
10	5	31,068	-38.1			
7						

Standard pressure surface (mb.)	HUNTINGTON, W. VA. 987 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	246	8.3	84	237	.6
1000	30	136				
950	30	562	9.8	66	252	6.2
900	30	1,011	8.1	63	272	13.8
850	30	1,481	6.1	60	281	17.5
800	30	1,976	4.0	56	287	20.4
750	30	2,501	1.7	53	286	24.3
700	30	3,054	- 1.2	46	289	27.2
650	30	3,640	- 4.3	41	287	32.6
600	29	4,269	- 8.0	36	289	35.5
550	29	4,936	-12.2	33	287	37.3
500	29	5,663	-17.1	32	287	43.1
450	28	6,436	-22.6	34	286	45.5
400	28	7,298	-29.0	35	287	49.7
350	28	8,239	-36.1	R31	285	54.2
300	28	9,291	-44.2		286	60.0
250	28	10,490	-52.8		286	68.2
200	28	11,906	-58.7		286	71.9
175	28	12,742	-59.1		288	63.5
150	28	13,710	-58.3		287	54.4
125	28	14,855	-59.5		284	45.1
100	28	16,246	-60.8		281	35.4
80	28	17,632	-61.1		286	24.1
70	28	18,461	-60.7		288	16.9
60	28	19,425	-59.0		290	12.6
50	28	20,571	-58.0		315	8.2
40	28	21,984	-55.8		307	3.9
30	28	23,826	-53.3		290	4.1
25	27	25,003	-51.7		282	5.8
20	26	26,461	-48.7		273	8.4
15	15	28,366	-44.7		280	9.5
10						
7						

Standard pressure surface (mb.)	* INTERNAT. FALLS, MINN. 973 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	360	.0	72	174	1.2
1000	30	134				
950	30	544	.6	67	184	2.7
900	30	979	- .9	71	245	2.7
850	30	1,434	- 2.6	69	269	4.3
800	30	1,914	- 4.5	69	293	5.6
750	30	2,418	- 5.8	60	301	8.0
700	30	2,960	- 8.1	58	309	11.1
650	30	3,527	-11.1	54	303	12.6
600	30	4,144	-14.7	51	303	15.5
550	30	4,794	-18.8	50	297	19.2
500	30	5,501	-23.6	49	298	23.5
450	30	6,259	-29.1	43	293	26.2
400	30	7,096	-35.4	43	295	29.7
350	30	8,012	-42.2	42	295	35.7
300	30	9,038	-49.6		292	38.9
250	30	10,213	-55.8		287	42.5
200	30	11,631	-55.6		287	40.0
175	30	12,485	-54.2		287	35.4
150	30	13,473	-54.1		287	33.8
125	30	14,641	-54.6		289	31.3
100	30	16,066	-55.3		289	28.6
80	30	17,489	-55.6		292	24.3
70	29	18,341	-55.4		295	20.4
60	28	19,322	-55.3		299	17.7
50	28	20,485	-55.0		306	13.6
40	28	21,914	-54.3		327	9.3
30	28	23,761	-53.5		340	4.9
25	28	24,935	-52.9		344	5.1
20	27	26,384	-51.4		354	5.8
15	25	28,256	-49.3		350	4.3
10	21	30,929	-44.1		269	9.5

Standard pressure surface (mb.)	JACKSON, MISS. 1005 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	94	15.5	89	182	2.5
1000	30	139	16.2	83	178	1.9
950	30	576	16.9	68	214	8.7
900	30	1,038	15.2	60	235	8.9
850	30	1,521	13.2	52	253	8.4
800	30	2,029	10.9	44	262	11.3
750	30	2,561	8.1	41	264	14.8
700	30	3,131	4.9	39	266	17.1
650	30	3,725	.9	40	271	20.2
600	30	4,371	- 3.5	38	271	23.3
550	30	5,044	- 8.5	38	272	24.9
500	30	5,785	-13.7	37	272	27.6
450	30	6,569	-19.4	R35	270	30.1
400	30	7,445	-25.4	R35	270	35.7
350	30	8,400	-32.3	R38	269	43.5
300	30	9,469	-40.5	R34	271	49.0
250	30	10,687	-49.6		273	62.2
200	30	12,113	-59.7		274	67.6
175	30	12,942	-62.0		276	64.7
150	30	13,896	-61.9		274	60.4
125	30	15,017	-64.3		275	53.0
100	30	16,370	-67.0		274	41.6
80	30	17,713	-67.9		274	26.2
70	30	18,516	-66.5		280	16.3
60	30	19,458	-63.4		296	7.0
50	30	20,585	-60.9		352	4.3
40	30	21,985	-57.3		22	3.7
30	29	23,817	-53.6		354	2.1
25	27	24,997	-51.5		327	3.5
20	26	26,458	-48.5		331	3.5
15	14	28,371	-44.6			
10						

Standard pressure surface (mb.)	JACKSONVILLE, FLA. 1018 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	5	16.6	90	330	3.1
1000	30	157	17.2	82	312	4.5
950	30	597	17.0	66	282	5.1
900	30	1,055	15.0	58	284	9.7
850	30	1,537	12.9	51	287	11.3
800	30	2,044	10.3	44	294	12.8
750	30	2,577	7.6	36	290	15.2
700	30	3,143	4.2	37	285	17.3
650	30	3,736	.6	33	288	20.8
600	30	4,379	- 3.5	31	291	23.5
550	30	5,050	- 8.1	36	294	27.6
500	30	5,794	-12.8	36	290	31.1
450	30	6,581	-18.4	35	289	35.7
400	30	7,457	-24.4	34	288	39.6
350	30	8,416	-31.4	R32	288	46.0
300	30	9,489	-39.7	35	289	49.7
250	30	10,710	-49.4		290	60.0
200	30	12,138	-59.1		290	70.5
175	29	12,969	-61.0		289	71.1
150	29	13,924	-62.5		285	68.6
125	29	15,042	-65.3		284	59.2
100	29	16,388	-68.5		286	44.9
80	29	17,719	-69.5		290	27.0
70	29	18,518	-67.6		295	16.3
60	29	19,452	-64.5		305	8.4
50	29	20,576	-60.4		27	4.9
40	29	21,978	-56.7		69	5.2
30	28	23,821	-52.3		78	6.4
25	28	25,006	-50.0		83	4.9
20	28	26,474	-46.7		113	3.7
15	27	28,387	-42.3		249	4.5
10	14	31,153	-37.1		276	14.4

Standard pressure surface (mb.)	JOHN F. KENNEDY INT. ARPT.NY 1016 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	5	5.8	60	342	4.9
1000	30	135	5.4	57	354	7.4
950	30	551	3.7	59	358	8.5
900	30	991	2.0	59	333	8.7
850	30	1,451	.6	61	302	13.4
800	30	1,937	- .7	54	298	18.6
750	30	2,452	- 2.9	54	296	24.3
700	30	2,995	- 5.0	48	295	26.4
650	30	3,575	- 7.9	46	294	29.3
600	30	4,194	-11.4	43	293	32.1
550	30	4,853	-15.7	44	293	33.8
500	30	5,568	-20.5	43	289	38.1
450	30	6,336	-26.0	41	286	40.8
400	30	7,182	-32.2	39	289	44.9
350	30	8,110	-39.3	41	292	50.5
300	30	9,149	-46.7		293	57.5
250	30	10,340	-53.3		293	66.0
200	30	11,762	-56.4		291	60.6
175	30	12,611	-55.4		291	54.6
150	30	13,596	-55.1		290	48.8
125	29	14,759	-55.9		290	43.3
100	29	16,174	-57.3		287	36.1
80	29	17,581	-58.0		288	25.4
70	29	18,422	-57.7		289	21.0
60	29	19,396	-56.9		295	14.4
50	29	20,553	-55.6		298	8.7
40	29	21,979	-54.1		277	4.9
30	28	23,832	-52.1		271	3.3
25	28	25,014	-51.1		276	3.9
20	23	26,469	-49.3		276	3.9
15	13	28,378	-45.1			
10	5	31,119	-39.1			

Standard pressure surface (mb.)	JOHNSTON IS., PACIFIC AREA 1015 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	3	24.3	73	68	8.4
1000	30	131	23.2	74	70	9.3
950	30	578	19.3	80	77	10.1
900	30	1,042	16.3	77	82	8.4
850	30	1,527	13.7	70	86	5.1
800	30	2,036	11.3	56	111	1.6
750	30	2,573	9.2	41	266	1.9
700	30	3,143	6.3	34	273	4.7
650	30	3,745	2.9	29	271	8.0
600	30	4,392	- .2	R25	275	12.4
550	30	5,077	- 4.4	R21	278	15.7
500	30	5,827	- 9.3	R22	283	18.1
450	30	6,628	-14.9	R22	283	22.9
400	30	7,516	-21.3	R23	283	28.9
350	30	8,487	-28.1	R21	281	36.1
300	30	9,575	-36.3	R23	277	41.8
250	30	10,816	-45.0		269	52.8
200	30	12,274	-55.4		267	61.8
175	30	13,113	-61.3		270	62.5
150	30	14,055	-67.8		271	58.9
125	28	15,131	-73.4		274	49.1
100	26	16,422	-77.4		278	34.0
80	25	17,701	-75.4		277	18.3
70	25	18,480	-71.6		276	11.1
60	23	19,398	-66.6		257	4.9
50	22	20,516	-61.8		125	2.3
40	21	21,909	-58.1		89	10.9
30	20	23,739	-53.7		87	19.6
25	18	24,917	-51.3		85	24.5
20	13	26,389	-48.0		84	28.6
15	9	28,298	-44.3			
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See reference note at end of table

RAWINSONDE DATA

Average monthly values

APRIL 1965

KEY WEST, FLORIDA
1017 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	29	3	23.7	76	82	3.3
1000	29	147	22.6	79	90	5.2
950	29	595	19.5	78	102	6.8
900	29	1,057	17.6	65	102	4.7
850	29	1,545	15.6	53	51	1.7
800	29	2,058	13.3	50	344	2.7
750	29	2,596	10.5	46	329	2.9
700	29	3,170	7.3	44	306	5.8
650	29	3,772	3.7	44	306	8.5
600	29	4,422	-.2	44	304	11.1
550	29	5,110	-4.3	42	302	15.5
500	29	5,860	-9.2	41	299	20.2
450	29	6,661	-14.7	41	293	23.7
400	29	7,549	-21.3	38	287	28.0
350	29	8,519	-28.7	39	285	32.8
300	29	9,603	-37.1	40	284	37.7
250	29	10,838	-46.9		285	43.3
200	29	12,280	-57.1		280	50.9
175	29	13,118	-60.8		279	51.1
150	29	14,068	-64.4		282	45.6
125	29	15,172	-68.8		283	39.8
100	29	16,493	-73.6		284	32.4
80	28	17,791	-74.9		290	22.0
70	28	18,569	-72.6		302	13.2
60	27	19,482	-68.1		344	5.1
50	27	20,592	-62.7		33	7.2
40	27	21,986	-57.5		63	8.4
30	27	23,824	-52.8		86	11.7
25	27	25,007	-50.2		81	11.5
20	27	26,475	-47.0		97	9.9
15	27	28,396	-43.1		97	8.5
10	21	31,156	-38.6		154	4.1
7	12	33,658	-34.0			
5	5	35,975	-28.7			

KING SALMON, ALASKA
1011 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	15	-2.9	82	308	1.6
1000	30	101			349	4.5
950	30	510	-2.1	68	325	6.0
900	30	938	-3.4	64	316	7.6
850	30	1,389	-5.4	60	299	7.6
800	30	1,863	-7.6	61	288	8.7
750	30	2,364	-9.7	52	285	10.7
700	30	2,894	-12.5	52	285	12.6
650	30	3,455	-15.6	51	283	14.4
600	30	4,056	-19.5	51	281	15.9
550	30	4,696	-23.8	51	283	16.9
500	30	5,387	-28.7	51	280	18.3
450	30	6,132	-33.8	50	282	20.0
400	30	6,950	-38.8	43	281	24.3
350	30	7,856	-44.2	42	286	26.8
300	30	8,880	-48.5		282	28.6
250	30	10,069	-51.7		287	31.3
200	30	11,511	-52.6		288	28.7
175	30	12,374	-52.4		282	27.0
150	30	13,374	-50.8		283	24.9
125	30	14,560	-51.5		279	18.6
100	30	16,005	-52.1		275	15.7
80	30	17,448	-52.4		275	11.3
70	30	18,310	-52.4		281	9.1
60	30	19,305	-52.5		277	6.6
50	30	20,481	-52.8		278	4.7
40	30	21,922	-52.3		287	3.1
30	30	23,782	-52.1		337	3.1
25	29	24,960	-51.8		355	4.3
20	25	26,415	-51.0		20	5.4
15	15	28,301	-50.4		36	6.2
10	6	30,851	-48.6			
7						
5						

+ KOROR, CAROLINE IS.
1008 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	30	28.1	78	79	6.4
1000	30	99	27.1	73	78	7.6
950	30	546	22.8	71	75	12.8
900	30	1,020	20.0	64	77	13.6
850	30	1,512	17.6	53	82	13.2
800	30	2,028	15.3	44	84	11.5
750	30	2,570	12.8	40	85	11.5
700	30	3,149	10.0	35	90	11.5
650	30	3,759	6.7	31	87	13.0
600	30	4,414	2.9	31	86	13.4
550	30	5,108	-1.3	30	90	15.2
500	30	5,867	-5.7	27	89	15.3
450	30	6,681	-10.6	23	89	15.5
400	30	7,584	-16.1	23	88	13.2
350	30	8,575	-23.1	25	100	9.9
300	30	9,685	-31.5	25	120	12.0
250	30	10,949	-41.6		130	15.9
200	30	12,422	-53.9		129	14.8
175	30	13,265	-61.0		137	10.1
150	29	14,207	-68.3		135	4.9
125	28	15,282	-75.2		91	4.1
100	27	16,559	-80.6		47	6.2
80	27	17,820	-77.9		31	2.3
70	27	18,594	-72.4		264	7.8
60	27	19,510	-67.8		276	14.6
50	27	20,616	-64.4		277	14.8
40	27	21,992	-61.1		54	2.1
30	25	23,805	-56.2		91	32.4
25	24	24,971	-53.0		92	45.8
20	17	26,413	-49.7		91	55.8
15	11	28,305	-45.9			
10						
7						
5						

KOTZEBUE, ALASKA
1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	5	-10.5	82	157	2.5
1000	30	102			220	2.5
950	30	498	-9.5	74	182	4.9
900	30	916	-9.8	69	192	4.5
850	30	1,357	-10.8	62	214	4.5
800	30	1,822	-12.7	61	215	5.1
750	30	2,315	-15.0	60	232	6.4
700	30	2,831	-17.9	60	225	6.8
650	30	3,382	-21.0	58	231	8.7
600	30	3,970	-24.4	56	235	10.5
550	30	4,600	-28.1	54	238	11.5
500	30	5,278	-32.2	51	233	14.8
450	30	6,014	-36.8	50	238	17.9
400	30	6,822	-42.0	50	247	18.8
350	30	7,715	-47.5		249	22.3
300	30	8,722	-52.2		255	22.5
250	30	9,897	-53.3		262	29.1
200	30	11,341	-51.0		263	26.8
175	30	12,211	-50.1		263	25.4
150	30	13,219	-49.8		257	27.6
125	30	14,412	-49.6		258	27.6
100	30	15,872	-50.0		260	26.8
80	30	17,331	-49.7		265	22.9
70	30	18,205	-49.6		264	23.7
60	30	19,214	-49.8		265	21.6
50	30	20,407	-49.7		266	19.2
40	29	21,859	-49.5		271	16.9
30	29	23,743	-49.5		291	12.6
25	29	24,938	-49.2		297	11.5
20	29	26,402	-49.1		311	8.4
15	25	28,273	-48.8		322	11.7
10	16	30,920	-48.1		322	28.0
7	5	33,144	-47.8			
5						

KWAJALEIN, MARSHALL IS.
1012 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	4	26.7	74	66	14.8
1000	30	108	25.7	73	69	16.1
950	30	558	22.1	82	72	18.5
900	30	1,027	19.0	78	78	16.3
850	30	1,517	16.5	69	88	12.0
800	30	2,033	15.8	45	93	7.8
750	30	2,579	13.5	40	92	6.8
700	30	3,157	10.5	35	91	7.4
650	30	3,770	6.7	38	89	7.4
600	30	4,423	3.0	37	89	8.9
550	30	5,122	-1.1	30	77	11.3
500	30	5,876	-5.8	31	81	10.3
450	30	6,693	-11.1	31	68	8.7
400	30	7,588	-16.6	29	60	8.5
350	30	8,581	-22.1	30	31	4.7
300	30	9,694	-30.9	34	294	4.5
250	30	10,960	-41.3	32	239	9.3
200	30	12,434	-53.7	34	229	13.6
175	30	13,278	-61.0	33	232	14.6
150	29	14,217	-69.0	29	250	12.4
125	29	15,286	-76.5		286	13.2
100	25	16,554	-81.2		289	9.1
80	19	17,819	-76.4		268	12.4
70	19	18,593	-74.2		270	15.3
60	18	19,500	-70.3		268	18.8
50	17	20,593	-66.5		275	15.9
40	16	21,961	-61.7		165	1.2
30	16	23,766	-56.5		89	31.5
25	16	24,930	-53.6		88	44.7
20	15	26,376	-49.9		86	54.2
15	14	28,283	-44.2		87	61.6
10	12	31,028	-40.0		89	67.4
7	9	33,509	-33.9			
5						

LAKE CHARLES, LA.
1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	5	17.7	92	145	1.9
1000	30	137	19.2	81	154	5.1
950	30	580	17.3	72	187	9.5
900	30	1,040	16.3	57	203	9.7
850	30	1,525	14.3	48	214	12.6
800	30	2,036	12.2	42	227	14.0
750	30	2,572	9.6	36	235	14.0
700	30	3,144	6.1	35	251	12.8
650	30	3,747	2.2	33	261	13.2
600	30	4,389	-2.3	33	264	14.2
550	30	5,069	-7.4	34	263	17.5
500	30	5,810	-12.6	35	265	20.8
450	30	6,605	-18.1	37	266	27.2
400	30	7,478	-24.2	36	264	33.8
350	30	8,438	-31.3	36	263	41.6
300	30	9,512	-39.4	R32	263	48.8
250	30	10,735	-49.1		266	56.1
200	30	12,164	-59.2		265	66.4
175	30	12,996	-61.2		267	65.9
150	30	13,951	-62.0		267	62.0
125	30	15,072	-64.9		264	50.3
100	30	16,419	-68.8		265	40.2
80	30	17,749	-69.6		263	24.9
70	30	18,546	-68.2		275	14.6
60	30	19,483	-64.2		311	3.3
50	30	20,608	-60.8		62	3.1
40	30	22,009	-56.9		59	4.1
30	30	23,849	-52.9		53	2.5
25	30	25,033	-50.3		41	2.3
20	29	26,504	-46.8		32	2.5
15	27	28,425	-42.6		322	1.9
10	11	31,182	-37.7			
7						

LANDER, WYO.
827 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	1,696	3.1	63	253	1.9
1000	30	121				
950	30	547				
900	30	996				
850	30	1,466				
800	30	1,960	3.9	54	248	2.3
750	30	2,479	.6	53	267	4.9
700	30	3,032	-3.3	55	264	8.9
650	30	3,609	-7.2	54	260	14.6
600	30	4,234	-11.3	48	256	17.5
550	30	4,890	-15.9	43	257	17.1
500	30	5,609	-21.2	41	255	18.3
450	30	6,371	-27.0	41	252	18.6
400	30	7,218	-33.4	41	249	19.2
350	30	8,142	-40.6	34	245	22.3
300	30	9,174	-48.7		245	25.6
250	30	10,352	-55.2		254	32.1
200	30	11,769	-56.8		257	33.4
175	30	12,615	-57.2		255	31.9
150	30	13,592	-56.3		251	30.3
125	30	14,751	-56.2		251	23.9
100	30	16,165	-57.5		253	19.0
80	30	17,572	-58.1		257	14.4
70	30	18,412	-58.4		256	9.7
60	30	19,382	-58.5		254	5.4
50	30	20,529	-58.0		315	1.4
40	30	21,938	-57.0		34	2.9
30	28	23,772	-55.2		53	4.5
25	27	24,937	-53.8		46	4.7
20	25	26,381	-51.8		50	3.1
15	16	28,247	-48.9		292	5.1
10						
7						

LAS VEGAS, NEV.
937 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	660	12.3	54	241	3.5
1000	30	107				
950	30	541				
900	30	997	12.7	46	241	2.7
850	30	1,474	9.1	48	245	5.2
800	30	1,974	5.9	49	242	7.2
750	30	2,495	2.3	47	224	9.1
700	30	3,054	-1.4	46	236	10.3
650	29	3,639	-5.5	41	252	12.2
600	29	4,267	-9.7	41	258	15.2
550	29	4,930	-14.5	39	257	16.9
500	29	5,649	-19.9	36	259	18.6
450	29	6,417	-25.1	R30	254	22.9
400	29	7,271	-31.3	R33	253	28.6
350	29	8,204	-37.9	R34	253	32.8
300	29	9,250	-45.2		255	35.7
250	29	10,448	-51.7		257	39.6
200	29	11,879	-56.5		254	43.5
175	29	12,722	-58.7		254	42.5
150	29	13,690	-58.0		252	36.9
125	29	14,840	-58.3		248	31.7
100	28	16,241	-60.0		248	22.9
80	28	17,634	-59.3		237	13.4
70	26	18,465	-59.4		240	9.7
60	25	19,432	-58.9		239	5.2
50	24	20,578	-58.2		243	2.9
40	23	21,989	-56.3		49	1.4
30	20	23,829	-54.3		318	1.4
25	20	25,001	-52.5		308	2.1
20	20	26,451	-49.6		273	3.3
15	19	28,351	-45.2		265	10.7
10	7	31,088	-38.8			
7						

* LIHUE, HAWAII
1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	36	20.3	88	70	3.3
1000	30	145	20.9	84	73	5.2
950	30	586	17.8	84	93	8.2
900	30	1,049	14.6	83	104	6.8
850	30	1,531	11.7	81	123	4.5
800	30	2,036	8.9	70	152	3.7
750	30	2,569	7.2	50	199	4.3
700	30	3,135	4.7	35	226	7.2
650	30	3,734	1.4	32	235	10.9
600	30	4,376	-2.4	25	237	14.2
550	30	5,055	-6.6	27	241	16.7
500	30	5,800	-11.4	25	240	20.8
450	30	6,595	-17.0	24	246	24.7
400	30	7,473	-23.4	26	248	29.3
350	30	8,436	-30.7	29	250	34.4
300	30	9,512	-39.1	23	252	40.8
250	30	10,737	-48.3		256	53.6
200	30	12,174	-57.4		258	65.5
175	30	13,009	-61.8		260	68.8
150	30	13,955	-65.5		264	61.6
125	29	15,054	-69.8		262	51.9
100	29	16,374	-72.3		263	36.1
80	29	17,685	-71.6		263	18.5
70	29	18,478	-68.5		259	8.5
60	29	19,410	-64.5		149	.8
50	28	20,534	-61.3		100	4.9
40	27	21,932	-57.5		106	7.4
30	25	23,763	-54.2		82	9.7
25	25	24,938	-52.1		80	13.6
20	24	26,391	-49.8		74	14.4
15	24	28,290	-45.9		80	15.3
10	18	31,018	-41.4		83	13.2
7	5	33,454	-36.4			

LITTLE ROCK, ARK.
1006 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	79	13.5	87	249	1.2
1000	30	132	14.6	76	257	1.7
950	30	568	15.5	64	238	10.9
900	30	1,026	13.7	60	248	14.0
850	30	1,506	12.3	49	260	14.2
800	30	2,013	9.9	42	260	14.8
750	30	2,542	6.8	37	265	17.1
700	30	3,110	3.3	35	268	17.5
650	30	3,701	-.7	34	271	20.0
600	30	4,343	-5.0	33	269	24.3
550	30	5,012	-9.8	33	271	26.0
500	30	5,750	-15.0	34	268	29.9
450	30	6,533	-20.5	34	267	32.6
400	30	7,402	-26.8	R34	270	37.9
350	30	8,352	-33.7	R35	272	43.9
300	30	9,415	-42.0	R34	270	50.5
250	30	10,626	-50.8		272	62.4
200	30	12,047	-60.1		270	69.0
175	30	12,876	-61.3		269	64.1
150	30	13,834	-61.1		272	60.4
125	30	14,962	-62.8		273	51.1
100	30	16,330	-65.1		271	37.7
80	30	17,687	-65.5		275	25.1
70	30	18,500	-64.3		274	17.9
60	29	19,448	-61.4		280	10.3
50	29	20,584	-59.4		305	4.9
40	29	21,989	-57.0		355	3.3
30	29	23,823	-54.1		346	1.2
25	28	25,000	-51.8		359	2.3
20	23	26,455	-49.3		280	3.9
15	10	28,343	-45.4			
10						
7						

MCGRATH, ALASKA
1001 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	103	-2.8	77	280	1.7
1000	30	108			309	4.7
950	30	515	-4.2	67	13	4.3
900	30	939	-6.2	70	83	2.5
850	30	1,385	-7.9	72	184	.8
800	30	1,855	-9.6	67	264	1.7
750	30	2,350	-12.1	62	278	3.9
700	30	2,877	-15.1	62	279	6.8
650	30	3,432	-18.2	57	284	8.0
600	30	4,029	-21.6	54	287	9.7
550	30	4,661	-25.6	54	286	10.5
500	30	5,351	-29.9	56	286	13.8
450	30	6,090	-34.7	52	284	15.7
400	30	6,909	-40.4	50	284	15.3
350	30	7,808	-45.9		308	21.0
300	30	8,825	-50.1		309	27.4
250	30	10,010	-51.7		301	32.4
200	30	11,458	-51.2		297	28.0
175	30	12,328	-50.1		299	25.1
150	30	13,337	-49.5		300	24.5
125	30	14,532	-49.4		296	22.7
100	29	15,982	-50.0		283	18.3
80	29	17,439	-50.3		284	15.9
70	29	18,310	-50.3		287	15.2
60	28	19,323	-50.8		290	14.4
50	28	20,510	-50.5		292	11.7
40	28	21,963	-50.8		298	9.3
30	28	23,838	-50.2		334	8.9
25	28	25,029	-49.9		344	9.3
20	27	26,502	-49.6		43	7.2
15	21	28,422	-48.8		35	7.4
10	15	31,137	-46.7			
7						

+ MAJURO, MARSHALL IS.
1011 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	3	28.5	74	67	13.6
1000	30	102	27.0	67	66	15.3
950	30	549	22.6	71	64	18.5
900	30	1,022	19.7	65	75	16.9
850	30	1,513	17.3	62	87	15.2
800	30	2,030	15.5	48	94	12.0
750	30	2,573	13.4	43	98	10.1
700	30	3,153	10.2	38	102	8.9
650	30	3,766	6.8	33	103	8.7
600	30	4,419	3.1	29	99	10.1
550	30	5,115	-.8	27	90	9.9
500	30	5,875	-5.0	26	81	10.7
450	30	6,692	-10.1	25	85	8.9
400	30	7,595	-15.4	21	63	5.6
350	30	8,592	-21.9	21	337	1.0
300	30	9,708	-30.4	22	255	4.5
250	30	10,977	-40.8	24	217	8.2
200	30	12,457	-53.1		210	13.8
175	29	13,303	-60.2		229	14.4
150	29	14,248	-67.9		267	14.2
125	29	15,322	-75.9		292	14.6
100	29	16,591	-81.5		286	10.5
80	29	17,854	-76.2		276	15.3
70	29	18,633	-71.8		267	20.2
60	28	19,550	-67.7		265	23.5
50	28	20,660	-63.4		262	19.4
40	27	22,044	-59.6		83	1.9
30	26	23,860	-55.6		89	30.1
25	20	25,037	-52.8		93	42.7
20	7	26,481	-48.7			
15						
10						
7						

MARCUS IS., N. PACIFIC
1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	9	23.1	69	99	5.1
1000	30	140	20.6	70	99	5.6
950	30	575	16.8	72	119	5.1
900	30	1,040	14.1	68	180	3.7
850	30	1,521	12.2	61	233	6.2
800	30	2,028	10.5	52	254	9.1
750	30	2,561	9.2	39	259	12.0
700	30	3,134	6.5	39	262	14.6
650	30	3,733	3.2	39	265	17.5
600	30	4,383	-.3	32	272	22.1
550	30	5,068	-4.1	28	272	26.6
500	30	5,820	-8.6	R25	271	28.9
450	30	6,621	-13.9	R21	275	33.6
400	30	7,515	-19.8	R22	275	39.4
350	30	8,492	-26.8	R24	276	42.9
300	30	9,585	-35.1	R23	277	46.8
250	30	10,831	-44.8		276	50.3
200	30	12,286	-55.9		279	55.9
175	30	13,125	-61.7		279	58.9
150	30	14,066	-67.1		276	58.7
125	30	15,153	-72.1		276	51.7
100	30	16,457	-74.5		283	37.7
80	30	17,754	-74.3		285	21.4
70	30	18,536	-71.0		288	14.4
60	30	19,461	-65.7		305	6.4
50	30	20,586	-59.6		49	3.3
40	30	21,996	-55.7		98	8.4
30	30	23,847	-51.3		102	9.9
25	30	25,038	-49.5		113	10.3
20	30	26,508	-46.9		131	8.4
15	26	28,423	-43.3		100	5.2
10	19	31,175	-37.7		128	5.1
7	6	33,649	-35.1			

MEDFORD, OREG.
968 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	401	7.1	85	327	1.9
1000	30	129				
950	30	554	7.6	75	311	1.7
900	30	998	6.0	70	176	1.4
850	30	1,465	3.3	70	190	4.3
800	30	1,955	.8	63	218	7.2
750	30	2,469	-2.4	59	227	11.1
700	30	3,015	-5.4	57	230	13.4
650	30	3,593	-8.6	49	239	14.8
600	30	4,213	-12.6	46	242	16.9
550	30	4,866	-17.0	46	240	18.5
500	30	5,581	-21.9	46	240	19.2
450	30	6,337	-27.5	42	243	20.6
400	30	7,181	-33.8	37	241	24.3
350	30	8,104	-41.2	35	246	26.8
300	30	9,135	-48.6		252	23.3
250	30	10,318	-53.9		264	25.4
200	30	11,739	-56.6		264	24.9
175	30	12,587	-56.1		263	26.2
150	29	13,575	-55.4		263	18.6
125	28	14,741	-55.6		258	17.3
100	27	16,162	-56.4		262	13.2
80	27	17,577	-56.6		267	8.4
70	27	18,423	-56.4		261	5.4
60	27	19,401	-56.2		245	2.7
50	27	20,558	-56.4		276	2.1
40	27	21,974	-55.8		82	2.5
30	25	23,805	-55.0		70	4.7
25	24	24,969	-54.1		63	4.1
20	23	26,405	-52.5		44	3.7
15	20	28,286	-49.2		327	3.5
10	17	30,970	-43.1		281	8.9
7	9	33,394	-38.5			

MERIDA, MEXICO
1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	27	11	20.4	95	117	7.2
1000	27	134	21.6	88	122	13.2
950	27	579	21.1	72	135	19.8
900	27	1,050	20.8	41	130	15.7
850	27	1,542	18.0	40	135	10.5
800	27	2,059	15.1	37	144	7.2
750	27	2,593	11.8	R31	131	4.5
700	27	3,176	8.7	R28	136	3.5
650	27	3,777	5.4	R23	97	1.6
600	27	4,436	1.8	R21	343	2.3
550	27	5,119	-2.5	R20	317	7.4
500	27	5,883	-7.4	R21	314	7.2
450	27	6,686	-12.9	R20	276	8.9
400	27	7,586	-19.6	R20	263	13.2
350	27	8,563	-27.0	R22	260	19.0
300	27	9,655	-35.5	R23	266	22.1
250	27	10,898	-45.2		269	28.4
200	27	12,352	-55.7		273	27.6
175	27	13,192	-60.7		267	31.3
150	27	14,140	-65.5		268	28.9
125	27	15,237	-69.7		270	24.1
100	25	16,549	-75.0		277	13.6
80	22	17,831	-76.8		13	3.7
70	22	18,603	-74.0		79	5.6
60	22	19,514	-68.8		101	6.4
50	22	20,624	-62.0		48	6.4
40	22	22,025	-55.8		69	12.0
30	21	23,867	-52.5		69	15.0
25	21	25,052	-50.1		85	13.4
20	20	26,522	-46.6		92	18.3
15	20	28,451	-42.2		94	19.6
10	15	31,209	-38.7		105	17.9
7	6	33,655	-36.1			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

* MIAMI, FLA. 1017 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	4	21.1	83	9	1.4
1000	30	150	21.6	76	46	2.5
950	30	594	18.6	73	99	3.7
900	30	1,056	16.5	58	81	3.5
850	30	1,541	14.1	48	5	2.5
800	30	2,051	12.2	35	321	4.5
750	30	2,591	9.4	32	322	7.8
700	30	3,158	6.0	32	319	9.5
650	30	3,757	2.4	31	303	12.4
600	30	4,403	- 1.5	30	303	15.0
550	30	5,087	- 5.5	30	301	20.0
500	30	5,833	-10.4	30	297	23.9
450	30	6,631	-15.7	30	293	28.0
400	30	7,515	-22.1	31	288	30.9
350	30	8,484	-29.4	29	289	35.9
300	30	9,565	-38.0	28	288	40.8
250	30	10,795	-48.0		288	46.6
200	30	12,233	-57.5		284	55.9
175	30	13,070	-60.7		283	57.3
150	30	14,020	-64.5		284	50.5
125	30	15,124	-68.6		281	46.2
100	29	16,445	-73.5		290	34.4
80	29	17,745	-74.0		297	17.5
70	29	18,528	-71.4		311	9.5
60	29	19,451	-66.6		333	5.2
50	28	20,567	-61.4		17	7.8
40	27	21,964	-57.2		52	8.0
30	27	23,804	-52.8		65	5.6
25	27	24,986	-50.5		78	7.2
20	27	26,452	-47.1		97	5.4
15	24	28,367	-43.5		137	1.0
10	13	31,111	-38.4		227	6.0
7						
5						

* MIDLAND, TEXAS 914 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	874	13.0	62	176	2.9
1000	30	111				
950	30	546				
900	30	1,008	15.2	55	182	5.8
850	30	1,492	15.1	48	210	10.5
800	30	2,004	13.0	36	234	12.8
750	30	2,539	10.1	32	243	13.0
700	30	3,113	6.2	30	243	15.9
650	30	3,711	1.7	29	245	18.5
600	30	4,354	- 3.2	31	247	23.9
550	30	5,028	- 8.6	34	246	26.8
500	30	5,768	-14.0	31	246	31.7
450	30	6,551	-19.6	32	248	37.3
400	30	7,423	-26.2	32	249	42.7
350	30	8,375	-33.4	30	249	47.8
300	30	9,439	-41.9	32	249	52.3
250	30	10,650	-50.8		249	62.7
200	30	12,072	-59.6		250	69.3
175	30	12,903	-61.2		249	66.2
150	30	13,859	-61.9		250	63.7
125	30	14,980	-64.6		251	57.1
100	30	16,335	-66.8		257	39.8
80	30	17,680	-67.8		249	20.8
70	30	18,485	-65.8		239	12.0
60	30	19,429	-63.0		257	4.7
50	30	20,559	-60.1		183	1.2
40	30	21,958	-57.8		343	2.1
30	29	23,789	-54.4		15	4.3
25	29	24,962	-52.4		8	4.3
20	28	26,415	-49.4		300	4.5
15	27	28,320	-44.5		283	8.5
10	21	31,082	-38.3		307	8.5
7	5	33,475	-34.0			
5						

MONTGOMERY, ALA. 1011 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	61	14.5	88	50	.4
1000	30	150	15.7	83	278	1.0
950	30	589	16.1	70	274	8.5
900	30	1,045	14.6	58	273	9.7
850	30	1,527	12.9	51	275	10.7
800	30	2,035	10.4	45	272	11.5
750	30	2,570	7.6	42	268	14.8
700	30	3,135	4.2	40	273	17.7
650	30	3,732	.4	37	271	22.3
600	30	4,371	- 3.8	34	272	25.1
550	30	5,048	- 8.8	36	274	25.8
500	30	5,784	-13.5	R33	274	31.3
450	30	6,571	-19.0	R31	274	35.2
400	30	7,444	-25.1	R30	276	39.0
350	30	8,400	-32.2	R29	277	44.7
300	30	9,469	-40.4	R29	279	50.7
250	30	10,686	-49.9		281	56.7
200	30	12,111	-59.7		284	64.3
175	30	12,941	-61.3		280	66.0
150	30	13,895	-62.3		276	62.5
125	30	15,016	-64.3		278	51.5
100	30	16,370	-67.0		278	39.0
80	30	17,712	-68.1		280	27.0
70	30	18,517	-66.1		283	17.9
60	30	19,460	-62.8		287	10.5
50	30	20,590	-60.1		320	6.0
40	30	21,994	-56.8		11	3.1
30	28	23,832	-53.2		345	1.6
25	27	25,010	-51.1		309	1.9
20	24	26,481	-48.1		300	1.2
15	20	28,401	-44.0		266	2.5
10	10	31,139	-37.2			
7						
5						

NANTUCKET, MASS. 1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	14	3.9	80	344	2.1
1000	30	120	3.5	72	336	3.1
950	30	534	2.8	63	330	6.8
900	30	973	1.1	61	333	10.1
850	30	1,431	- 1.0	61	313	13.2
800	30	1,914	- 2.4	55	299	17.3
750	30	2,423	- 3.9	49	293	23.5
700	30	2,969	- 5.9	43	288	25.1
650	30	3,543	- 8.9	41	287	28.6
600	30	4,163	-12.5	38	286	32.6
550	30	4,818	-16.8	R35	286	34.4
500	30	5,532	-21.5	R33	288	39.0
450	30	6,298	-26.8	R34	286	42.5
400	30	7,140	-33.0	R34	287	45.8
350	30	8,065	-40.2	38	286	50.5
300	30	9,100	-47.5		288	54.6
250	30	10,289	-53.1		286	59.8
200	30	11,715	-55.0		285	55.8
175	30	12,569	-54.0		284	48.0
150	30	13,559	-54.1		283	43.5
125	30	14,726	-54.9		281	35.5
100	30	16,148	-56.1		280	30.5
80	30	17,562	-57.1		280	24.5
70	30	18,407	-56.8		280	20.0
60	29	19,386	-56.3		282	13.4
50	29	20,547	-55.0		283	8.5
40	28	21,974	-53.9		268	4.1
30	27	23,827	-52.3		232	4.3
25	27	25,009	-51.1		231	4.3
20	27	26,465	-49.4		222	3.3
15	26	28,370	-45.3		281	3.3
10	18	31,132	-36.4		269	12.0
7	8	33,648	-31.8			
5						

*2/ NASHVILLE, TENN. 996 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	177	12.1	86	180	1.2
1000	30	143				
950	30	572	13.0	69	249	8.0
900	30	1,028	11.8	61	273	13.0
850	30	1,505	9.6	56	276	16.9
800	30	2,006	7.1	50	280	20.2
750	30	2,531	4.6	43	281	23.7
700	30	3,095	1.4	40	278	27.8
650	30	3,683	- 2.5	39	280	30.9
600	30	4,318	- 6.7	42	280	35.2
550	30	4,984	-11.3	41	279	37.9
500	30	5,717	-16.2	36	277	42.0
450	30	6,496	-21.5	31	277	46.0
400	30	7,362	-27.6	31	281	49.0
350	30	8,308	-34.8	33	281	55.8
300	30	9,367	-42.8		280	62.2
250	30	10,572	-52.0		279	67.6
200	30	11,986	-60.5		281	76.7
175	30	12,816	-60.9		282	73.6
150	30	13,774	-60.6		280	67.0
125	30	14,909	-61.6		278	50.9
100	30	16,282	-63.9		278	37.5
80	30	17,649	-63.6		281	24.7
70	30	18,469	-62.6		287	17.1
60	30	19,422	-61.1		297	10.9
50	30	20,558	-59.7		333	4.9
40	30	21,963	-56.7		47	5.1
30	29	23,794	-54.3		59	3.1
25	29	24,967	-52.5		74	1.4
20	27	26,419	-49.8		266	2.7
15	26	28,322	-44.8		275	7.6
10	25	31,073	-37.9		277	12.4
7	18	33,530	-34.9		266	18.1
5	6	35,815	-32.2			

NOME, ALASKA 1012 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	7	- 6.9	80	16	2.1
1000	28	99			299	1.2
950	28	500	- 7.5	73	223	1.7
900	28	919	- 8.0	64	241	2.7
850	28	1,362	- 9.3	62	273	5.6
800	28	1,830	-11.1	59	278	6.0
750	28	2,316	-13.5	56	264	8.4
700	28	2,845	-16.4	56	264	10.3
650	28	3,393	-19.3	52	277	12.2
600	28	3,991	-22.7	48	287	14.8
550	28	4,619	-26.5	45	288	15.5
500	28	5,307	-30.8	48	289	17.1
450	28	6,043	-35.6	50	272	17.1
400	28	6,858	-40.9	52	267	18.6
350	28	7,756	-46.2		271	22.0
300	28	8,768	-51.0		270	24.5
250	28	9,949	-52.5		269	27.2
200	27	11,392	-51.1		271	22.9
175	27	12,262	-50.3		270	21.8
150	27	13,270	-49.2		273	20.6
125	26	14,450	-49.4		261	22.5
100	26	15,909	-50.2		266	21.4
80	26	17,366	-50.2		266	22.7
70	26	18,236	-50.5		271	20.2
60	26	19,242	-50.7		271	17.7
50	26	20,430	-50.0		274	15.7
40	26	21,887	-50.1		285	10.7
30	26	23,764	-50.3		303	10.3
25	25	24,953	-50.2		308	10.1
20	24	26,419	-49.3		355	11.1
15	14	28,253	-49.7		337	16.9
10	6	30,916	-47.6			
7						
5						

NORFOLK, VA. 1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	9	9.6	73	239	4.9
1000	30	134	9.6	66	296	3.3
950	30	563	9.6	61	297	10.9
900	30	1,009	8.0	55	304	13.4
850	30	1,480	6.1	51	301	15.3
800	30	1,975	4.0	46	297	19.8
750	30	2,495	1.6	45	292	24.1
700	30	3,051	- 1.5	44	290	26.6
650	30	3,631	- 5.0	39	287	29.7
600	30	4,263	- 8.7	36	289	33.8
550	30	4,931	-12.4	R31	289	37.9
500	30	5,654	-17.1	R29	292	42.9
450	30	6,430	-22.4	R32	288	45.8
400	30	7,291	-28.6	R32	291	51.9
350	30	8,233	-35.5	R30	293	59.8
300	30	9,289	-43.3		294	63.5
250	30	10,492	-52.1		293	71.9
200	30	11,910	-58.8		291	69.9
175	30	12,747	-59.1		290	62.2
150	30	13,716	-58.1		286	54.2
125	30	14,861	-59.3		283	46.8
100	30	16,256	-60.4		288	40.4
80	30	17,641	-61.2		284	25.1
70	30	18,471	-60.3		287	21.6
60	30	19,434	-59.5		298	13.4
50	30	20,580	-57.2		305	7.0
40	30	21,999	-54.8		314	1.7
30	30	23,849	-52.3		262	1.2
25	29	25,030	-50.7		259	1.9
20	23	26,493	-48.1		226	2.1
15	15	28,427	-42.5		238	4.5
10						
7						
5						

* NORTH PLATTE, NEBR. 915 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	848	4.4	84	343	3.3
1000	30	113				
950	30	541				
900	30	980	6.2	74	330	3.9
850	30	1,448	6.2	63	306	7.8
800	30	1,945	5.1	55	300	11.5
750	30	2,467	2.6	46	294	14.6
700	30	3,025	- .9	45	287	17.3
650	30	3,609	- 5.0	44	283	21.0
600	30	4,237	- 9.5	45	272	23.3
550	30	4,898	-14.2	45	268	24.9
500	29	5,614	-19.5	42	264	28.0
450	29	6,383	-25.3	36	263	32.2
400	29	7,233	-31.8	32	263	37.1
350	29	8,162	-39.1	R30	260	43.7
300	29	9,201	-46.7		259	51.3
250	29	10,390	-53.9		257	54.8
200	29	11,805	-58.1		259	53.4
175	29	12,645	-58.2		259	48.0
150	29	13,616	-57.9		264	43.9
125	29	14,766	-58.0		266	33.0
100	29	16,167	-59.3		269	22.1
80	29	17,560	-60.4		273	16.3
70	29	18,392	-59.6		274	12.8
60	29	19,359	-58.9		277	10.1
50	29	20,505	-58.1		296	5.2
40	29	21,914	-57.0		318	4.7
30	29	23,742	-55.4		346	4.3
25	29	24,909	-54.0		341	3.3
20	29	26,347	-52.3		321	4.3
15	29	28,223	-48.7		286	5.2
10	27	30,936	-42.4		277	16.5
7	18	33,370	-36.9		272	31.5
5	9	35,703	-33.1			

* OAKLAND, CALIF. 1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	6	11.7	79	239	1.7
1000	30	124	10.7	76	228	3.1
950	30	552	9.6	66	254	4.3
900	30	999	7.9	64	270	5.6
850	30	1,468	5.3	58	256	6.8
800	30	1,961	2.7	54	250	8.2
750	30	2,473	- .3	48	258	9.3
700	30	3,030	- 3.6	43	254	9.9
650	30	3,604	- 6.9	41	256	11.5
600	30	4,233	-11.1	42	259	15.0
550	30	4,889	-15.7	45	259	15.9
500	30	5,608	-20.8	45	257	19.0
450	30	6,373	-26.5	44	256	21.6
400	30	7,219	-32.8	43	260	23.5
350	30	8,146	-39.8	40	265	26.2
300	30	9,183	-47.1		272	31.5
250	30	10,372	-53.5		276	34.0
200	30	11,794	-57.5		272	34.6
175	30	12,636	-58.1		264	33.4
150	30	13,607	-57.8		265	27.2
125	30	14,758	-58.1		258	21.8
100	30	16,160	-59.1		263	17.3
80	30	17,559	-59.0		251	9.9
70	30	18,397	-58.4		243	5.1
60	29	19,367	-58.2		248	3.9
50	29	20,516	-57.9		247	1.7
40	29	21,927	-56.9		228	1.6
30	29	23,755	-55.5		300	1.7
25	24	24,930	-54.2		332	2.1
20	22	26,375	-52.2		314	3.9
15	20	28,253	-48.9		274	9.1
10	15	30,970	-41.4		276	23.1
7	6	33,474	-36.6			
5						

OKLAHOMA CITY, OKLA. 968 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	392	13.5	77	176	4.5
1000	30	118				
950	30	551	14.6	65	193	8.9
900	30	1,010	14.3	51	224	15.7
850	30	1,491	13.0	40	238	17.7
800	30	1,999	10.4	38	246	17.7
750	30	2,530	7.2	38	250	16.7
700	30	3,097	3.6	34	261	16.9
650	30	3,690	- .4	36	266	21.0
600	30	4,329	- 5.1	38	264	26.0
550	30	5,000	-10.3	40	262	29.5
500	30	5,733	-15.6	39	262	33.2
450	30	6,512	-21.4	37	260	35.7
400	29	7,379	-27.7	36	259	40.4
350	29	8,325	-34.8	36	257	44.7
300	29	9,383	-42.8	35	258	52.6
250	29	10,589	-51.7		257	58.9
200	29	12,005	-60.6		257	61.6
175	29	12,833	-61.2		261	64.7
150	29	13,790	-61.5		261	62.2
125	29	14,919	-61.9		264	50.7
100	29	16,290	-64.5		264	35.0
80	28	17,653	-64.8		259	22.3
70	28	18,468	-63.3		258	15.7
60	28	19,421	-61.4		267	6.6
50	28	20,556	-59.5		310	3.7
40	28	21,960	-57.1		331	2.5
30	28	23,793	-54.1		285	2.7
25	28	24,967	-51.8		293	4.5
20	24	26,412	-49.3		297	6.0
15	22	28,312	-44.6		273	9.1
10	9	31,063	-39.3			
7						
5						

OMAHA, NEBR. 966 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	403	5.8	85	39	3.5
1000	30	113				
950	30	534	6.4	81	29	2.7
900	30	980	7.9	67	294	4.7
850	30	1,451	7.4	60	274	11.3
800	30	1,949	5.6	55	274	15.7
750	30	2,471	2.6	49	276	19.0
700	30	3,030	- 1.0	48	279	22.1
650	30	3,607	- 5.1	50	279	25.1
600	30	4,241	- 9.1	47	275	29.3
550	30	4,897	-13.7	44	273	29.9
500	30	5,626	-19.0	42	272	33.2
450	30	6,394	-24.9	40	270	35.4
400	30	7,248	-31.1	37	271	41.8
350	30	8,182	-38.0	33	267	48.4
300	30	9,227	-45.4		267	56.1
250	30	10,421	-53.1		265	62.7
200	30	11,838	-58.5		266	62.5
175	30	12,677	-58.5		267	55.9
150	30	13,647	-57.8		268	50.5
125	30	14,797	-57.8		272	36.5
100	30	16,199	-59.3		271	28.4
80	30	17,596	-59.7		273	20.6
70	30	18,430	-59.3		281	14.2
60	29	19,398	-58.3		284	10.1
50	29	20,546	-57.6		292	7.4
40	29	21,960	-56.2		312	5.8
30	29	23,796	-54.4		324	3.7
25	29	24,968	-52.9		292	2.9
20	29	26,414	-50.4		276	6.0
15	27	28,303	-46.8		276	7.6
10	11	31,016	-41.8			
7						
5						

* PEORIA, ILL. 991 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	200	6.5	88	141	1.6
1000	30	122				
950	30	544	8.5	74	247	6.4
900	30	992	7.9	64	270	11.8
850	30	1,463	6.9	52	281	14.6
800	30	1,959	4.8	51	282	16.9
750	30	2,482	1.8	51	284	20.0
700	30	3,037	- 1.3	49	283	24.9
650	30	3,620	- 5.1	49	281	28.7
600	30	4,248	- 9.0	48	278	33.8
550	30	4,910	-13.2	45	276	39.0
500	30	5,635	-18.2	42	277	42.5
450	30	6,407	-23.8	41	276	44.3
400	30	7,262	-29.9	R36	275	49.9
350	30	8,199	-37.0	R37	274	57.9
300	30	9,247	-44.9		275	64.5
250	30	10,443	-53.3		276	73.0
200	30	11,859	-59.0		276	72.1
175	30	12,696	-59.0		277	66.0
150	30	13,664	-58.5		280	52.1
125	30	14,812	-58.3		278	41.8
100	30	16,212	-59.5		277	32.2
80	30	17,603	-60.4		281	22.1
70	30	18,436	-59.3		285	17.1
60	29	19,410	-58.8		300	9.1
50	29	20,557	-58.0		304	7.0
40	29	21,968	-56.2		339	5.6
30	29	23,804	-54.4		352	2.5
25	29	24,975	-53.1		342	2.7
20	28	26,423	-50.9		281	2.9
15	27	28,316	-47.2		279	8.9
10	21	31,042	-40.5		261	14.4
7	7	33,502	-35.7			
5						

* PITTSBURGH, PA. 974 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	353	4.4	77	305	1.2
1000	30	142				
950	30	558	5.1	66	297	1.6
900	30	1,002	3.8	63	279	7.8
850	30	1,465	2.2	61	287	13.6
800	30	1,953	.4	59	289	19.6
750	30	2,467	- 1.8	56	290	23.7
700	30	3,016	- 4.6	54	292	26.4
650	30	3,594	- 7.7	52	290	30.9
600	30	4,215	-11.1	47	291	34.8
550	30	4,872	-15.3	38	293	39.0
500	30	5,593	-19.7	38	292	42.7
450	30	6,360	-25.0	38	293	46.8
400	30	7,213	-31.0	39	293	52.6
350	30	8,146	-37.9	36	292	57.7
300	30	9,190	-45.5		289	66.4
250	30	10,384	-53.3		288	76.9
200	30	11,802	-57.7		290	70.7
175	30	12,643	-57.9		291	63.5
150	30	13,618	-56.5		288	52.4
125	29	14,771	-57.5		287	42.5
100	29	16,176	-58.8		287	35.2
80	29	17,575	-58.9		291	25.3
70	28	18,414	-59.0		292	19.8
60	28	19,381	-58.5		297	14.6
50	28	20,531	-56.7		305	9.7
40	28	21,949	-55.4		307	6.2
30	28	23,790	-53.9		304	5.4
25	27	24,961	-52.5		285	4.7
20	27	26,409	-50.2		279	4.7
15	26	28,300	-46.2		266	7.4
10	24	31,021	-40.1		277	13.4
7	21	33,476	-35.5		285	16.1
5	9	35,795	-32.2			

PONAPE, CAROLINE IS. + 1006 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	39	27.8	79	68	7.8
1000	30	88	27.1	75	72	10.1
950	30	535	23.2	75	78	17.3
900	30	1,011	20.2	72	79	18.5
850	30	1,503	17.7	66	86	18.1
800	30	2,020	15.7	57	90	13.8
750	30	2,564	13.1	51	92	11.1
700	30	3,145	10.0	48	98	12.4
650	30	3,754	6.6	44	98	14.0
600	30	4,411	3.0	43	95	15.7
550	30	5,108	- .6	34	93	14.6
500	30	5,869	- 5.0	33	91	15.5
450	30	6,687	- 9.8	32	91	14.4
400	30	7,593	-15.0	28	87	12.2
350	30	8,589	-21.9	26	82	11.1
300	30	9,706	-30.4	26	104	9.5
250	30	10,975	-40.7	35	138	10.5
200	30	12,454	-53.2		149	10.5
175	30	13,301	-60.5		149	9.5
150	30	14,244	-68.1		139	6.4
125	29	15,318	-75.9		65	4.5
100	29	16,586	-80.8		69	4.5
80	29	17,854	-77.4		266	6.0
70	28	18,628	-72.3		267	13.0
60	27	19,544	-67.6		271	17.1
50	23	20,654	-63.2		267	17.9
40	23	22,042	-59.4		243	1.6
30	21	23,855	-56.4		86	25.3
25	16	25,012	-54.1		88	40.4
20	14	26,459	-50.1		91	50.9
15	6	28,352	-46.5			
10						
7						
5						

PORTLAND, ME. 1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	20	2.3	74	302	2.5
1000	30	127	2.6	56	329	4.1
950	30	540	.9	55	336	6.6
900	30	974	- 1.4	56	340	7.4
850	30	1,428	- 3.6	55	325	9.5
800	30	1,905	- 5.3	50	322	12.2
750	30	2,409	- 6.8	42	308	14.0
700	30	2,948	- 8.6	38	297	17.5
650	30	3,515	-11.6	36	296	21.2
600	30	4,130	-14.9	34	294	27.0
550	30	4,778	-18.5	R33	294	31.7
500	30	5,489	-23.3	R32	294	36.1
450	30	6,247	-28.6	R33	294	39.4
400	30	7,086	-34.5	R35	292	44.3
350	30	8,007	-41.1	37	289	50.7
300	30	9,039	-48.2		288	53.0
250	30	10,224	-53.1		287	51.5
200	30	11,660	-53.2		284	49.1
175	30	12,521	-52.8		285	42.0
150	30	13,517	-52.5		282	39.4
125	30	14,692	-53.6		281	35.0
100	29	16,128	-54.9		281	29.7
80	29	17,552	-55.4		282	21.4
70	29	18,403	-55.2		278	17.3
60	28	19,387	-54.7		281	11.5
50	26	20,550	-54.2		286	6.4
40	26	21,985	-53.2		265	2.9
30	24	23,850	-52.1		228	2.1
25	23	25,034	-51.3		231	1.4
20	21	26,482	-49.8		114	1.6
15	13	28,409	-45.7		22	2.1
10						
7						
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

APRIL 1965

RAPID CITY, S. DAK.
902 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	29	966	3.3	82	336	2.5
1000	29	122				
950	29	540				
900	29	984			339	3.3
850	29	1,451	4.2	62	293	8.2
800	29	1,943	2.3	56	297	14.0
750	29	2,459	- .1	54	299	14.0
700	29	3,012	- 3.4	56	291	14.8
650	29	3,588	- 7.1	52	283	15.9
600	29	4,214	-11.0	47	279	17.3
550	29	4,868	-15.6	45	282	18.1
500	29	5,588	-20.9	42	283	20.4
450	29	6,350	-26.7	40	278	22.1
400	29	7,196	-33.4	34	272	22.7
350	29	8,119	-41.0	R27	269	25.6
300	29	9,150	-48.6		267	28.4
250	29	10,330	-54.9		259	37.1
200	29	11,747	-57.1		263	38.9
175	29	12,593	-56.8		260	37.1
150	29	13,572	-55.9		259	33.6
125	29	14,731	-56.3		262	27.6
100	29	16,144	-57.3		264	22.3
80	29	17,550	-58.6		267	14.0
70	29	18,388	-58.3		273	11.7
60	29	19,361	-57.3		279	7.0
50	29	20,514	-57.1		306	2.9
40	28	21,927	-56.3		338	3.5
30	27	23,762	-55.2		38	3.7
25	27	24,931	-53.5		55	5.8
20	24	26,379	-51.5		69	4.5
15	11	28,225	-48.9			
10						

ST. CLOUD, MINN.
977 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	316	1.8	85	67	1.2
1000	30	130				
950	30	544	2.3	80	57	1.7
900	30	980	1.1	76	285	.8
850	30	1,440	.6	66	300	3.9
800	30	1,927	- .4	57	294	8.9
750	30	2,440	- 2.8	53	299	11.5
700	30	2,986	- 5.6	57	290	14.6
650	30	3,561	- 8.9	53	289	19.0
600	30	4,180	-12.8	52	291	23.5
550	30	4,834	-17.1	49	288	25.6
500	30	5,549	-21.5	42	289	29.3
450	30	6,309	-27.4	40	286	31.9
400	30	7,156	-33.4	36	287	35.4
350	30	8,079	-40.5	R33	284	35.9
300	30	9,111	-48.4		281	40.2
250	30	10,292	-55.0		276	47.2
200	30	11,707	-56.7		279	50.1
175	30	12,555	-55.7		281	43.7
150	30	13,538	-55.4		278	38.1
125	30	14,699	-55.9		281	33.4
100	30	16,116	-56.8		282	25.3
80	30	17,527	-57.2		287	22.1
70	30	18,371	-57.1		294	17.5
60	30	19,347	-57.1		301	13.2
50	30	20,502	-56.2		314	10.3
40	29	21,922	-55.4		333	5.6
30	29	23,761	-54.4		349	4.1
25	28	24,930	-53.4		331	2.7
20	26	26,366	-51.7		337	2.9
15	22	28,249	-48.7		291	9.7
10	7	30,935	-42.2			

ST. PAUL IS., ALASKA
1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	10	- 1.7	89	283	4.3
1000	30	120	- 1.3	80	332	4.7
950	30	529	- 2.9	81	344	6.8
900	30	956	- 4.2	75	312	7.0
850	30	1,406	- 5.7	70	303	8.2
800	30	1,880	- 7.3	59	307	9.1
750	30	2,384	- 9.7	57	281	9.5
700	30	2,912	-12.1	54	275	12.2
650	30	3,479	-15.1	57	276	13.8
600	30	4,078	-18.7	55	277	15.3
550	30	4,721	-22.5	52	281	16.5
500	30	5,416	-27.1	47	287	17.7
450	30	6,166	-32.1	44	282	20.6
400	30	6,992	-37.7	45	290	23.1
350	30	7,901	-44.0	37	286	19.8
300	30	8,922	-49.7		282	20.2
250	30	10,105	-53.0		296	25.4
200	30	11,539	-54.1		287	22.5
175	30	12,397	-53.0		288	18.3
150	30	13,395	-51.5		287	16.7
125	29	14,575	-51.9		288	12.4
100	29	16,019	-52.4		302	7.0
80	28	17,462	-52.9		350	1.9
70	28	18,324	-52.6		28	2.5
60	28	19,321	-52.3		57	2.1
50	28	20,500	-52.2		80	4.3
40	28	21,944	-52.2		86	6.4
30	28	23,806	-52.0		104	7.2
25	28	24,987	-51.7		113	8.0
20	28	26,438	-50.9		98	7.6
15	22	28,306	-50.3		87	8.9
10	14	30,973	-48.5			

SALEM, OREG.
1008 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	61	6.0	93	199	2.1
1000	30	129			197	2.1
950	30	548	6.1	75	217	2.3
900	30	993	3.8	74	212	4.7
850	30	1,456	1.5	73	218	8.9
800	30	1,942	- 1.0	65	227	11.7
750	30	2,452	- 3.6	62	233	12.6
700	30	2,998	- 6.5	53	235	14.4
650	30	3,570	-10.0	51	233	15.7
600	30	4,186	-14.0	51	233	17.1
550	30	4,838	-18.1	48	231	18.6
500	30	5,547	-23.1	44	232	20.4
450	30	6,302	-28.6	41	235	21.8
400	30	7,143	-34.7	37	235	23.7
350	30	8,062	-41.3	R34	232	22.7
300	30	9,092	-48.6		237	21.2
250	30	10,271	-55.2		251	20.2
200	30	11,689	-56.9		258	20.4
175	30	12,537	-55.6		261	19.6
150	30	13,522	-54.6		260	16.5
125	30	14,686	-55.2		264	15.7
100	30	16,109	-55.6		265	11.1
80	30	17,528	-56.5		258	6.8
70	30	18,374	-56.3		256	5.4
60	30	19,353	-56.6		270	3.9
50	30	20,509	-56.7		32	.6
40	30	21,926	-55.8		64	3.5
30	29	23,766	-54.9		65	4.7
25	28	24,930	-54.1		65	6.0
20	26	26,364	-52.8		66	8.5
15	19	28,232	-50.6		45	7.2
10	9	30,924	-43.2			

SALT LAKE CITY, UTAH
869 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	1,288	6.2	68	162	6.0
1000	30	122				
950	30	550				
900	30	998				
850	30	1,471	7.5	57	164	10.1
800	30	1,968	4.7	53	174	11.5
750	30	2,490	1.0	54	205	10.1
700	30	3,042	- 3.3	62	232	12.4
650	30	3,624	- 7.6	66	240	12.6
600	30	4,243	-11.7	62	244	14.4
550	30	4,900	-16.4	58	243	16.5
500	30	5,613	-21.5	50	240	17.3
450	30	6,377	-27.2	46	245	21.2
400	30	7,219	-33.8	42	246	21.8
350	30	8,141	-40.9	40	251	26.4
300	30	9,173	-48.1		251	29.7
250	30	10,357	-54.2		254	34.8
200	30	11,776	-57.2		250	34.8
175	30	12,620	-57.4		252	33.0
150	30	13,595	-56.8		248	28.0
125	30	14,750	-57.0		248	24.5
100	30	16,161	-57.7		248	17.9
80	29	17,566	-58.3		244	13.8
70	29	18,405	-58.4		247	10.9
60	28	19,380	-58.6		253	6.0
50	27	20,526	-58.4		287	2.1
40	26	21,934	-57.2		357	1.7
30	22	23,765	-55.4		349	.8
25	18	24,931	-54.3		32	3.3
20	14	26,352	-53.3		4	2.5
15	9	28,212	-50.9			
10						

SAN ANTONIO, TEXAS
986 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	243	17.3	87	91	4.3
1000	30	124				
950	30	560	17.6	77	133	8.7
900	30	1,025	15.8	70	173	11.7
850	30	1,511	15.7	49	190	12.6
800	30	2,025	14.0	37	206	11.3
750	30	2,565	11.1	34	224	12.2
700	30	3,139	7.2	38	235	13.4
650	30	3,736	2.6	38	247	14.8
600	30	4,387	- 2.2	41	255	18.5
550	30	5,061	- 7.3	41	257	22.3
500	30	5,809	-12.5	38	259	24.7
450	30	6,597	-18.2	R34	260	28.4
400	30	7,477	-24.7	35	256	33.2
350	30	8,435	-31.8	R32	254	38.9
300	30	9,507	-40.1	R33	255	49.0
250	30	10,726	-49.8		253	56.7
200	30	12,151	-59.6		253	64.5
175	30	12,980	-62.6		254	67.2
150	30	13,927	-64.1		255	62.2
125	30	15,038	-66.2		255	52.6
100	30	16,379	-69.5		255	36.9
80	29	17,703	-71.5		250	24.7
70	28	18,495	-69.5		250	15.7
60	27	19,425	-64.9		243	6.2
50	27	20,545	-61.4		138	1.9
40	27	21,941	-57.7		61	4.9
30	26	23,774	-53.3		33	1.6
25	26	24,954	-50.9		308	2.9
20	20	26,413	-49.0		317	3.3
15	16	28,310	-45.4		278	4.5
10						
7						
5						
4						

SAN DIEGO, CALIF.
1000 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	124	11.3	92	145	1.0
1000	30	125			107	.4
950	30	551	12.8	65	280	2.7
900	30	1,009	11.8	55	277	4.9
850	30	1,486	9.2	50	262	8.0
800	30	1,985	6.2	48	256	9.3
750	30	2,506	3.1	40	251	11.8
700	30	3,067	- .4	37	249	14.4
650	30	3,650	- 4.0	33	256	19.0
600	30	4,284	- 8.0	32	259	23.1
550	30	4,948	-12.3	R31	257	23.3
500	30	5,677	-17.6	R31	261	26.9
450	30	6,453	-23.3	R31	262	31.5
400	30	7,310	-29.9	R28	260	33.4
350	30	8,248	-36.9	R23	259	33.0
300	30	9,299	-44.0		256	38.5
250	30	10,504	-51.4		255	40.6
200	30	11,930	-57.9		258	42.3
175	30	12,767	-60.2		256	42.3
150	30	13,728	-60.2		251	40.2
125	30	14,865	-60.5		248	35.0
100	30	16,249	-61.9		248	24.9
80	30	17,627	-62.4		239	16.7
70	30	18,453	-60.9		236	10.7
60	30	19,413	-59.8		236	5.2
50	29	20,549	-59.2		265	1.2
40	29	21,953	-57.1		41	1.0
30	27	23,786	-54.7		344	1.2
25	26	24,961	-52.9		306	2.1
20	24	26,406	-50.2		286	4.3
15	13	28,321	-44.0		282	11.8
10	6	31,103	-37.4			
7	5	33,595	-33.7			
5						
4						

* SAN JUAN, P. R.
1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	6	23.6	76	124	2.3
1000	30	144	22.8	72	92	6.6
950	30	589	19.1	76	77	10.1
900	30	1,052	15.9	72	75	8.4
850	30	1,536	13.2	63	76	7.6
800	30	2,046	11.3	47	62	5.4
750	30	2,584	9.3	37	56	5.2
700	30	3,153	6.7	32	37	5.2
650	30	3,753	3.9	24	349	4.5
600	30	4,405	.4	23	334	6.8
550	30	5,096	- 3.6	20	320	9.3
500	30	5,846	- 8.1	18	307	14.2
450	30	6,654	-13.6	18	308	19.2
400	30	7,543	-20.3	16	300	25.4
350	30	8,517	-27.6	17	298	30.9
300	30	9,607	-35.8	17	291	36.1
250	30	10,851	-44.8		281	44.3
200	30	12,309	-55.3		273	57.5
175	30	13,149	-60.9		275	55.4
150	30	14,095	-66.2		277	47.8
125	30	15,188	-70.9		285	37.7
100	30	16,491	-76.2		294	25.3
80	30	17,777	-76.4		307	11.8
70	30	18,550	-73.0		334	5.6
60	30	19,465	-67.2		30	4.1
50	30	20,581	-61.1		57	9.7
40	30	21,983	-56.5		82	14.0
30	29	23,828	-52.3		83	20.0
25	26	25,007	-50.5		91	23.7
20	26	26,473	-47.2		95	27.6
15	25	28,396	-43.0		101	30.3
10	21	31,158	-37.1		86	29.9
7	8	33,652	-32.7			
5						
4						

SAN NICOLAS, CALIF.
993 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	174	11.5	82	302	6.4
1000	30	117				
950	30	548	13.6	56	303	7.8
900	30	1,002	11.3	52	283	6.6
850	30	1,477	8.5	50	273	8.4
800	30	1,975	6.0	47	266	9.3
750	30	2,499	3.0	42	264	11.7
700	30	3,057	- .2	36	262	15.9
650	30	3,643	- 3.7	35	[illegible]	18.8
600	30	4,274	- 7.9	33	265	20.8
550	30	4,938	-12.4	33	268	22.7
500	30	5,665	-17.5	30	271	24.9
450	30	6,439	-23.5	31	272	27.8
400	30	7,295	-30.5	36	268	29.9
350	30	8,230	-37.7	31	271	31.5
300	30	9,275	-44.9		270	36.9
250	30	10,474	-52.2		266	39.2
200	30	11,898	-57.8		263	43.7
175	30	12,736	-59.9		261	40.2
150	30	13,698	-60.2		257	40.0
125	30	14,836	-60.5		257	35.7
100	29	16,223	-61.6		253	27.6
80	28	17,608	-61.8		251	16.9
70	28	18,434	-60.9		245	9.7
60	28	19,396	-60.3		230	6.0
50	28	20,535	-59.5		181	1.9
40	28	21,938	-57.3		63	1.6
30	28	23,768	-55.0		291	1.0
25	26	24,937	-53.7		266	3.1
20	26	26,379	-51.1		271	5.8
15	25	28,273	-46.5		263	11.1
10	18	31,017	-39.3		271	16.1
7	16	33,487	-34.9		266	14.2
5	11	35,839	-31.0			
4	6	37,408	-28.3			

SANTA MONICA, CALIF.
1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	38	12.2	84	38	2.9
1000	30	119	12.4	81	41	2.5
950	30	551	12.4	65	42	1.7
900	30	1,003	11.1	53	247	2.9
850	30	1,478	8.3	49	253	3.7
800	30	1,976	5.3	49	254	7.2
750	30	2,498	2.4	45	254	10.5
700	30	3,055	- 1.0	40	254	13.0
650	30	3,637	- 4.6	37	260	16.1
600	30	4,268	- 9.0	37	261	18.5
550	30	4,929	-13.3	36	260	21.2
500	30	5,655	-18.5	33	266	23.1
450	30	6,423	-24.4	R33	272	26.0
400	30	7,280	-31.1	R33	268	27.2
350	30	8,213	-38.2	R25	263	28.0
300	30	9,257	-45.5		262	31.3
250	30	10,454	-52.5		262	35.4
200	30	11,877	-57.6		259	38.3
175	30	12,715	-60.1		259	37.5
150	30	13,676	-60.3		255	36.9
125	30	14,813	-60.3		251	33.0
100	30	16,201	-61.5		251	24.5
80	30	17,582	-61.9		238	13.0
70	30	18,410	-60.5		235	10.9
60	30	19,372	-59.9		237	5.6
50	30	20,512	-59.3		243	3.1
40	28	21,918	-57.4		[illegible]	1.4
30	26	23,743	-55.3		[illegible]	1.6
25	25	24,920	-53.4		294	3.3
20	23	26,369	-50.9		277	6.0
15	21	28,258	-46.5		249	11.8
10	17	30,975	-40.3			
7						
5						
4						

* SAULT STE. MARIE, MICH.
990 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	221	- 1.6	86	45	2.3
1000	30	139				
950	30	549	- .1	63	102	1.4
900	30	981	- 1.4	55	273	1.2
850	30	1,435	- 3.4	53	295	4.1
800	30	1,913	- 4.9	53	308	7.6
750	30	2,418	- 6.4	51	306	10.1
700	30	2,956	- 8.5	48	298	13.4
650	30	3,527	-11.3	46	293	18.3
600	30	4,139	-14.6	41	297	20.8
550	30	4,788	-18.5	40	296	25.8
500	30	5,497	-23.0	39	293	30.1
450	30	6,256	-28.2	37	290	34.0
400	30	7,095	-34.3	R36	289	38.3
350	30	8,015	-41.3	R28	288	43.5
300	30	9,045	-48.4		283	50.3
250	30	10,228	-53.8		284	57.3
200	30	11,655	-54.8		283	54.8
175	30	12,510	-54.3		287	47.4
150	30	13,500	-53.2		287	42.2
125	30	14,672	-54.2		286	36.5
100	30	16,099	-54.8		288	32.6
80	29	17,523	-55.7		289	24.5
70	29	18,373	-55.6		296	22.1
60	29	19,356	-55.5		298	16.1
50	29	20,520	-54.8		308	10.5
40	29	21,949	-54.0		325	4.5
30	27	23,804	-53.0		16	3.1
25	27	24,982	-52.0		86	2.7
20	27	26,433	-50.2		103	3.1
15	24	28,328	-47.4		92	1.7
10	18	31,027	-41.6		257	11.3
7						

SHEMYA, ALASKA
1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	38	1.7	84	247	3.9
1000	30	114			248	2.5
950	30	526	- 1.7	87	215	5.1
900	30	955	- 3.1	78	219	5.8
850	30	1,407	- 4.5	67	228	7.2
800	30	1,883	- 6.3	59	232	8.0
750	30	2,384	- 8.7	58	233	9.9
700	30	2,919	-11.5	51	235	13.0
650	30	3,481	-14.8	51	236	14.2
600	30	4,086	-18.7	48	238	14.2
550	30	4,723	-22.7	47	236	15.3
500	30	5,423	-27.5	45	239	16.7
450	30	6,169	-32.8	44	236	17.9
400	30	6,993	-38.5	40	232	21.4
350	30	7,900	-44.3	42	233	23.9
300	30	8,920	-50.0		228	27.2
250	30	10,100	-53.9		235	21.6
200	29	11,520	-54.5		239	21.0
175	29	12,378	-52.7		237	19.4
150	29	13,375	-51.9		230	16.5
125	29	14,556	-51.9		228	16.1
100	29	15,998	-52.8		222	9.9
80	29	17,438	-52.6		203	7.2
70	29	18,300	-52.2		203	7.0
60	28	19,301	-52.2		185	4.5
50	28	20,480	-52.4		156	4.7
40	27	21,924	-52.0		140	5.8
30	27	23,788	-51.7		112	7.4
25	27	24,971	-51.4		105	6.4
20	26	26,423	-50.9		97	10.3
15	22	28,302	-49.7		94	12.2
10	8	30,963	-47.2			
7	6	33,332	-45.4			

* SHREVEPORT, LA.
1006 M[illegible]

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	79	16.5	89	149	2.9
1000	30	129	17.2	81	147	3.7
950	30	570	17.2	69	197	10.7
900	30	1,030	15.0	64	212	12.4
850	30	1,513	13.2	54	224	12.8
800	30	2,021	11.1	46	240	13.0
750	30	2,554	8.2	39	247	15.0
700	30	3,123	4.8	33	259	15.5
650	30	3,719	.6	32	263	17.3
600	30	4,360	- 4.0	33	262	19.8
550	30	5,034	- 9.1	37	265	22.5
500	30	5,770	-14.3	35	269	25.4
450	30	6,554	-19.8	33	265	29.1
400	30	7,423	-26.3	34	267	33.8
350	30	8,375	-33.1	34	264	41.6
300	30	9,440	-41.2	39	261	51.7
250	30	10,654	-50.4		263	62.2
200	30	12,074	-60.1		264	72.7
175	30	12,902	-61.7		266	71.5
150	30	13,858	-61.4		268	61.8
125	30	14,981	-64.4		267	53.8
100	30	16,334	-67.7		265	41.4
80	30	17,673	-67.8		266	25.1
70	30	18,478	-66.2		267	16.1
60	29	19,416	-63.7		277	5.1
50	29	20,539	-61.2		340	2.5
40	28	21,938	-57.9		44	4.1
30	28	23,765	-54.4		35	2.7
25	28	24,939	-51.9		318	3.1
20	27	26,393	-49.2		305	4.9
15	25	28,308	-44.2		291	7.0
10	24	31,060	-38.5		292	10.7
7	[illegible]	33,503	-33.3			

SPOKANE, WASH.
929 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	722	4.9	80	167	3.5
1000	30	115				
950	30	536				
900	30	981	6.9	62	188	6.2
850	30	1,450	4.9	58	217	8.5
800	30	1,942	1.4	61	227	7.6
750	30	2,453	- 2.1	60	232	7.6
700	30	3,003	- 5.6	59	235	11.5
650	30	3,571	- 9.2	54	242	13.8
600	30	4,195	-13.2	50	[illegible]	15.3
550	30	4,844	-17.4	43	242	16.9
500	30	5,561	-22.4	42	238	18.5
450	30	6,317	-27.9	42	242	18.5
400	30	7,162	-34.2	43	241	19.4
350	30	8,083	-41.3	R36	243	20.4
300	30	9,112	-49.0		248	23.7
250	30	10,287	-56.5		249	23.5
200	30	11,696	-57.5		255	21.8
175	30	12,543	-55.0		258	20.6
150	30	13,530	-54.2		263	15.3
125	29	14,696	-54.3		259	13.0
100	29	16,123	-55.1		266	12.5
80	29	17,547	-55.4		262	9.1
70	29	18,397	-55.5		265	7.8
60	29	19,379	-55.0		271	4.9
50	29	20,543	-55.5		291	1.9
40	29	21,966	-55.0		21	3.1
30	27	23,817	-54.1		59	6.2
25	26	25,001	-53.3		65	10.1
20	21	26,428	-52.0		61	8.4
15	5	28,326	-50.1			
10						
7						

SWAN ISLAND, W. I.
1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	10	25.3	81	104	9.7
1000	30	121	24.5	80	102	11.1
950	30	573	21.3	77	110	13.6
900	30	1,036	18.5	65	110	14.4
850	30	1,525	16.2	49	107	13.2
800	30	2,038	13.5	42	104	11.8
750	30	2,581	10.5	34	104	10.9
700	30	3,150	8.3	R25	91	9.9
650	30	3,762	6.1	R19	76	7.2
600	30	4,411	2.8	R15	78	[illegible]
550	30	5,100	- 1.1	R16	42	2.1
500	30	5,864	- 6.0	R16	351	2.9
450	30	6,677	-11.6	R17	336	4.3
400	29	7,572	-18.4	R17	337	6.4
350	29	8,553	-26.1	R20	308	6.2
300	29	9,647	-35.1	R24	286	10.5
250	29	10,892	-45.1		264	19.6
200	29	12,346	-55.8		266	[illegible]
175	29	13,183	-61.7		264	26.6
150	29	14,125	-67.0		270	23.1
125	29	15,212	-71.9		285	15.2
100	29	16,510	-77.0		327	5.8
80	27	17,781	-78.7		37	5.4
70	27	18,546	-75.7		54	6.6
60	27	19,453	-68.7		69	[illegible]
50	27	20,563	-62.5		[illegible]	9.7
40	27	21,962	-56.2		80	13.0
30	27	23,804	-52.4		88	19.8
25	25	24,988	-50.5		87	24.9
20	23	26,449	-47.8		90	31.9
15	14	28,396	-42.7		95	38.1
10						
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

APRIL 1965

TAMPA, FLA.
1017 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	8	18.6	91	70	1.4
1000	30	153	19.8	79	73	2.5
950	30	592	18.5	66	290	1.0
900	30	1,057	16.4	56	270	4.1
850	30	1,542	14.2	46	281	5.6
800	30	2,052	12.0	40	293	7.6
750	30	2,590	9.2	35	294	9.1
700	30	3,158	5.9	33	295	10.9
650	30	3,757	2.2	32	295	13.8
600	30	4,402	-1.9	36	294	16.7
550	30	5,078	-6.5	35	292	19.0
500	30	5,828	-11.2	31	293	23.9
450	30	6,623	-16.6	31	287	28.4
400	30	7,505	-22.7	32	285	33.4
350	30	8,471	-29.8	R27	283	37.9
300	30	9,550	-38.2	R25	281	43.7
250	30	10,778	-47.9		285	50.7
200	30	12,216	-57.7		282	60.2
175	30	13,051	-60.9		278	60.6
150	30	14,005	-63.2		278	57.5
125	30	15,117	-66.5		277	51.7
100	30	16,452	-70.9		281	43.9
80	30	17,768	-72.1		285	28.0
70	30	18,555	-70.7		292	14.6
60	30	19,478	-66.7		313	6.8
50	29	20,592	-61.5		30	6.8
40	29	21,991	-56.5		59	9.3
30	29	23,834	-52.2		69	8.0
25	29	25,020	-49.6		70	4.3
20	27	26,487	-46.4		311	3.1
15	15	28,405	-42.7		225	4.3
10						
7						

* TATOOSH IS., WASH
1011 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	31	7.1	87	123	3.3
1000	30	119	6.4	82	135	4.1
950	30	535	4.1	76	193	8.0
900	30	976	1.3	80	202	9.7
850	30	1,435	-1.3	74	199	10.5
800	29	1,917	-3.7	66	208	11.7
750	29	2,423	-6.2	60	218	11.5
700	29	2,963	-9.0	53	223	12.8
650	29	3,530	-12.2	50	223	13.8
600	29	4,142	-15.8	52	222	16.7
550	29	4,789	-20.0	54	219	18.5
500	29	5,494	-24.8	54	221	20.2
450	29	6,247	-30.1	49	225	21.0
400	29	7,083	-35.9	50	224	21.4
350	29	7,996	-43.1	42	228	24.7
300	29	9,018	-50.4		237	27.0
250	29	10,194	-54.9		247	24.5
200	29	11,613	-55.9		258	21.4
175	29	12,465	-54.4		256	18.5
150	29	13,454	-53.8		259	17.7
125	28	14,626	-54.4		266	14.6
100	28	16,051	-55.8		264	11.3
80	28	17,471	-56.0		264	9.1
70	28	18,319	-55.8		276	6.2
60	28	19,301	-55.8		300	3.5
50	28	20,462	-55.5		291	2.5
40	27	21,884	-55.6		7	2.5
30	27	23,718	-55.2		47	4.1
25	26	24,882	-54.6		42	5.4
20	24	26,307	-54.0		38	6.0
15	22	28,165	-51.8		51	5.6
10	16	30,836	-48.1		347	7.2
7	5	33,243	-44.0			

TOPEKA, KANS.
982 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	269	9.3	81	156	1.7
1000	30	114				
950	30	542	11.1	69	225	7.2
900	30	994	11.2	61	256	15.0
850	30	1,470	10.3	51	271	16.1
800	30	1,973	7.9	46	270	17.3
750	30	2,496	4.4	42	274	19.4
700	30	3,061	.9	39	273	22.0
650	30	3,645	-3.2	36	273	25.4
600	30	4,281	-7.5	34	269	29.9
550	30	4,944	-12.2	34	267	34.2
500	30	5,675	-17.4	39	266	34.8
450	30	6,451	-23.2	37	268	38.3
400	30	7,308	-29.5	36	265	44.7
350	30	8,246	-36.8	37	265	48.0
300	30	9,296	-44.7		265	55.6
250	30	10,494	-52.7		263	62.4
200	30	11,909	-59.6		266	62.4
175	30	12,741	-60.2		270	58.1
150	30	13,704	-59.5		269	51.1
125	30	14,845	-59.7		271	41.2
100	30	16,234	-61.1		271	29.3
80	29	17,620	-61.1		275	20.8
70	29	18,448	-60.9		278	14.6
60	29	19,412	-59.4		288	9.3
50	29	20,556	-58.6		284	4.3
40	29	21,965	-56.5		319	2.7
30	28	23,798	-54.4		318	2.3
25	27	24,969	-52.8		301	2.9
20	25	26,409	-50.4		284	6.4
15	20	28,296	-46.6		277	10.7
10	8	30,980	-40.0			
7						

+ TRUK, CAROLINE IS.
1011 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	2	27.9	76	48	8.4
1000	30	94	27.0	72	55	10.5
950	30	543	23.0	74	74	14.6
900	30	1,017	20.0	69	81	15.5
850	30	1,509	17.4	65	91	13.4
800	30	2,026	15.4	56	97	10.7
750	30	2,570	13.3	45	99	10.1
700	30	3,150	10.3	42	99	11.1
650	30	3,764	6.6	40	100	12.6
600	30	4,417	3.0	41	106	13.2
550	30	5,111	-.9	39	102	13.2
500	30	5,873	-5.1	31	100	14.0
450	30	6,690	-9.7	27	97	14.8
400	30	7,596	-15.1	25	92	13.6
350	30	8,592	-22.0	24	95	13.2
300	30	9,707	-30.5	24	120	12.8
250	30	10,977	-40.7	26	141	11.7
200	30	12,456	-53.1		144	13.0
175	30	13,303	-60.2		143	13.2
150	30	14,247	-67.8		110	8.9
125	30	15,323	-75.2		80	9.1
100	30	16,597	-80.0		55	2.9
80	30	17,867	-76.6		288	5.4
70	29	18,644	-71.3		277	10.5
60	28	19,563	-67.4		275	14.2
50	28	20,673	-63.4		275	13.0
40	27	22,054	-59.6		34	2.1
30	23	23,871	-56.1		91	28.7
25	22	25,040	-53.4		95	42.5
20	17	26,485	-49.8		97	54.0
15	7	28,390	-44.5			
10						
7						

TUCSON, ARIZ.
923 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	789	11.2	45	164	5.6
1000	30	114				
950	30	544				
900	30	1,005	15.2	37	180	5.1
850	30	1,487	12.7	35	218	4.1
800	30	1,992	9.2	36	221	7.4
750	30	2,517	5.4	34	225	12.4
700	30	3,083	1.6	34	226	16.5
650	30	3,670	-2.2	30	230	20.6
600	30	4,307	-6.1	R27	236	24.1
550	30	4,975	-10.9	R25	241	27.6
500	30	5,707	-16.0	R27	242	32.4
450	30	6,482	-21.5	R27	246	38.7
400	30	7,350	-28.0	R25	246	43.7
350	30	8,295	-35.1	R26	248	42.9
300	30	9,351	-43.3		248	46.0
250	30	10,555	-51.7		251	51.9
200	30	11,976	-58.6		256	46.8
175	30	12,811	-60.2		256	47.6
150	30	13,772	-60.2		254	46.2
125	30	14,906	-61.8		255	40.0
100	30	16,277	-64.7		250	34.6
80	30	17,641	-63.5		249	19.2
70	30	18,460	-63.0		245	10.9
60	30	19,412	-61.9		235	3.9
50	30	20,545	-59.4		90	.4
40	30	21,950	-57.0		65	3.7
30	30	23,781	-54.5		15	3.5
25	30	24,953	-52.7		355	3.1
20	29	26,405	-49.6		294	3.7
15	28	28,314	-44.0		281	9.3
10	25	31,088	-36.9		276	9.5
7	6	33,633	-33.9			

* VANDENBERG AFB, CALIF.
1002 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	113	8.3	98	331	1.7
1000	30	127			326	2.5
950	30	561	11.5	65	345	5.4
900	30	1,006	9.4	63	341	5.2
850	30	1,479	6.9	62	319	6.2
800	30	1,975	4.6	56	288	7.2
750	30	2,498	2.1	47	274	9.1
700	30	3,053	-1.1	44	268	10.9
650	30	3,634	-4.8	43	259	14.4
600	30	4,265	-8.9	43	261	17.3
550	30	4,927	-13.4	42	262	20.2
500	30	5,652	-18.5	44	266	24.1
450	30	6,420	-24.4	45	268	28.7
400	30	7,277	-31.1	41	270	30.5
350	30	8,208	-38.8	33	268	30.1
300	30	9,251	-45.8		268	32.2
250	30	10,446	-52.4		272	34.8
200	30	11,870	-57.6		265	35.4
175	30	12,708	-59.8		264	35.5
150	30	13,670	-59.9		261	34.8
125	30	14,811	-59.6		254	30.1
100	30	16,203	-60.6		256	23.3
80	30	17,588	-61.1		252	13.8
70	30	18,418	-60.5		239	10.5
60	30	19,380	-59.3		235	5.6
50	30	20,522	-59.1		223	2.7
40	29	21,926	-57.3		240	1.0
30	27	23,749	-55.8		282	3.5
25	27	24,913	-53.9		282	4.7
20	27	26,353	-51.3		289	7.2
15	26	28,246	-46.4		271	11.3
10	21	30,972	-40.4		276	19.4
7	12	33,444	-35.9			
5						

* WAKE IS., PACIFIC AREA
1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	5	23.9	77	65	8.2
1000	30	139	22.9	77	73	10.9
950	30	583	19.3	85	81	11.3
900	30	1,049	16.2	79	78	9.9
850	30	1,534	13.6	78	81	8.0
800	30	2,044	12.3	60	79	6.2
750	30	2,583	10.5	48	55	4.5
700	30	3,157	8.2	34	21	3.7
650	30	3,765	5.4	30	343	3.9
600	30	4,417	1.7	28	321	6.0
550	30	5,108	-2.6	25	296	9.3
500	30	5,863	-7.3	25	291	11.8
450	30	6,672	-12.5	23	299	16.9
400	30	7,568	-18.7	22	290	20.6
350	30	8,549	-25.8	23	295	26.4
300	30	9,646	-34.3	24	290	31.5
250	30	10,894	-44.1		284	38.1
200	30	12,354	-55.3		281	44.5
175	30	13,194	-61.5		280	47.2
150	30	14,135	-67.9		279	48.6
125	30	15,212	-74.5		279	41.6
100	30	16,495	-78.5		280	28.4
80	29	17,771	-77.4		278	13.8
70	27	18,541	-73.8		284	7.8
60	23	19,454	-68.2		333	3.1
50	23	20,570	-61.7		112	5.8
40	23	21,964	-57.3		90	10.1
30	22	23,803	-53.6		85	19.4
25	22	24,982	-51.0		82	23.7
20	21	26,443	-48.8		83	28.0
15	21	28,346	-45.8		83	29.1
10	18	31,087	-39.3		87	29.5
7	6	33,554	-35.4			
5						

* WALLOPS IS. VA. NASA
1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	20	3	8.9	82	337	1.7
1000	20	127	9.8	75	288	3.3
950	20	556	10.0	69	299	9.5
900	20	1,004	8.9	61	295	12.4
850	20	1,476	6.5	62	293	16.1
800	20	1,971	3.7	62	286	20.4
750	20	2,491	1.2	59	281	25.8
700	20	3,047	-1.7	53	277	29.3
650	20	3,630	-5.1	49	275	31.5
600	20	4,259	-8.8	45	277	33.4
550	20	4,928	-12.8	46	278	37.1
500	19	5,650	-17.1	41	281	40.8
450	19	6,428	-22.5	39	282	46.6
400	19	7,288	-28.4	42	281	51.1
350	19	8,232	-35.5	38	281	56.7
300	19	9,287	-43.4		282	61.8
250	19	10,491	-52.1		286	70.1
200	19	11,911	-58.2		289	67.8
175	19	12,749	-58.9		287	60.4
150	19	13,720	-57.4		287	55.0
125	19	14,869	-58.4		284	43.1
100	18	16,267	-59.9		281	40.0
80	18	17,657	-60.5		286	26.4
70	18	18,489	-59.8		290	21.4
60	18	19,452	-58.8		297	14.4
50	17	20,598	-56.9		315	6.6
40	16	22,020	-54.8		326	5.4
30	15	23,873	-52.4		295	5.4
25	13	25,046	-51.4		224	1.2
20	13	26,499	-49.4		63	3.1
15	12	28,407	-45.4		254	5.6
10	10	31,150	-38.0			
7	8	33,642	-33.6			
5						

WASHINGTON, D. C.
1007 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	84	5.4	81	306	2.3
1000	30	138			289	1.7
950	30	562	6.4	62	309	8.2
900	30	1,003	4.8	65	301	14.0
850	30	1,468	3.2	64	297	19.4
800	30	1,959	2.0	63	294	22.1
750	30	2,479	-.7	58	290	23.1
700	30	3,027	-2.9	50	293	25.3
650	30	3,606	-6.1	50	292	28.0
600	30	4,233	-9.9	48	293	32.1
550	30	4,897	-14.0	47	292	34.2
500	30	5,616	-18.8	43	292	40.8
450	30	6,389	-24.1	38	294	45.3
400	30	7,242	-29.9	37	293	50.7
350	30	8,180	-36.9	37	293	58.9
300	30	9,229	-44.4		292	64.1
250	30	10,428	-52.6		290	71.1
200	30	11,847	-58.2		292	70.7
175	30	12,687	-57.9		291	60.0
150	30	13,661	-56.7		292	51.9
125	30	14,815	-57.5		286	41.4
100	30	16,218	-59.2		286	33.6
80	30	17,614	-59.8		290	23.3
70	30	18,449	-59.3		290	19.0
60	29	19,414	-59.0		295	13.8
50	29	20,562	-57.4		299	9.7
40	29	21,979	-55.1		287	5.6
30	28	23,819	-53.3		273	5.4
25	28	24,995	-52.2		270	5.6
20	28	26,445	-50.3		272	4.9
15	21	28,327	-46.0		274	9.7
10	20	31,064	-40.0		272	15.5
7	13	33,522	-35.4		278	22.0
5	6	35,924	-28.8			

WINNEMUCCA, NEV.
866 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	1,310	4.1	72	176	1.7
1000	30	122				
950	30	547				
900	30	999				
850	30	1,465	6.2	58	193	1.7
800	30	1,960	3.7	55	213	4.1
750	30	2,478	-.1	59	237	7.0
700	30	3,029	-4.4	63	247	9.9
650	30	3,608	-8.3	61	247	11.8
600	30	4,227	-12.2	53	247	12.8
550	30	4,883	-16.4	49	249	14.2
500	30	5,598	-21.0	43	249	16.3
450	30	6,361	-26.6	41	253	14.2
400	30	7,207	-33.2	39	251	15.5
350	30	8,131	-40.5	35	256	18.1
300	30	9,163	-48.2		266	21.6
250	30	10,347	-54.3		270	27.0
200	30	11,768	-56.5		267	31.3
175	30	12,615	-56.7		261	28.6
150	30	13,594	-55.7		260	23.9
125	30	14,756	-56.0		256	20.0
100	30	16,170	-57.0		253	15.2
80	30	17,582	-57.2		243	10.1
70	30	18,426	-57.0		243	8.7
60	30	19,400	-57.1		250	5.4
50	30	20,554	-57.2		273	2.5
40	30	21,967	-56.4		92	1.4
30	30	23,798	-55.2		73	2.1
25	27	24,975	-53.8		55	3.1
20	26	26,419	-51.5		42	1.9
15	11	28,319	-47.9			
10						
7						
5						

WINSLOW, ARIZ.
850 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	1,492	4.5	65	183	4.3
1000	30	142				
950	30	568				
900	30	1,018				
850	30	1,490			175	3.5
800	30	1,989	7.0	43	212	8.0
750	30	2,517	3.4	43	235	12.4
700	30	3,073	-.5	42	233	16.9
650	30	3,655	-4.3	37	234	19.4
600	30	4,287	-8.3	35	237	21.0
550	30	4,951	-12.9	34	241	24.5
500	30	5,678	-17.7	35	245	29.9
450	30	6,450	-23.4	35	248	33.4
400	30	7,309	-30.0	R34	247	39.2
350	29	8,248	-37.3	R29	248	43.7
300	29	9,296	-45.0		250	51.5
250	29	10,494	-52.4		249	57.3
200	29	11,916	-57.8		251	54.2
175	29	12,756	-59.0		252	48.8
150	29	13,720	-59.5		251	46.8
125	29	14,858	-60.7		247	38.5
100	29	16,240	-62.3		248	29.9
80	29	17,617	-62.0		243	18.6
70	28	18,445	-62.0		250	10.3
60	28	19,399	-61.2		251	5.1
50	28	20,536	-59.6		299	2.7
40	27	21,936	-57.8		360	2.1
30	27	23,760	-55.4		317	3.5
25	27	24,929	-53.5		295	3.1
20	23	26,375	-51.1		277	6.8
15	15	28,266	-46.9			
10						

YAKUTAT, ALASKA
1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	12	-.6	90	90	3.7
1000	30	89			86	4.5
950	30	502	1.4	69	121	9.3
900	30	938	-1.3	70	131	10.7
850	30	1,392	-4.2	72	132	11.7
800	30	1,868	-7.2	69	136	9.1
750	30	2,367	-10.5	66	156	8.9
700	30	2,897	-13.8	65	177	8.4
650	30	3,454	-17.1	64	196	7.0
600	30	4,053	-20.7	58	223	7.6
550	30	4,688	-24.6	52	248	6.8
500	30	5,380	-28.9	47	278	7.0
450	30	6,122	-33.9	42	299	10.9
400	30	6,943	-39.6	43	307	12.4
350	30	7,845	-45.2		299	17.1
300	30	8,863	-49.9		300	22.3
250	30	10,046	-52.5		294	25.6
200	30	11,490	-51.8		306	24.7
175	30	12,358	-50.8		299	18.6
150	30	13,362	-50.8		282	18.1
125	30	14,549	-50.7		289	15.7
100	30	16,001	-51.6		286	12.2
80	30	17,445	-52.2		285	12.6
70	30	18,308	-52.3		288	10.9
60	30	19,305	-52.6		293	8.9
50	30	20,483	-52.4		295	9.5
40	30	21,925	-52.6		307	7.6
30	29	23,801	-52.4		332	5.8
25	27	24,983	-52.1		339	5.8
20	27	26,429	-51.8		335	6.6
15	25	28,309	-50.9		23	5.8
10	14	30,937	-49.9			

YAP, CAROLINE IS.
+ 1009 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	17	28.3	74	68	9.3
1000	30	96	27.1	73	68	10.3
950	30	547	22.4	74	73	13.4
900	30	1,017	19.5	65	78	14.2
850	30	1,509	17.3	54	80	14.2
800	30	2,025	15.2	45	79	14.4
750	30	2,571	12.7	37	77	12.2
700	30	3,146	10.0	33	81	13.2
650	30	3,758	6.6	30	79	13.0
600	30	4,411	2.7	28	85	12.8
550	30	5,101	-1.7	27	88	12.8
500	30	5,862	-6.1	25	91	11.8
450	30	6,678	-11.0	23	94	11.3
400	30	7,577	-16.4	22	97	9.7
350	30	8,567	-23.5	21	100	8.2
300	30	9,674	-31.9	23	118	7.8
250	30	10,935	-41.9		139	10.7
200	30	12,406	-54.1		141	10.3
175	30	13,248	-61.3		137	6.0
150	30	14,187	-68.8		168	4.3
125	30	15,256	-76.2		142	3.3
100	30	16,524	-81.2		45	4.7
80	29	17,777	-78.4		3	2.7
70	28	18,547	-73.2		270	4.1
60	28	19,459	-68.8		271	7.2
50	28	20,560	-65.0		272	5.4
40	28	21,936	-59.9		87	4.9
30	26	23,747	-56.3		86	22.3
25	20	24,915	-53.5		84	32.4
20	15	26,350	-50.3		89	44.5
15	6	28,226	-46.6			
10						

YUCCA FLAT, NEV.
879 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	1,196	6.6	65	242	1.4
1000	30	120				
950	30	547				
900	30	1,002				
850	30	1,473	8.0	53	185	2.3
800	30	1,970	4.7	56	194	8.4
750	30	2,489	1.1	58	205	9.5
700	30	3,045	-2.5	49	225	11.7
650	30	3,625	-6.2	45	240	13.0
600	30	4,251	-10.7	46	254	14.6
550	30	4,906	-15.3	46	258	17.5
500	30	5,628	-20.4	39	257	18.8
450	30	6,394	-26.2	36	262	21.8
400	30	7,241	-32.6	37	258	23.1
350	30	8,170	-39.1	R33	250	27.0
300	30	9,210	-46.4		250	33.0
250	30	10,403	-52.6		255	38.1
200	28	11,829	-56.7		255	38.5
175	28	12,672	-58.4		254	37.9
150	28	13,642	-57.9		256	34.4
125	28	14,790	-58.3		254	28.9
100	28	16,186	-60.1		245	22.7
80	28	17,579	-59.7		243	14.4
70	28	18,414	-58.9		234	9.9
60	28	19,381	-59.2		223	4.5
50	28	20,523	-58.7		189	1.4
40	26	21,930	-57.1		215	1.0
30	25	23,758	-55.6		259	2.5
25	23	24,922	-54.1		292	4.1
20	22	26,368	-51.6		282	5.1
15	19	28,263	-47.2		264	8.0
10	10	30,943	-41.1			

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Relative humidity averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Relative humidity data are not published for standard pressure surfaces for which less than 5 observations are available.

Relative humidity data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from lithium chloride hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature in degrees Celsius, relative humidity in percent, and resultant winds in degrees and knots.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. They were also equipped with carbon hygristors. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G. C. T.

R More than half of the observations are from statistical values.

1/ began April 6, 1965 2/ began April 11, 1965

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun. APRIL 1965

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	ALBUQUERQUE, N. MEX.								
	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Apr.									
3-----	0.75	0.85	1.00	1.15	1.34	1.05	----	----	----
6-----	.76	.87	.99	1.15	----	----	----	----	----
8-----	.84	.94	1.06	1.22	1.41	1.09	----	----	----
9-----	----	1.01	1.12	1.31	----	----	----	----	----
10----	.78	.89	1.02	1.21	----	----	1.00	0.91	----
11----	.83	.93	1.07	1.23	1.43	1.14	----	----	----
12----	.84	.93	1.07	1.21	----	----	----	----	----
14----	.79	.88	.99	1.14	1.37	----	----	----	----
15----	.81	.92	1.05	1.20	1.40	1.17	1.02	.90	0.80
16----	----	----	----	1.25	1.43	1.25	1.08	.93	.80
17----	.86	.97	1.10	1.25	1.43	1.19	1.04	.94	.83
19----	----	----	----	1.23	1.43	----	----	----	----
21----	----	----	1.13	1.23	1.45	1.27	1.08	.97	.73
22----	.88	.96	1.05	1.18	----	----	----	----	----
23----	----	----	----	----	1.32	----	----	----	----
24----	.74	.83	.97	1.15	1.35	----	----	.87	----
28----	----	----	----	----	1.34	1.17	1.03	.89	.81
29----	.86	.96	1.08	1.23	1.44	1.21	1.08	.96	.85
30----	.86	.95	1.07	1.19	1.38	----	.98	.84	.75
Averages	0.82	0.92	1.05	1.21	1.39	1.17	1.04	0.91	0.80
	MAUNA LOA OBS., HAWAII								
	Air mass								
	3.36	2.69	2.01	1.34	*	1.34	2.01	2.69	3.36
Apr.									
4-----	1.06	1.16	----	----	----	----	----	----	----
8-----	----	----	----	----	----	1.37	1.22	1.12	1.03
9-----	1.07	1.14	1.26	1.38	----	----	----	----	----
11----	1.10	1.19	1.21	1.43	----	----	----	----	----
13----	----	----	----	----	----	----	(1.18)	(1.05)	(.96)
14----	----	----	----	----	(1.55)	1.39	1.26	1.16	1.07
15----	(1.08)	(1.17)	1.28	1.41	1.57	----	----	----	----
16----	----	----	----	----	1.57	1.38	1.23	1.11	1.02
17----	----	----	----	----	----	(1.36)	(1.24)	----	----
18----	----	----	----	----	----	----	(1.31)	----	----
22----	(1.09)	(1.17)	----	(1.41)	----	----	----	----	----
23----	1.10	1.18	1.28	1.40	(1.53)	H 1.33	H 1.23	H 1.12	H 1.03
24----	1.07	1.16	1.26	----	1.51	(1.32)	(1.22)	(1.14)	(1.05)
25----	(1.06)	(1.17)	(1.26)	----	(1.51)	----	----	----	----
26----	(1.04)	(1.13)	(1.24)	(1.37)	1.52	----	----	1.11	1.02
27----	1.04	1.13	1.24	1.37	1.53	----	----	----	----
28----	----	----	----	1.38	----	----	----	----	----
29----	(1.02)	(1.11)	(1.22)	(1.36)	1.52	(1.30)	(1.14)	(1.03)	----
30----	(1.01)	(1.09)	(1.20)	(1.34)	----	----	----	----	----
Averages	1.07	1.16	1.26	1.40	1.54	1.37	1.24	1.12	1.03
	OMAHA, NEBR.								
	Air mass								
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Apr.									
21----	----	----	----	----	HM1.25	----	----	----	----
22----	----	----	----	HM0.84	----	----	----	----	----
26----	HI0.40	HI0.48	HI0.60	HM .90	----	----	----	----	----
28----	HS .74	HS .84	HS .98	HS1.14	HM1.38	HM1.15	HM0.92	HM0.78	HM0.70
29----	----	----	HS1.01	HS1.20	HS1.40	HS1.12	HS .92	HS .70	HS .64
30----	HS .81	HS .90	HS1.06	HS1.19	HS1.36	HS1.12	HS .95	HS .78	HS .60
Averages	0.65	0.74	0.91	1.05	1.45	1.13	0.93	0.75	0.65

H	Haze
HS	Slight haze
HM	Moderate haze
HI	Intense haze
( )	Clouds present
S	Slight haze-indeterminable
M	Moderate haze-indeterminable
*	Values corresponding to true solar noon

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	MADISON, WIS.								
	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Apr.									
7-----	----	----	----	S 1.11	----	----	----	----	----
9-----	----	----	----	----	M 1.26	----	----	----	----
27----	----	S 0.72	S 0.84	S 1.10	----	----	----	----	----
28----	----	----	----	----	----	S 1.21	S 1.02	S 0.89	S 0.78
29----	S 0.78	S .91	S 1.06	S 1.24	S 1.42	S 1.16	S .97	S .82	----
Averages	0.78	0.82	0.95	1.15	1.34	1.19	1.00	0.86	0.78
	BLUE HILL OBS., MASS.								
	Air mass								
	4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
Apr.									
1-----	0.82	0.94	1.07	1.24	1.39	1.16	0.96	0.82	----
3-----	----	.89	1.03	1.17	1.37	1.20	1.01	.88	0.77
4-----	.81	.91	1.04	1.22	1.40	1.20	1.01	.87	.76
5-----	.83	.94	1.07	1.24	1.44	1.21	1.01	.89	.76
6-----	.75	.84	.98	1.16	1.39	1.15	.93	.75	.65
29----	----	.77	.87	1.06	1.33	1.04	.84	----	----
30----	.75	.84	.99	1.16	----	----	----	----	----
Averages	0.79	0.88	1.01	1.18	1.39	1.16	0.96	0.84	0.74
	TUCSON, ARIZ.								
	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Apr.									
1-----	0.62	0.76	----	----	----	----	----	----	----
5-----	.80	.89	1.02	----	----	----	----	----	----
8-----	.87	.94	----	----	----	----	----	----	----
11----	----	----	----	----	----	----	----	0.88	0.77
12----	.83	.94	1.03	----	----	----	----	.83	----
14----	.78	.91	1.03	----	----	----	----	----	----
16----	.70	----	1.08	----	----	----	----	----	.68
17----	.72	.86	----	----	----	----	----	----	----
18----	----	----	----	----	----	----	----	.88	.79
19----	.78	.89	1.01	----	----	----	----	----	----
20----	----	----	----	----	----	----	----	.94	----
21----				Instrument failure					
22----	.77	----	----	----	----	----	----	----	----
23----				Instrument failure					
24----	----	----	----	----	----	----	----	.79	.65
25----				Instrument failure					
26----	----	----	----	----	----	----	----	----	.75
27----	----	----	----	----	----	----	----	----	.70
28----	.79	.89	----	----	----	----	----	----	.68
29----	.67	.77	.92	----	----	----	----	----	----
30----	.64	.75	.89	----	----	----	----	----	.64
Averages	0.74	0.86	0.98	----	——	----	----	0.84	0.80
	GUAM, M. I.								
	Air mass								
	4.92	3.93	2.95	1.97	*	1.97	2.95	3.93	4.92
			No observations due to cloudiness						

Langley is the unit used to denote one gram calorie per square centimeter An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol 8, No 2 page 63, of this publication

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	437	496	---	500	544	639	---	---	---	---	---	---	---	698	709	706	716	635	703	668	727	625	507	716	480	216	440	705	750	717		606
AMES IOWA	129	105	49	152	47	263	420	105	411	56	309	159	416	90	131	431	377	310	489	502	497	472	241	39	104	517	111	609	583	560		290
ANNETTE ALASKA	326	303	50	367	502	378	514	267	287	404	48	438	527	547	555	503	183	434	---	---	130	---	---	164	215	429	439	311	463	578		360
APALACHICOLA FLORIDA	616	614	607	496	537	605	551	529	534	506	469	613	565	665	551	598	690	655	454	403	548	270	610	644	280	477	204	681	724	694		546
ARGONNE NAT. LAB.	171	497	399	195	174	340	581	105	455	232	304	106	591	103	149	439	412	449	564	420	331	553	390	87	69	110	581	593	677	632		357
ASTORIA OREGON	316	346	540	385	296	253	190	261	330	409	520	232	169	390	396	361	378	271	86	267	403	455	274	263	478	539	341	627	652	362		360
ATLANTA GEORGIA	181	566	138	257	290	407	236	363	605	511	503	419	677	452	271	649	701	707	390	424	585	607	642	661	393	456	363	684	647	733		484
BARROW ALASKA	202	273	271	302	251	226	349	312	279	350	276	335	235	234	302	317	415	349	461	490	428	452	481	455	477	488	431	392	478	524		361
BETHEL ALASKA	229	289	273	267	245	473	312	318	296	431	555	---	---	---	---	---	580	559	411	587	589	568	589	571	591	---	574	---	248	262		427
BISMARCK N.DAK.	311	64	115	143	107	259	459*	147	106	57	35	586	345	90	222	311	231*	539	464	350	367	469	103	241	632	211	646	660*	586	512		312*
BLUE HILL MASS.	601	278	609	613	617	608	249	104	546	362	560	55	157	626	418	266	598	393	165	339	587	445	212	603	590	114	157	414	680	607		419
BOISE IDAHO	365	340	341	576	474	250	362	467	319	337	356	585	617	605	570	138	325	239	200	405	515	301	660	398	661	672	682	412	366	517		435
BOSTON MASSACHUSETTS	580	294	582	587	588	579	244	87	523	333	518	45	118	613	417	267	579	425	230	295	578	464	240	598	590	82	131	428	659	591		409
BROWNSVILLE TEXAS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	685	465	---	635	715	737	714	728	690	629	324	485	189	440	669		---
BURLINGTON VERMONT	452	489	505	525	454	478	84	89	270	581	432	35	88	563	387	90	243	465	600	536	467	536	210	614	219	72	162	563	589	557		412
CAPE HATTERAS N.C.	565	531	639	431	601	242	381	518	531	581	373	299	602	515	176	628	674	652	625	125	667	607	506	279	169	328	533	396	543	688		480
CARIBOU MAINE	583	570	573	565	561	583	556	102	190	236	338	236	362	642	572	47	211	622	524	570	599	556	437	684	659	353	322	381	336	299		442
CHARLESTON S.C.	122	558	552	169	224	575	439	506	580	538	219	410	672	627	506	662	683	687	517	365	246	669	657	585	541	240	482	699	647	711		503
CLEVELAND OHIO	191	548	582	411	388	298	550	301	501	500	349	243	352	541	54	223	138	164	624	328	205	532	366	224	91	115	189	535	661	502		357
COLUMBIA MISSOURI	492	162	97	169	118	585	574	508	300	310	565	270	558	95	267	630	530	419	640	522	594	581	591	579	153	180	338	305	687	671		416
DAVIS CALIFORNIA	478	358	496	536	236	528	302	151	173	195	425	564	70	264	155	467	257	196	434	212	562	602	578	614	615	616	525	553	610	630		413
DODGE CITY KANSAS	461	204	539	86	347	550	220	555	305	534	491	573	298	262	473	524	534	509	552	559	563	575	446	78	601	306	452	639	637	637		450
E. LANSING MICHIGAN	77	655	605	254	204	288	602	166	450	462	323	331	628	422	69	250	125	480	608	494	468	543	307	429	96	54	630	637	676	480		394
EL CENTRO CALIF. NPF	489	387	422*	422*	433	399	411	436*	436*	580	441	548	577	584	594	575	580	592	584	601	554	608	603	584	590	598	592	585	601	598		534*
EL PASO TEXAS	471	499	708	634	731	588	474*	714	471	656	722	715	466	760	769	750	761	763	757	755	759	742	673	780	447	496	708	741	777	715		667*
ELY NEVADA	222	425	344	258	415	282	452	402	462	484	421	411	442	593	693	589	529	581	543	449	627	537	622	488	665	632	698	693	647	587		506
EPPLEY,NEWPORT R.I.	555	185	564	567	576	566	214	98	395	430	488	97	175	593	369	331	559	392	139	351	569	505	176	617	569	139	201	381	625	578		400
FAIRBANKS ALASKA	285	237	333	---	280	267	423	410	278	310	243	473	129	364	93	387	359	439	284	467	512	405	537	449	290	249	487	281	380	305		343
FLAMING GORGE UTAH	327	---	376	348	281	511	438	448	474	482	224	479	631	558	627	595	551	511	507	374	450	551	290	574	133	365	327	694	---	593		454
FORT WORTH TEXAS	256	226	383	251	201	536	408	467	261	511	531	661	263	341	693	707	702	686	570	686	679	707	705	661	511	---	665	768*	744	769*		536*
FRESNO CALIFORNIA	321	341	472	352	156	194	303	139	259	285	319	390	362	549	661	634	406	618	606	465	579	682	672	649	660	649	655	648	631	673		478
GAINESVILLE FLORIDA	425	518	500	503	497	504	482	537	524	425	445	565	544	507	515	437	591	582	532	535	390	609	588	421	330	673	247	594	712	642		513
GLASGOW MONTANA	468	427	100	352	247	439	429	235	261	60	436	617	527	375	219	358	436	516	280	185	302	359	261	511	450	524	679	608	447	525		388
GRAND JUNCTION COLO.	392	310	455	271	241	591	189	521	83	175	---	193	605	709	676	534	496	383	680	589	554	434	606	---	---	---	319	722	722	707		468
GREAT FALLS MONTANA	381	---	371	520	469	487	409	398	340	312	328	564*	553	177	111	386	421	319	282	314	328	556	502	338	225	367	618	463	353	385		389*
GREENSBORO N.C.	217	750	693	290	570	240	542	445	549	542	130	471	657	586	317	565	666	658	274	170	524	374	520	499	281	367	411	237	551	722		461
GRIFFIN EXP.STA.GA.	245	643	223	358	320	620	269	383	627	588	526	315	744	641	405	680	766	775	540	481	444	692	736	707	436	602	571	770	679	815		553
INDIANAPOLIS INDIANA	272	443	266	236	83	471	641	---	---	---	322	176	681	208	189	560	599	374	541	590	440	506	520	208	218	215	391	269	742	718		403
INYOKERN CALIFORNIA	---	476	149	459	629	445	713	---	496	820	751	583	705	799	808	641	592	813	752	742	811	843	829	820	839	825	822	807	830	807		676
ITHACA NEW YORK	426	438	563	562	545	359	85	161	159	554	211	166	48	569	77	52	202	129	569	477	241	442	244	541	293	115	78	532	623	512		332
LAKE CHARLES LA.	433	416	397	327	273	244	461	510	446	292	252	243	---	482	154	679	657	382	548	635	675	630	484	659	589	482	376	668	715	695		476
LAKELAND FLORIDA	493	671	621	552	604	680	---	---	---	526	621	653	528	639	589	410	670	648	585	529	392	294	498	421	333	468	569	439	707	720		550
LANDER WYOMING	371	572	579	192	389	521	434	388	493	415	335	507	432	329	583	408	685	616	527	390	605	545	156	675	192	236	703	704	415	472		462
LARAMIE WYOMING	419	372	472	309	312	551	233	518	318	608	198	449	606	341	540	564	438	469	485	444	375	450	536	324	395	386	563	643	641	537		450
LAS VEGAS NEVADA	350	550	142	232	292	343	588	217	587	653	537	188	684	684	697	556	598	689	668	631	509	637	717	692	727	732	686	718	727	700		558
LITTLE ROCK ARKANSAS	---	---	---	---	---	---	513	384	614	292	382	652	644	227	594	659	684	461	656	662	639	647	600	587	467	152	588	741	709	699		552
LOS ANGELES CALIF.U	134	143	136	130	399	289	433	60	229	632	512	128	533	578	638	622	555	614	610	568	493	579	602	605	634	624	606	640	618	594		465
LOS ANGELES CALIF.WB	280	179	138	126	553	271	543	81	294	650	636	184	589	532	649	644	511	616	633	603	546	594	607	657	661	608	622	639	562	543		492
MADISON WISCONSIN	155	518	399	194	234	408	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		---
MANHATTAN KANSAS	530	95	224	172	134	546	281	460	330	445	576	286	149	188	510	573	475	575	543	523	539	498	453	112	195	412	277	617	605	605		398
MATANUSKA ALASKA	177	68	354	309	163	255	314	183	301	228	170	481	---	426	479	439	455	462	490	449	161	416	441	471	196	394	358	358	244	164		324
MAUNA LOA OB.HAWAII	---	608	133	472	---	---	---	---	---	---	544	536	---	831	---	842	797	826	630	728	661	748	769	787	626	767	728	480	836	451		657
MEDFORD OREGON	129	450	544	559	257	477	249	386	316	230	480	564	420	363	216	461	469	183	513	540	347	466	423	589	647	591	473	609	523	511		433
MIAMI FLORIDA	510*	613	510	532	580	501	567	586	581	585	590	548	583	566*	566	589	634	540	451	498	374	355	486	422	489	515	427	496	508	486		523*
MIDLAND TEXAS	179	458	558	400	578	545	521	520	284	595	594	438	564	527	534	643	622	631	613	619	629	639	630	612	119	182	626	526	657	665		524

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

APRIL 1965

Station	Day of month																														Avg.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
NASHVILLE TENNESSEE	408	546	58	527	---	---	---	323	672	375	388	676	607	208	287	665	724	685	428	716	706	683	707	669	427	271	184	365	688	770		510
NEW YORK N.Y.U	488	240	642	638	605	458	154	303	461	491	424	314	214	653	185	370	614	388	235	394	575	628	103	655	527	105	151	284	683	645		421
NORTH OMAHA NEBRASKA	228	187	60	330	70	578	402	220	279	470	470	136	407	296	503	622	563	595	616	640	614	604	364	45	200	711	499	738	728	713		430
OAK RIDGE TENNESSEE	334	491	174	158	229	78	427	146	502	322	388	509	524	322	142	426	563	543	274	546	541	529	517	481	354	293	115	233	409	586		372
OKLAHOMA CITY OKLA.	247	76	439	301	130	493	405	461	319	461	500	497	309	137	458	521	513	495	471	525	521	529	530	471	322	96	467	596	576	587		415
PAGE ARIZONA	366	359	248	374	447	452	373	217	160	348	451	240	574	570	563	526	561	497	563	478	450	509	603	495	288	497	---	---	539	518		438
PHOENIX ARIZONA	338	465	309	417	385	355	433	562	233	553	425	320	563	629	624	625	619	629	601	617	624	459	634	528	632	634	627	650	634	631		525
PORTLAND MAINE	581	528	579	590	583	597	371	63	338	371	460	33	211	626	487	131	572	552	550	126	601	541	300	612	664	103	187	556	678	567		439
PROSSER WASHINGTON	208	453	572	570	396	545	507	438	202	521	558	603	540	560	457	401	635	226	211	327	656	639	579	549	627	---	---	593	646	515		491
PULLMAN WASHINGTON	373	144	445	495	258	193	518	429	143	278	496	598	581	582	383	182	613	218	114	406	544	498	620	387	535	572	621	299	484	423		414
RAPID CITY S.DAK.	416	417	329	469	313	528	353	345	319	266	221	497	358	382	300	239	395	590	466	388	450	534	41	192	497	400	633	637	600	522		403
SAINT CLOUD MINN.	291	407	151	382	283	136	526	424	600	161	155	454*	536	211	253	271	401	412	574	314	371	165	124	274	90	612	496	698	673	504		365*
SALT LAKE CITY UTAH	507	414	574	296	492	439	398	373	315	181	327	411	605	556	607	567	494	518	475	497	547	602	153	585	606	748	747	724	661	458		496
SAN ANTONIO TEXAS	80	214	324	458	550	119	299	201	145	272	203	213	230	324	518	585	522	492	238	609	611	593	481	491	435	371	519	569	667	659		400
SANTA MARIA CALIF.	339	314	163	131	244	158	461	272	184	542	600	126	385	359	627	607	528	620	606	602	597	651	662	643	659	648	593	604	650	514		470
SAULT STE MARIE MICH	400	606	632	619	237	123	127	410	517	571	121	248	639	499	161	426	554	409	462	658	131	591	327	607	486	395	589	704	667	688		453
SEATTLE WASH. UNIV.	96	216	473	517	130	220	456	357	196	426	412	442	145	269	377	484	496	224	90	42	312	368	386	177	450	542	360	516	638	506		344
SEATTLE TACOMA WASH.	110	234	509	535	190	284	481	365	240	460	437	463	175	290	464	408	506	215	93	380	323	389	393	263	508	597	454	485	664	439		378
SHREVEPORT LOUISIANA	471	304	260	283	295	271	276	462	486	466	270	563	490	426	577	689	690	550	590	661	675	630	638	628	575	212	348	727	721	724		499
SPOKANE WASHINGTON	386	79	476	573	285	248	572	338	191	344	507	642	639	609	388	136	614	306	104	465	570	515	682	408	650	658	674	578	647	550		461
STATE COLLEGE PENN.	459	326	662	655	560	149	98	503	181	558	225	357	133	622	68	128	410	206	373	340	421	624	220	510	44	424	139	394	704	540		368
STERLING VIRGINA	553	164	615	515	585	90	91	467	192	582	81	553	507	631	53	527	616	492	85	394	550	526	314	195	63	355	196	226	607	631		382
STILLWATER OKLAHOMA	457	104	545	316	140*	608	468	594*	378	548	553	605	396	158	471	614	603	575	597	624	611	618	615	537	244	255	507	672	659	674		492*
SWAN ISLAND W.I.	711	628	680	659	673	687	702	720	689	672	679	715	686	669	715	715	724	646	711	729	708	679	691	656	647	688	588	695	715	565		682
TAMPA FLORIDA	534	674	596	629	629	613	633	655	574	584	625	---	544	702	653	481	730	712	678	660	421	326	464	444	506	606	611	499	745	746		596
TUCSON ARIZONA	---	---	---	---	---	---	---	---	---	277	650	647	381	667	656	705	665	620	655	670	676	613	676	615	452	646	685	679	616	678		616
WAKE ISLAND,PACIFIC	448	544	440	504	553	462	546	562	492	492	458	550	476	232	461	507	562	352	544	528	527	385	315	417	448	471	222	559	560	569		473

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (midnight to midnight) at Huntley, Mont.

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	157	220	36	241	172	257	206	256	203	-12	-57	314	84	120	297	107	136	310	158	96	175	125	-39	340	192	181	343	336	321	296		186

The measurement is made with a Beckman and Whitley net exchange radiometer over a plot of sod. **The value represents the total incoming minus the total outgoing radiation of all wave lengths.**

These data are of an experimental nature and are published as received from the Huntley Exp. Station. **The instrument with which they were measured has not been checked by the Weather Bureau.**

TOTAL OZONE DATA

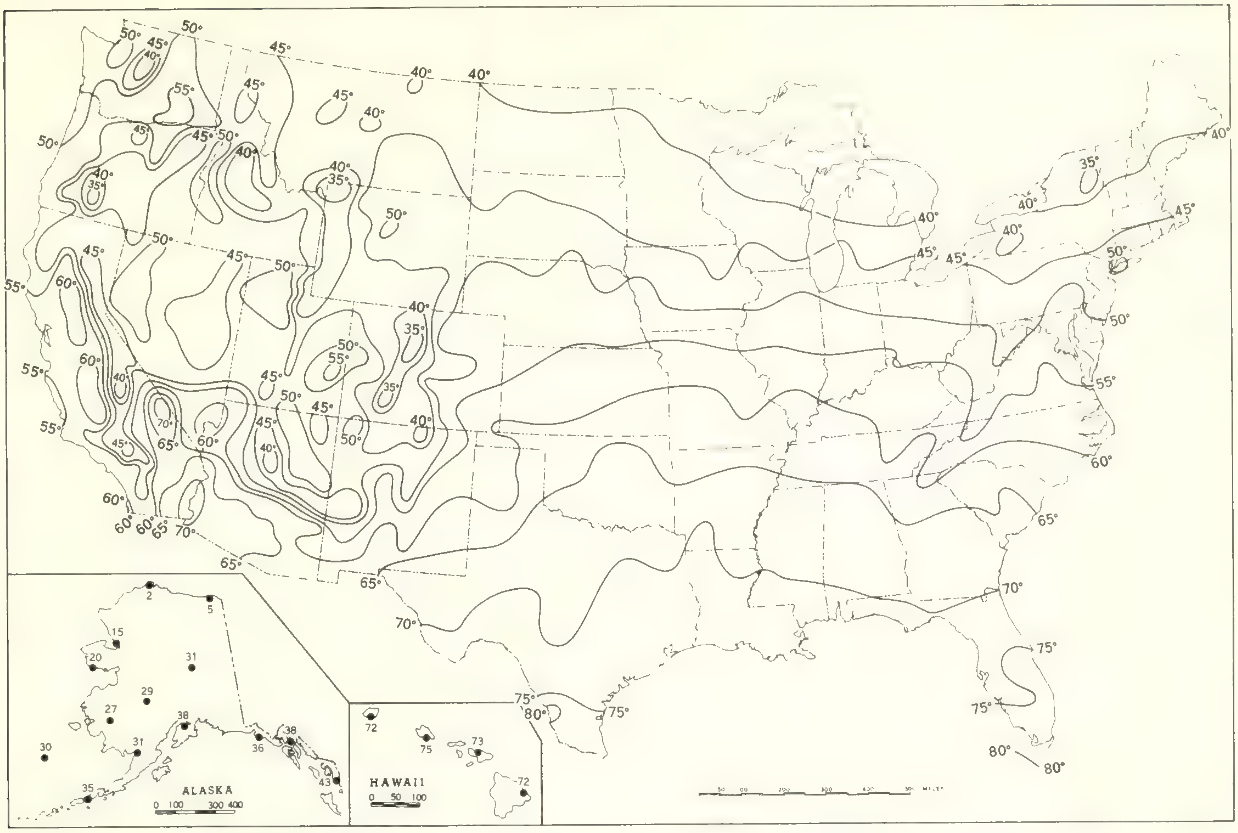
These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λ s Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

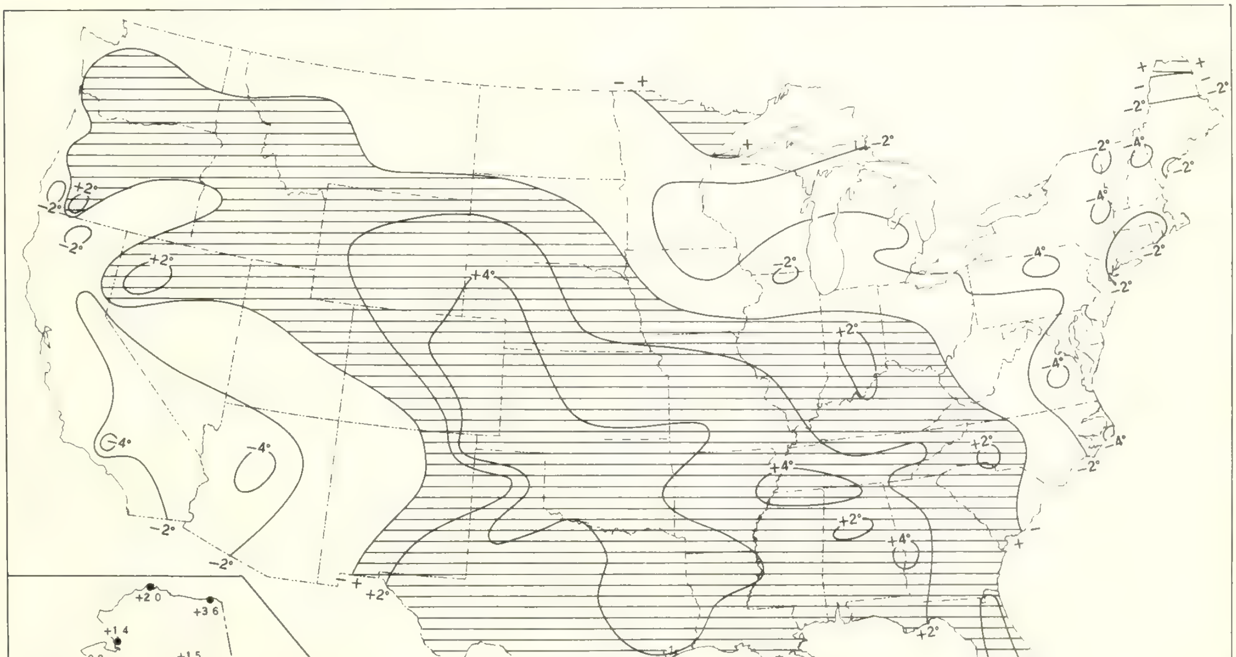
Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O3
																Data will be delayed																

The spectrophotometer measures the total amount of ozone in the atmosphere, i e , the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e g , 350 milli-atmo-cm ozone implies an ozone layer 0 350 centimeter thick The code λ s designates the type of measurement made

Chart I. A. Average Temperature (°F.) at Surface, April 1965.

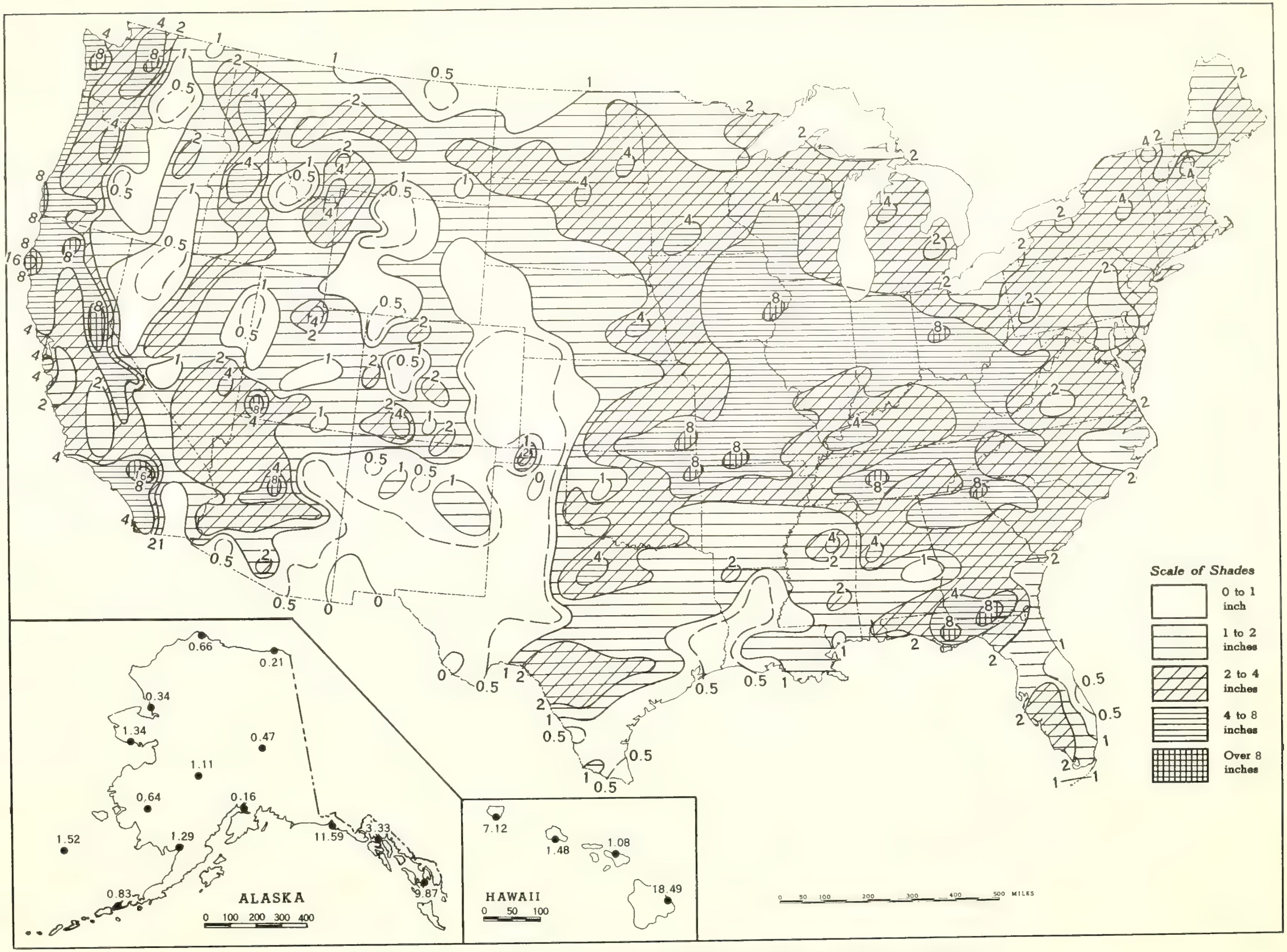


B. Departure of Average Temperature from Normal (°F.), April 1965.



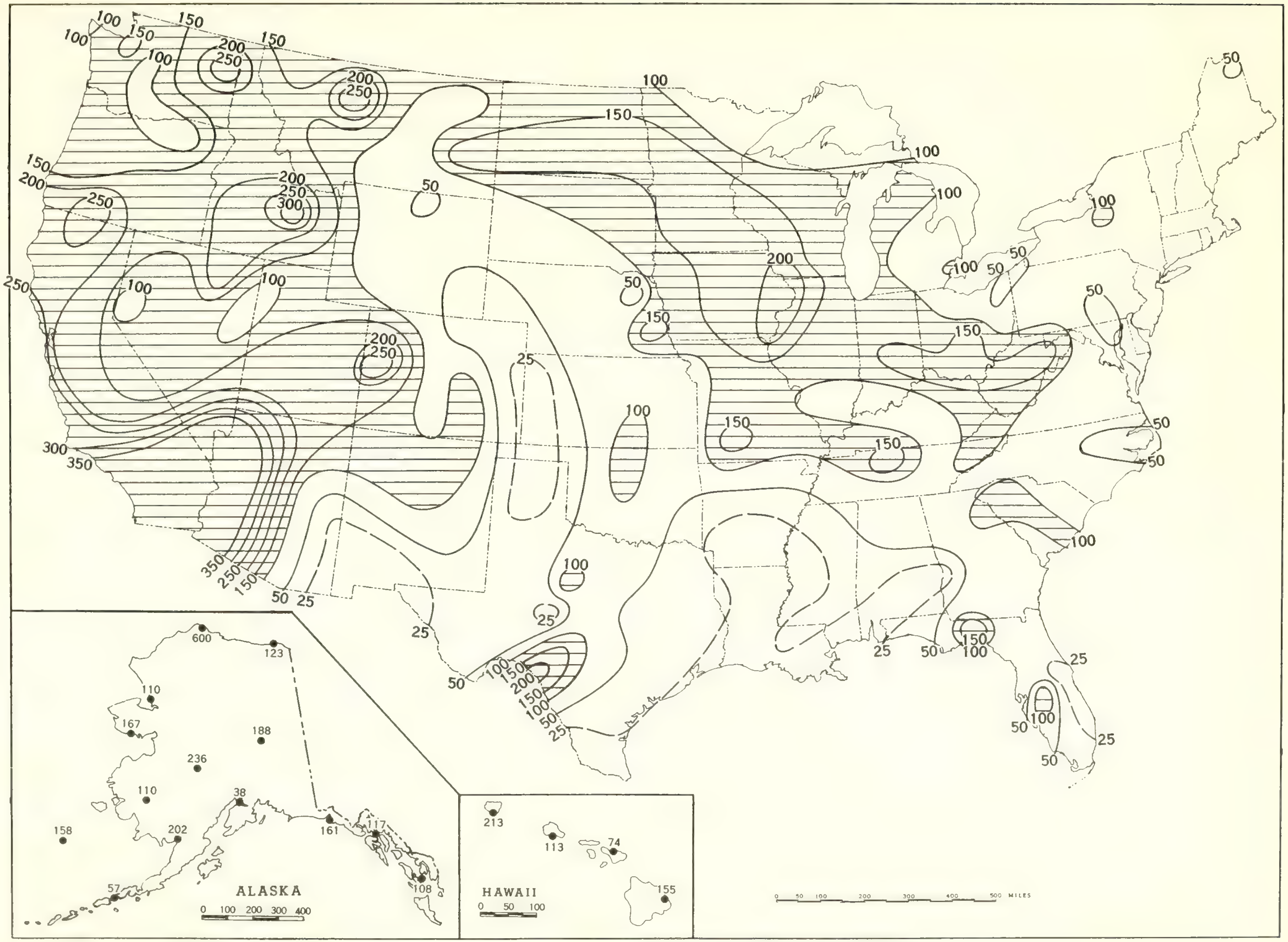
A. Based on reports from over 870 Weather Bureau and cooperative stations. The monthly average is half the sum of the monthly average maximum and monthly average minimum, which are the average of the daily maxima and daily minima, respectively.
B. Departures from normal are based on the 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart II. Total Precipitation (Inches), April 1965.



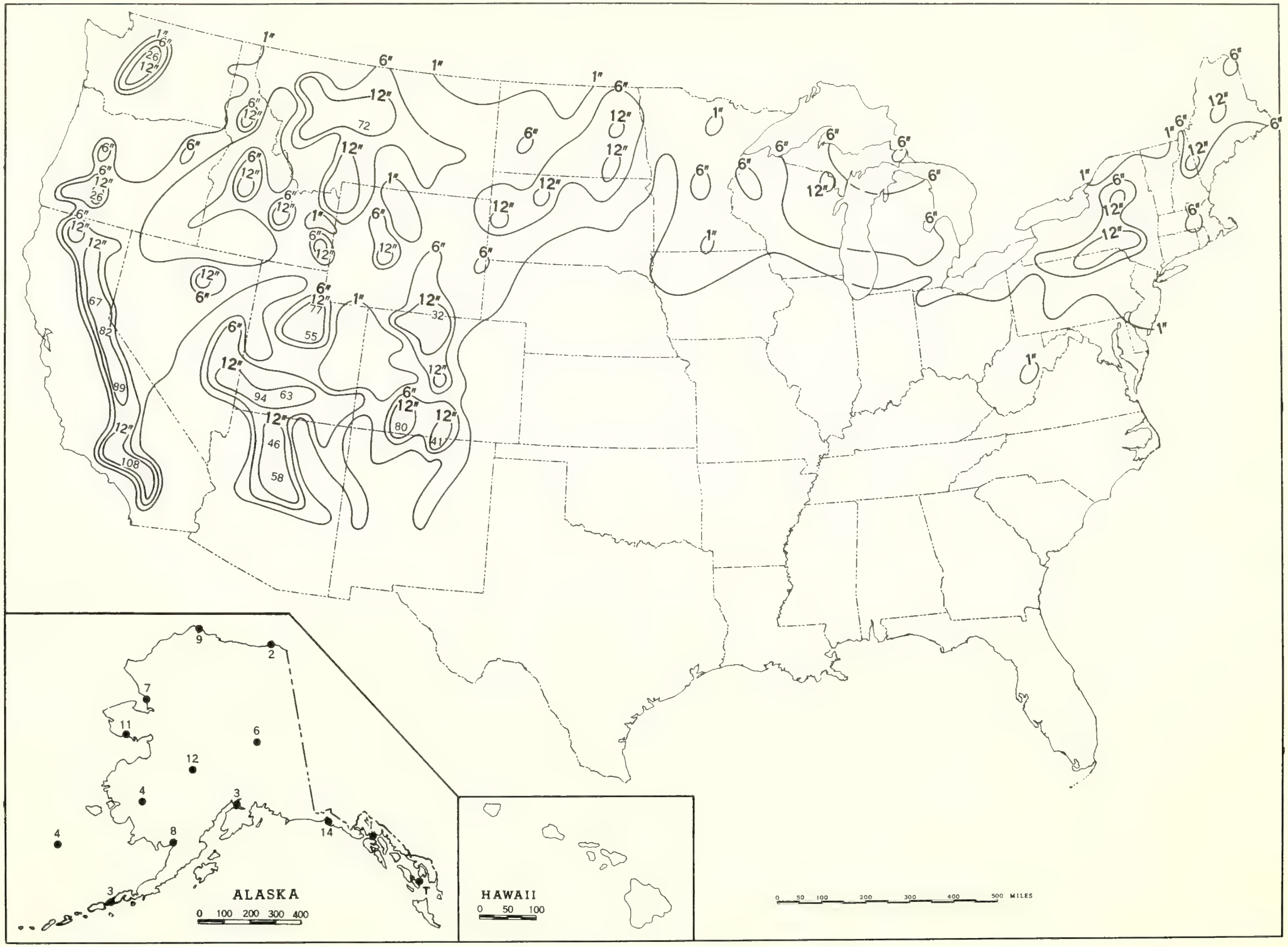
Based on daily precipitation records at about 870 Weather Bureau and cooperative stations.

Chart III. Percentage of Normal Precipitation, April 1965.



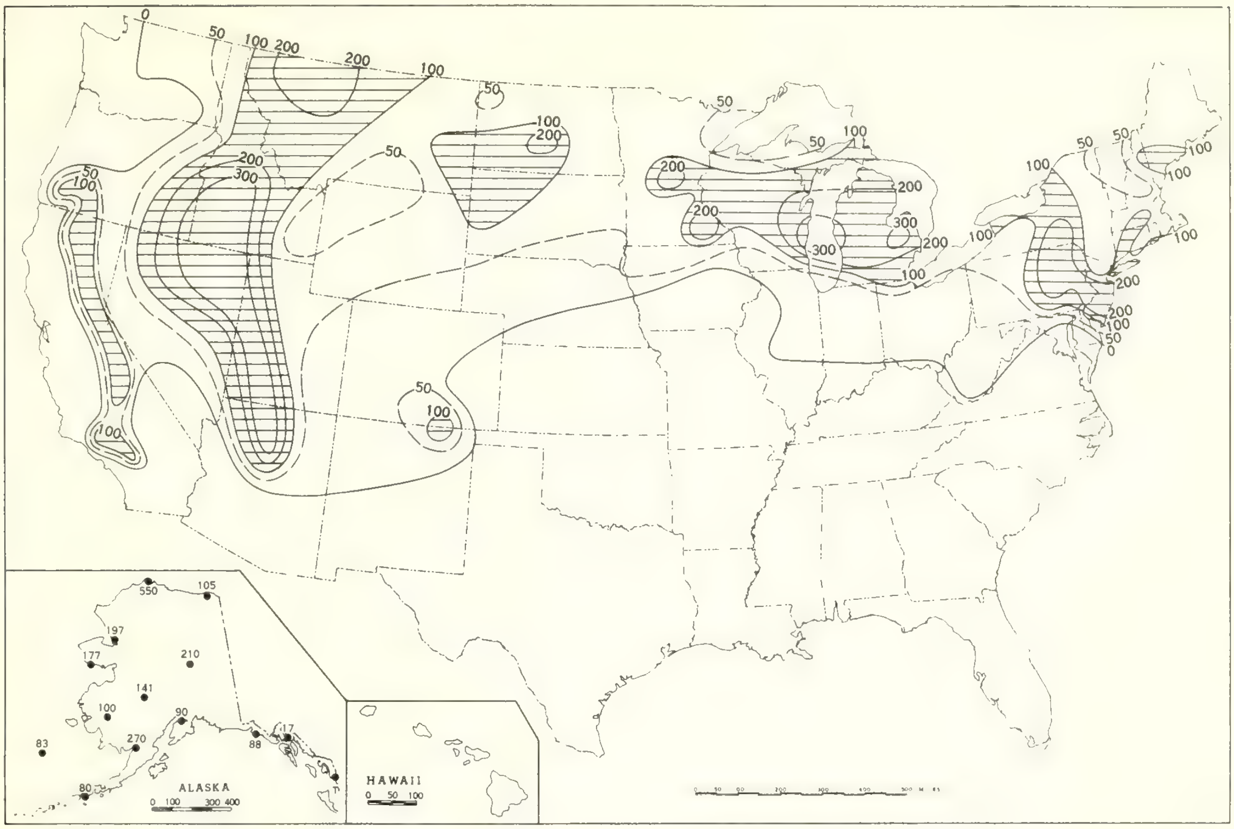
Normal monthly precipitation amounts are computed from 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart IV. Total Snowfall (Inches), April 1965.

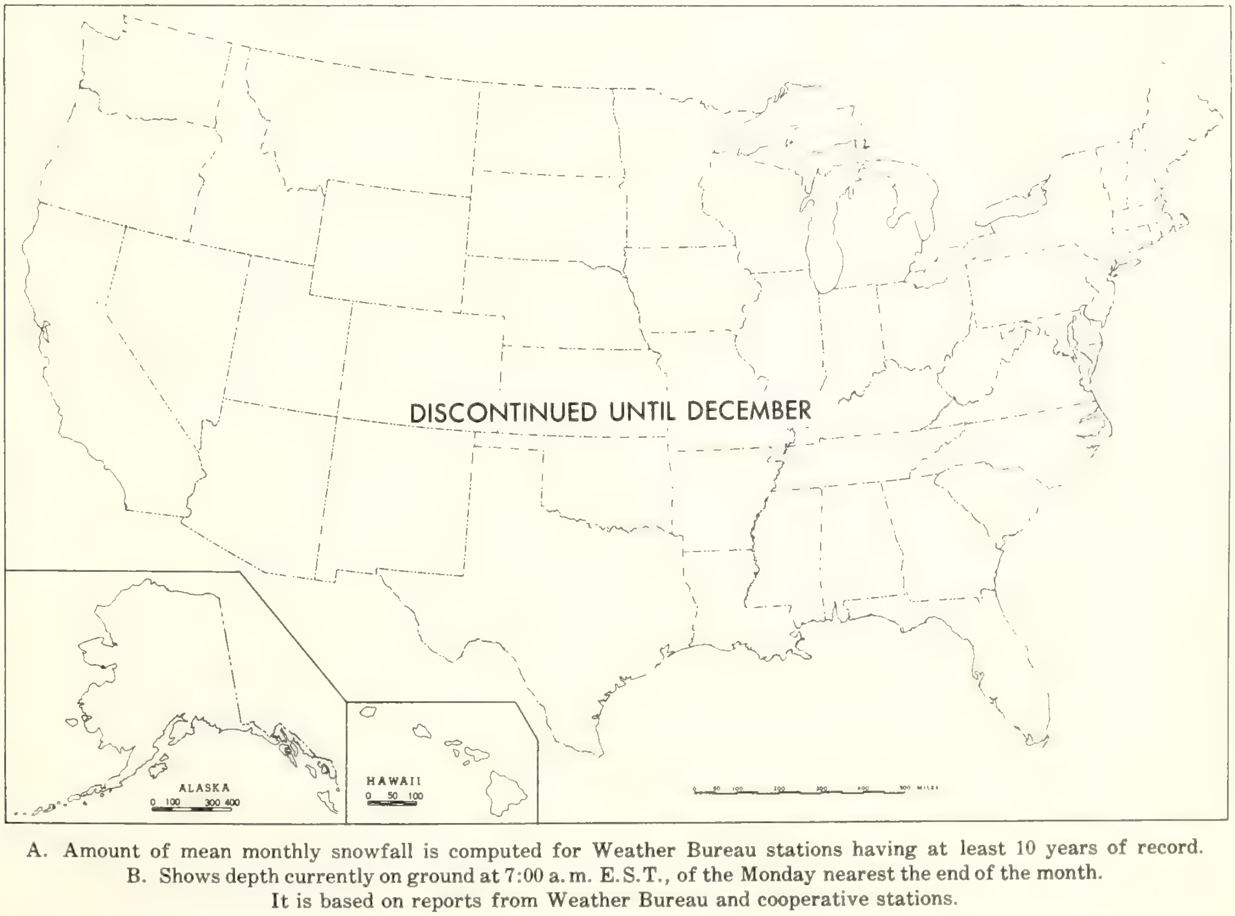


This is the total of unmelted snowfall recorded during the month at Weather Bureau and cooperative stations. This chart and Chart V are published only for the months of November through April although of course there is some snow at higher elevations, particularly in the far West, earlier and later in the year.

Chart V. A. Percentage of Mean Monthly Snowfall, April 1965.

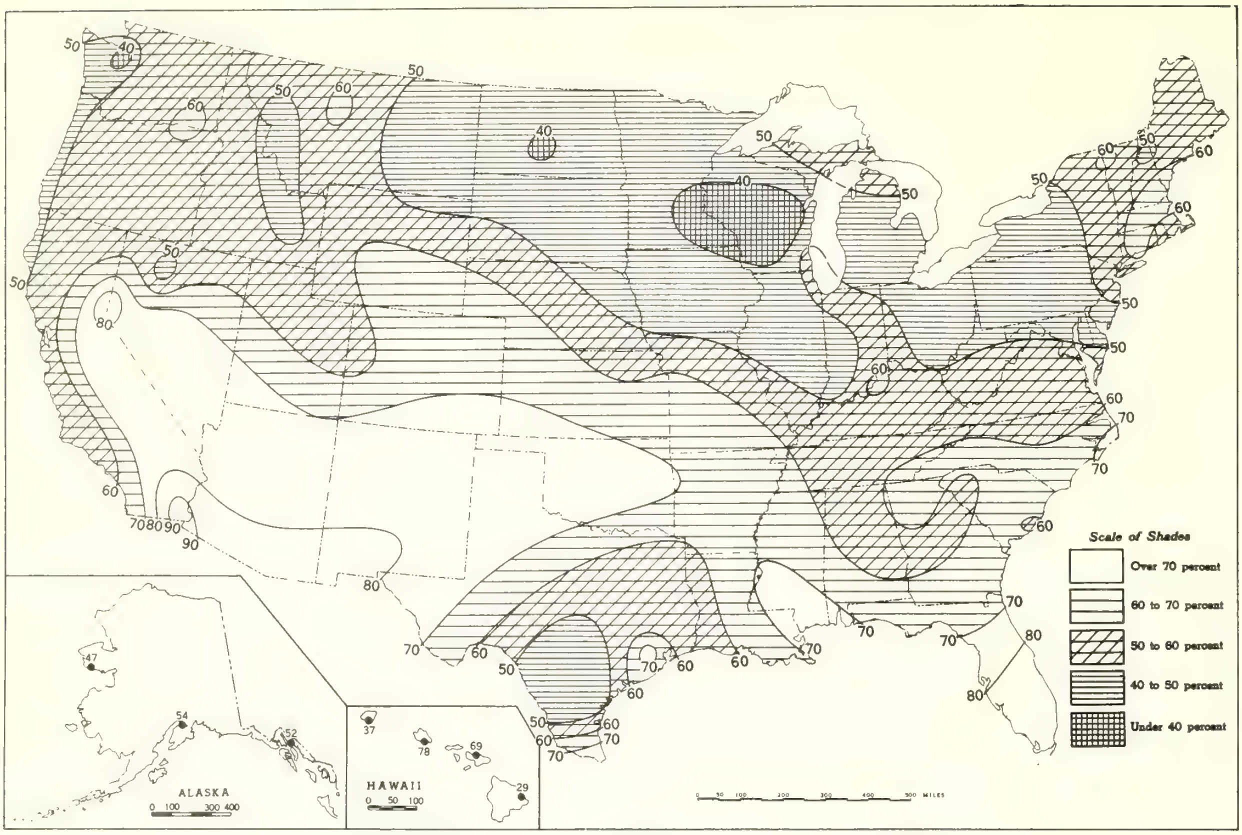


B. Depth of Snow on Ground (Inches), 7:00 a. m. E. S. T., April 1965.

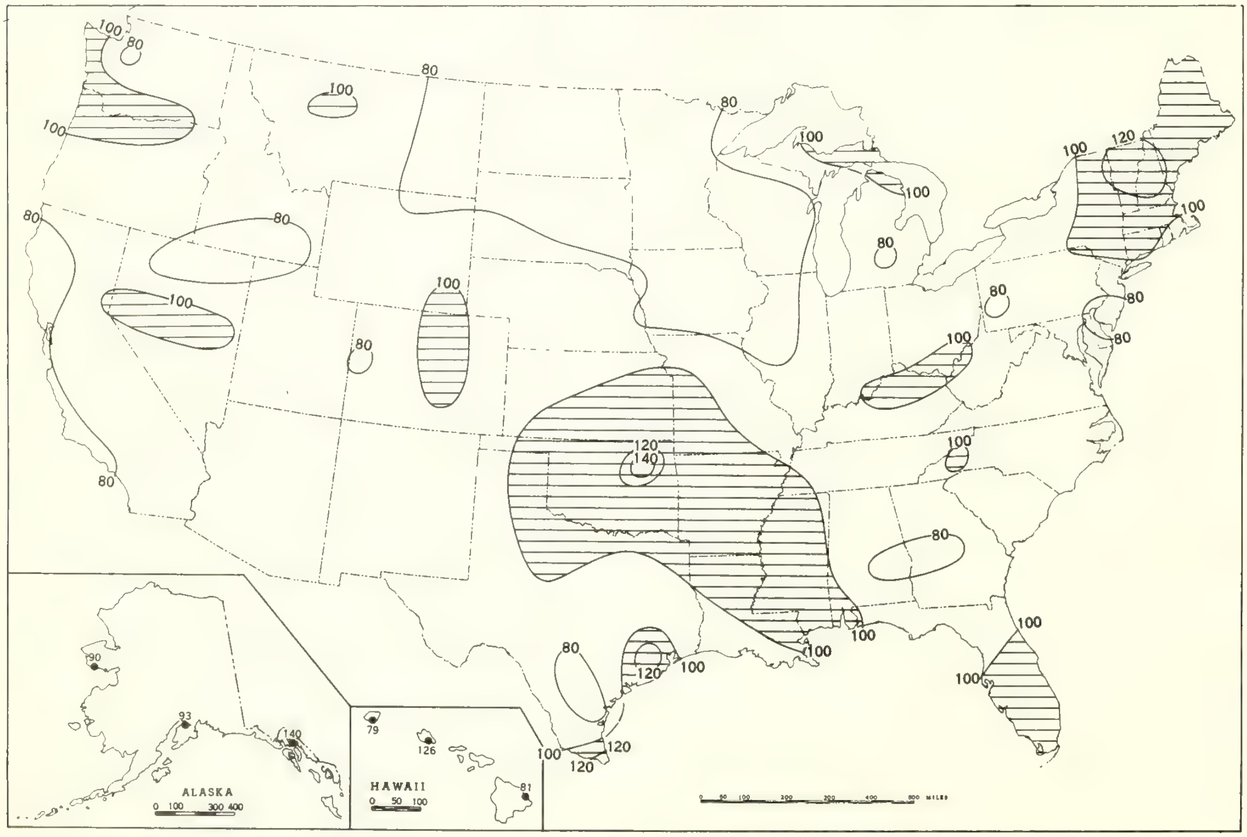


A. Amount of mean monthly snowfall is computed for Weather Bureau stations having at least 10 years of record.
B. Shows depth currently on ground at 7:00 a.m. E.S.T., of the Monday nearest the end of the month.
It is based on reports from Weather Bureau and cooperative stations.

Chart VI. A. Percentage of Possible Sunshine, April 1965.

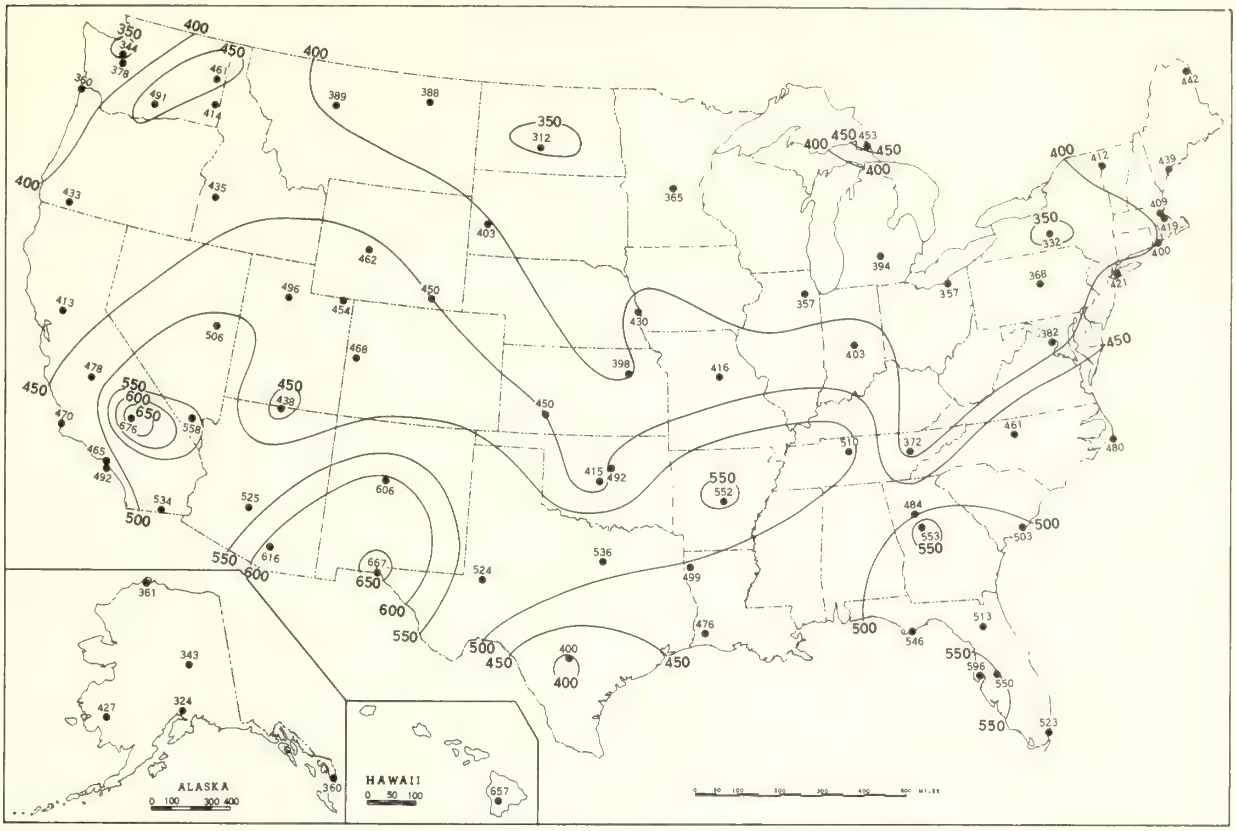


B. Percentage of Mean Monthly Sunshine, April 1965.

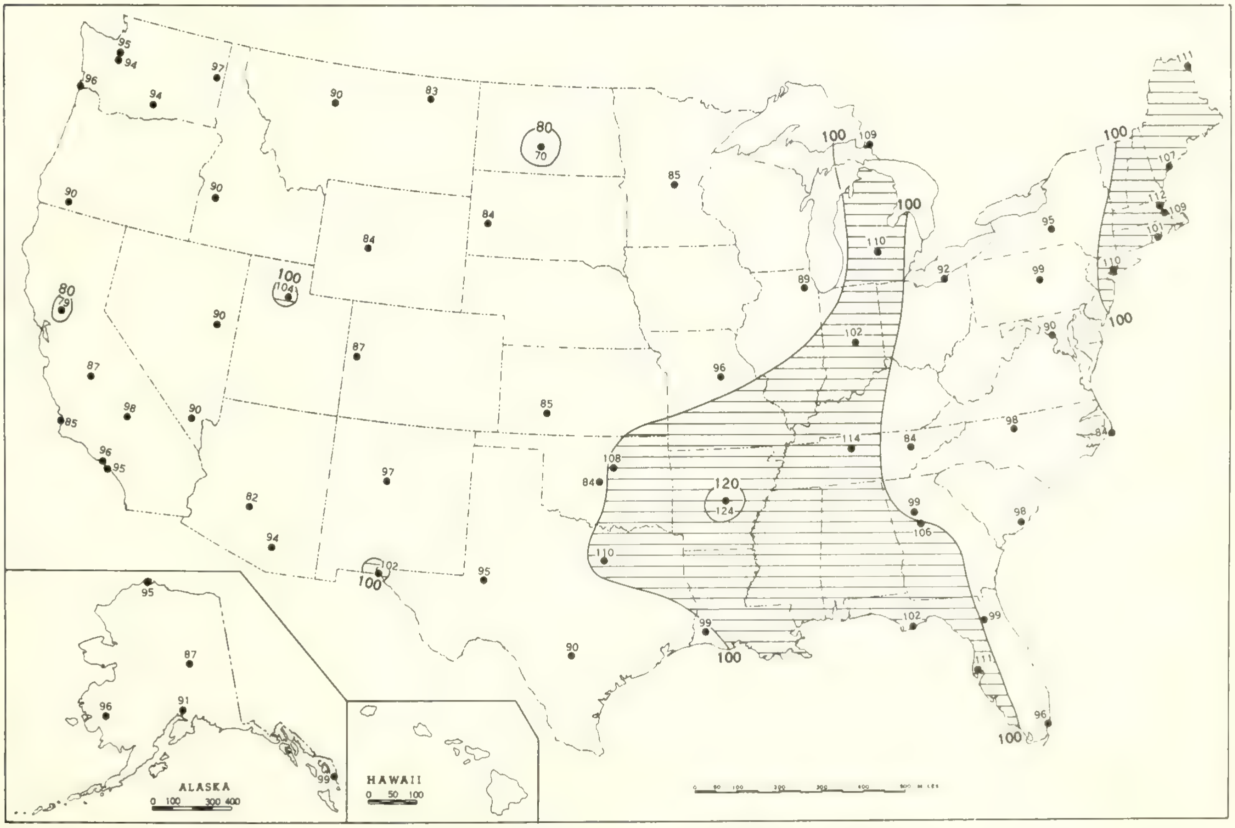


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, April 1965.

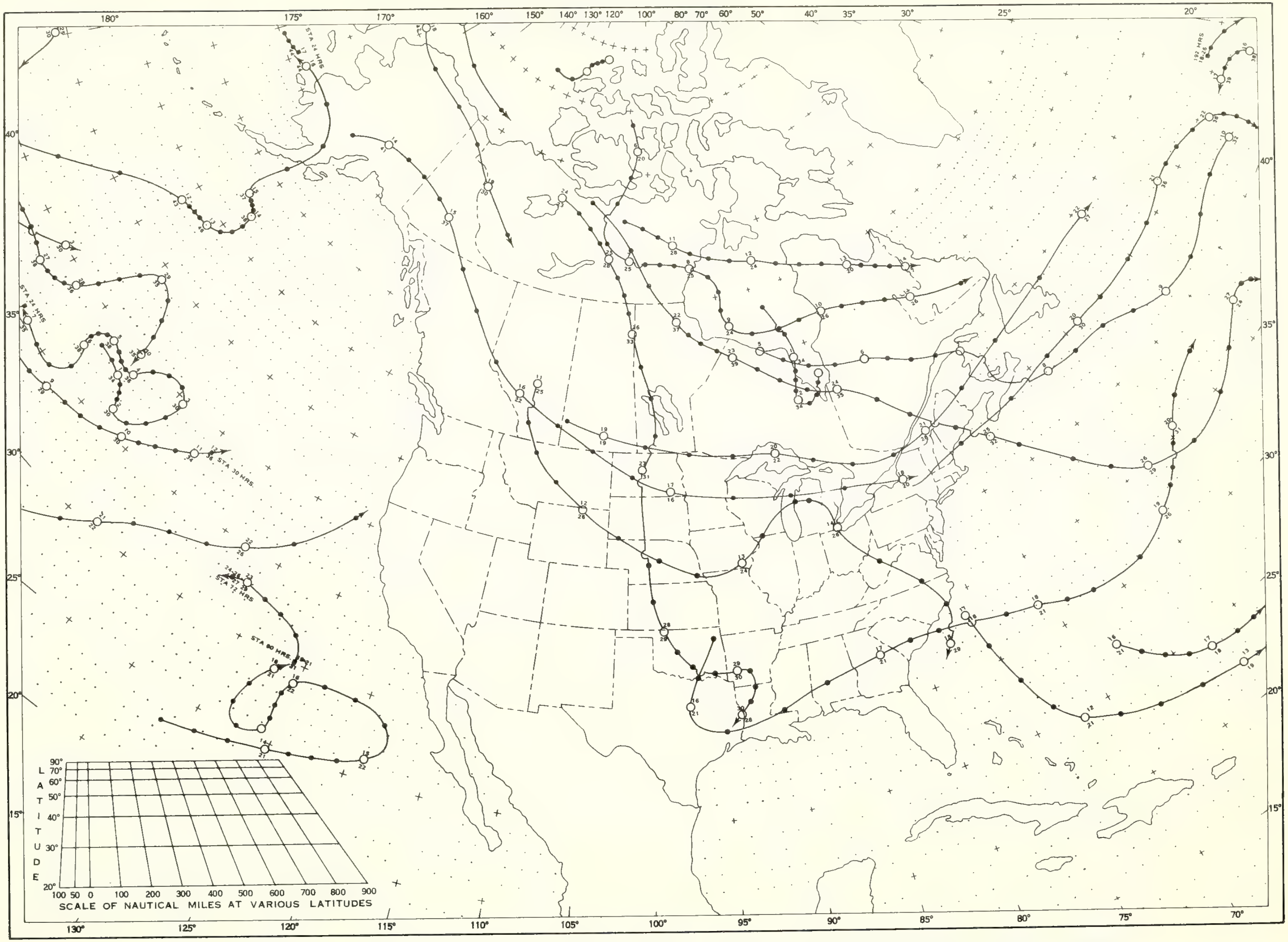


B. Percentage of Mean Daily Solar Radiation, April 1965.



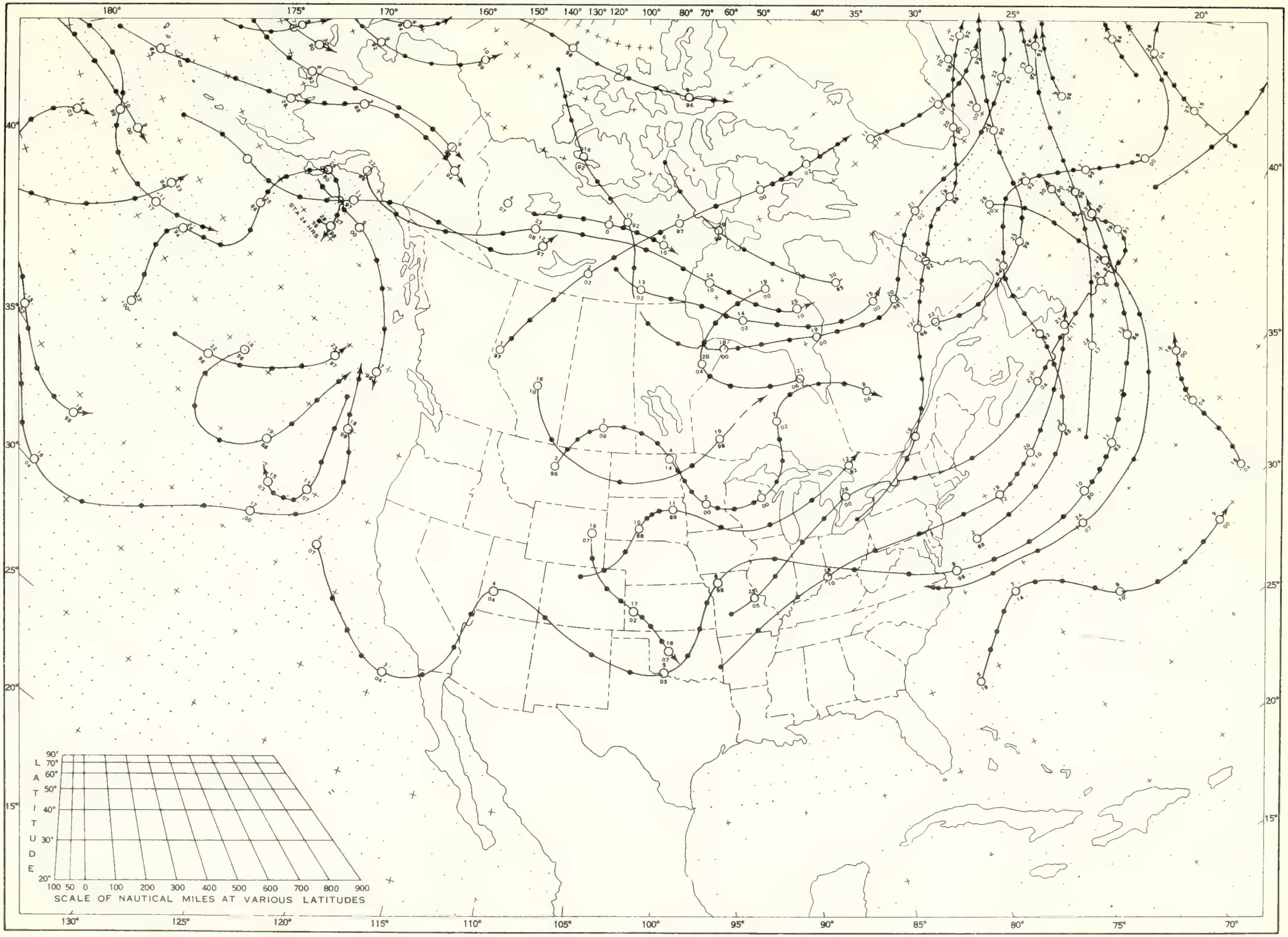
Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm. $^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, April 1965.



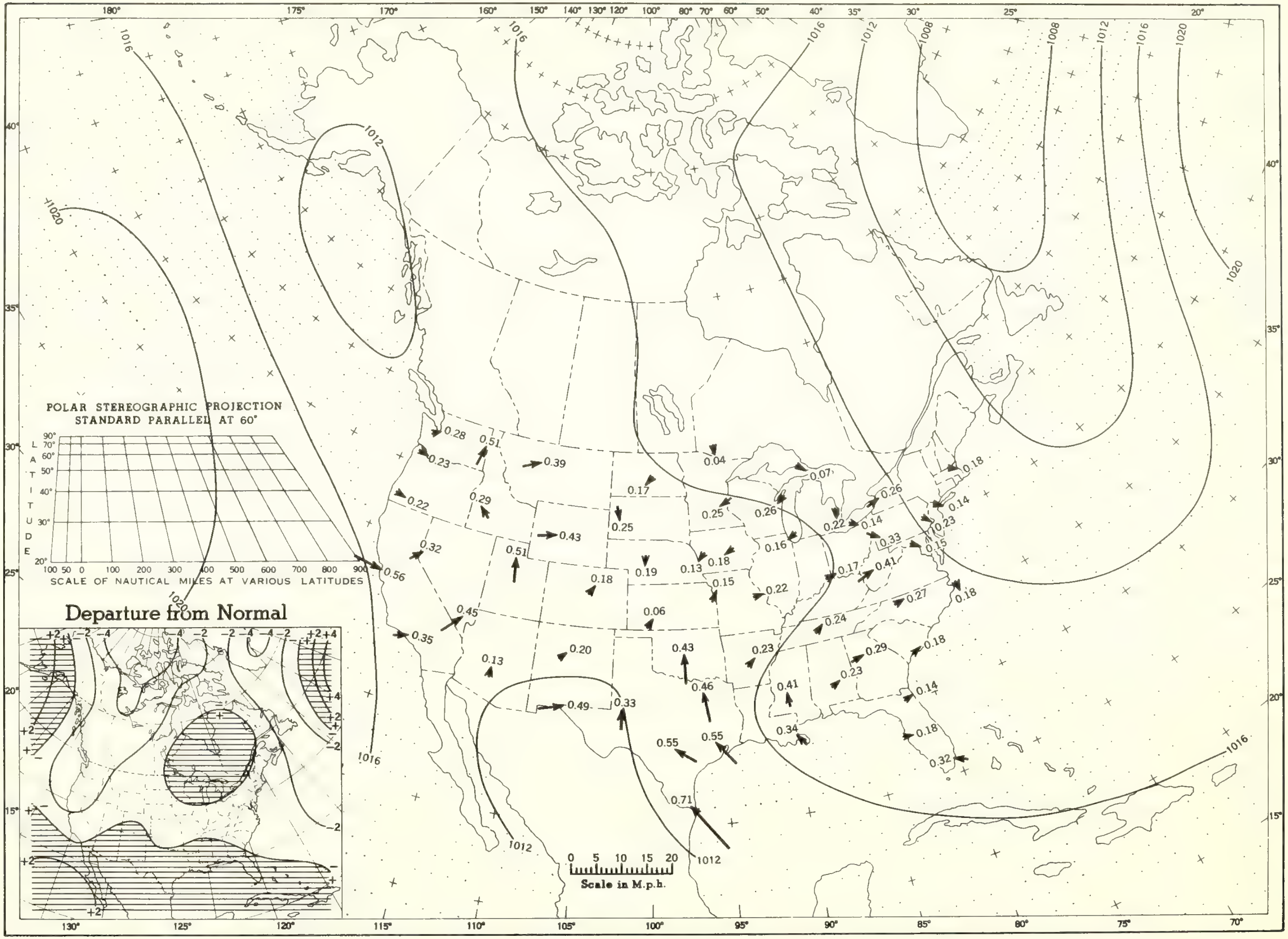
Circle indicates position of center at 7:00 a. m. E. S. T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, April 1965.



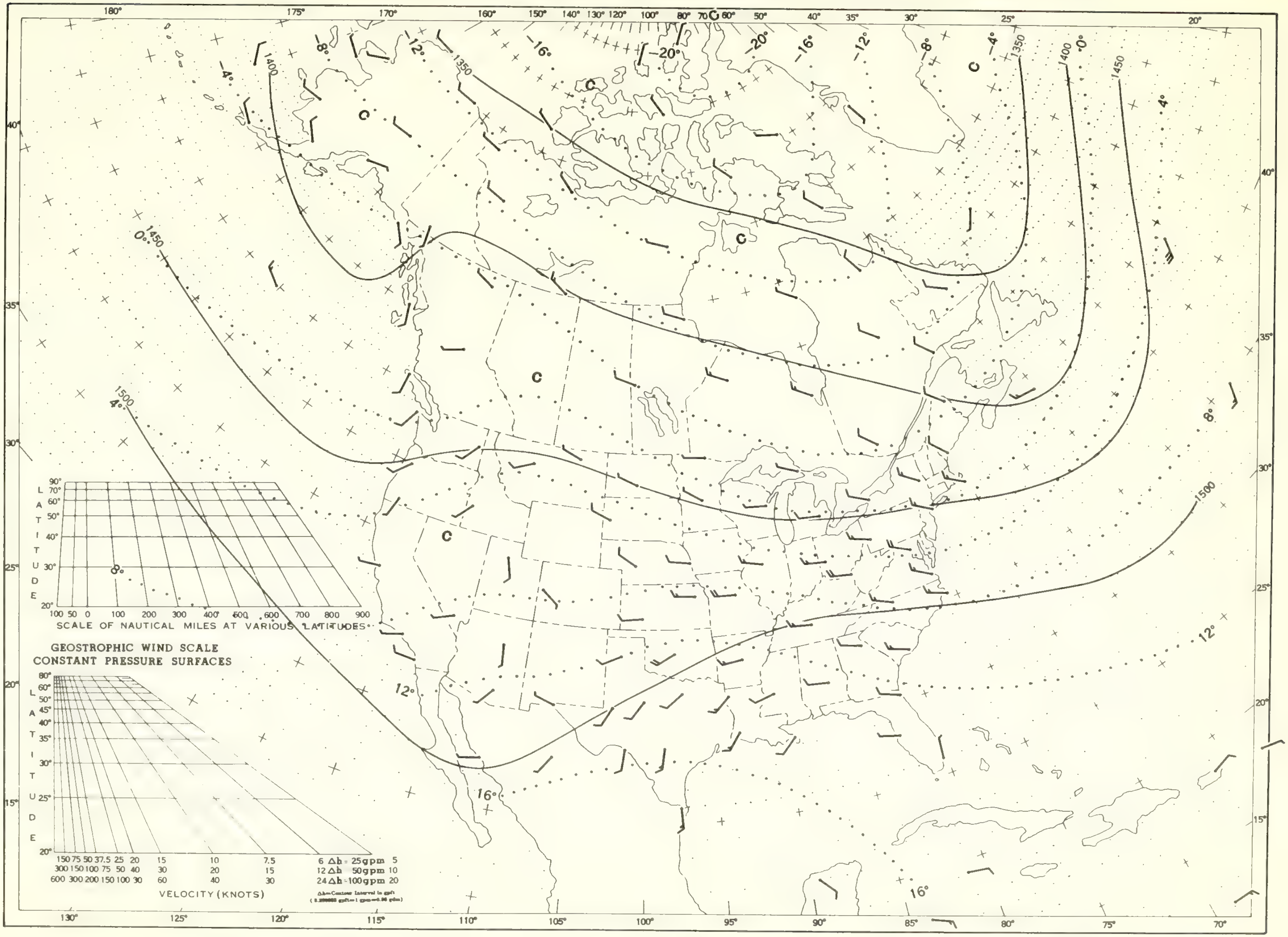
Circle indicates position of center at 7:00 a. m. E. S. T. See Chart VIII for explanation of symbols.

Chart X. Average Sea Level Pressure (mb.) and Resultant Surface Wind, April 1965. Inset: Departure of Average Pressure (mb.) from Normal, April 1965.



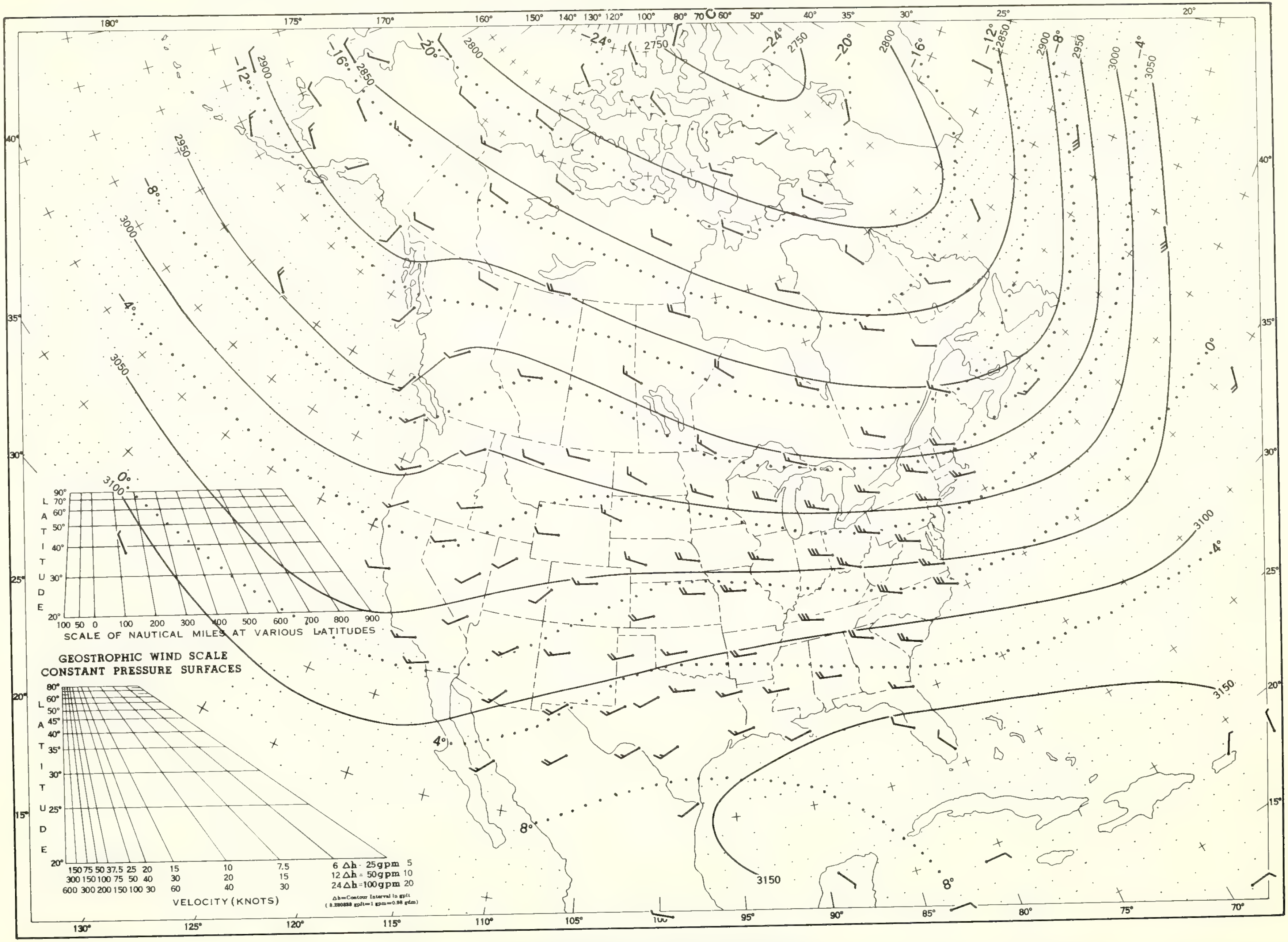
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb. Surface, 1200 GMT, April 1965. Average Height and Temperature, and Resultant Winds.



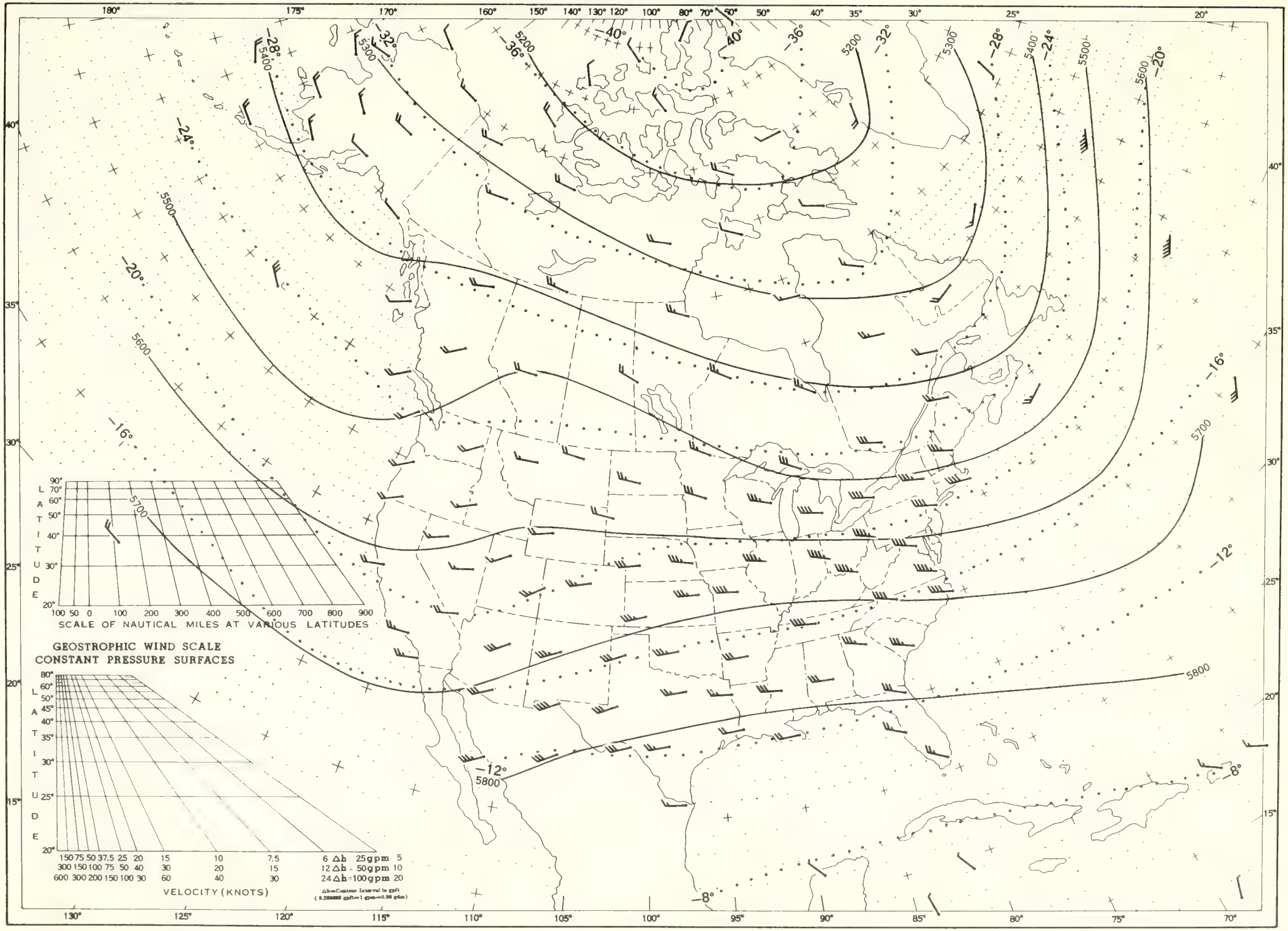
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in knots; flag represents 50 knots, full feather 10 knots, and half feather 5 knots. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, April 1965. Average Height and Temperature, and Resultant Winds.



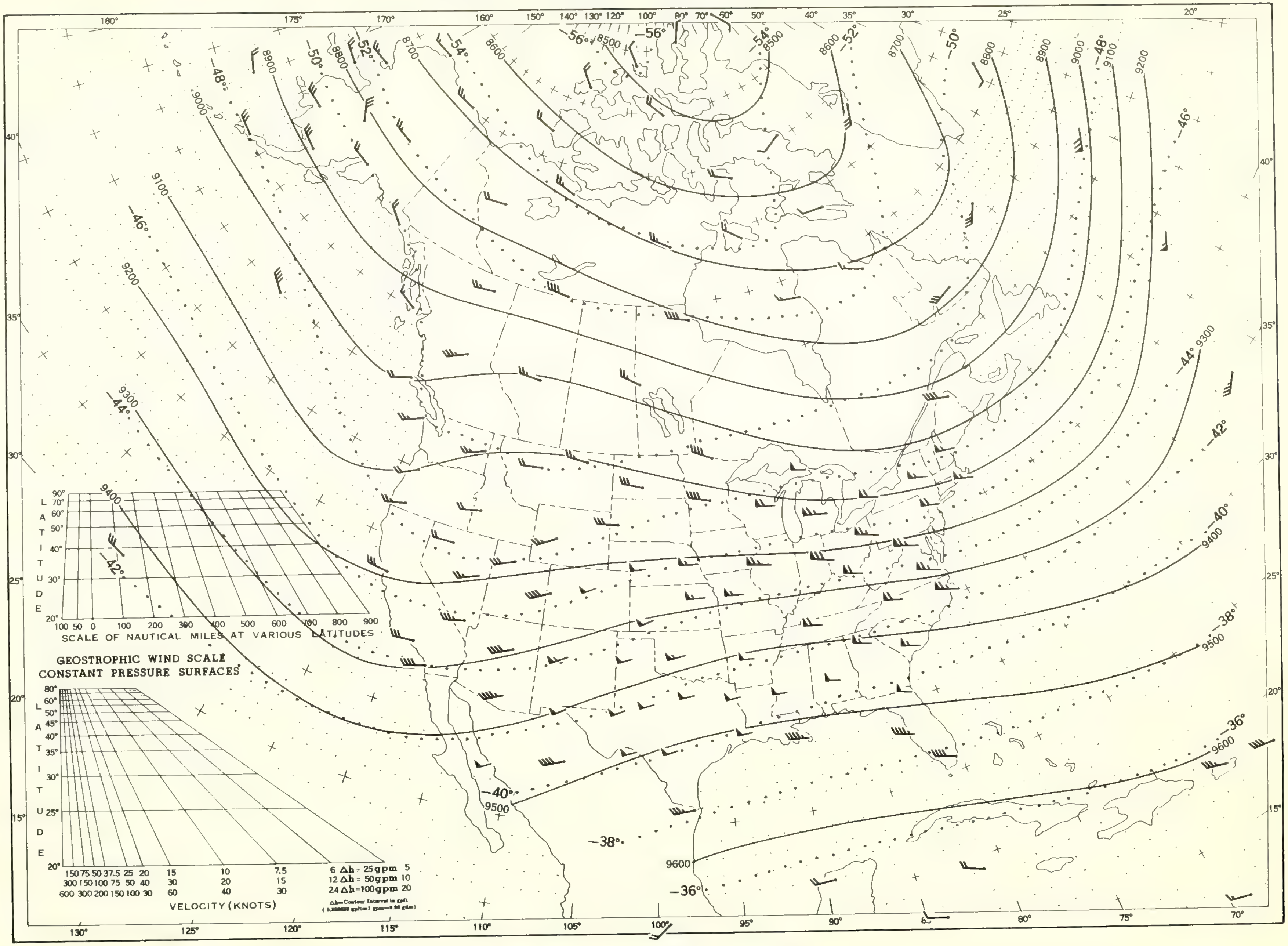
See Chart XI for explanation of map.

Chart XIII. 500-mb. Surface, 1200 GMT, April 1965. Average Height and Temperature, and Resultant Winds.



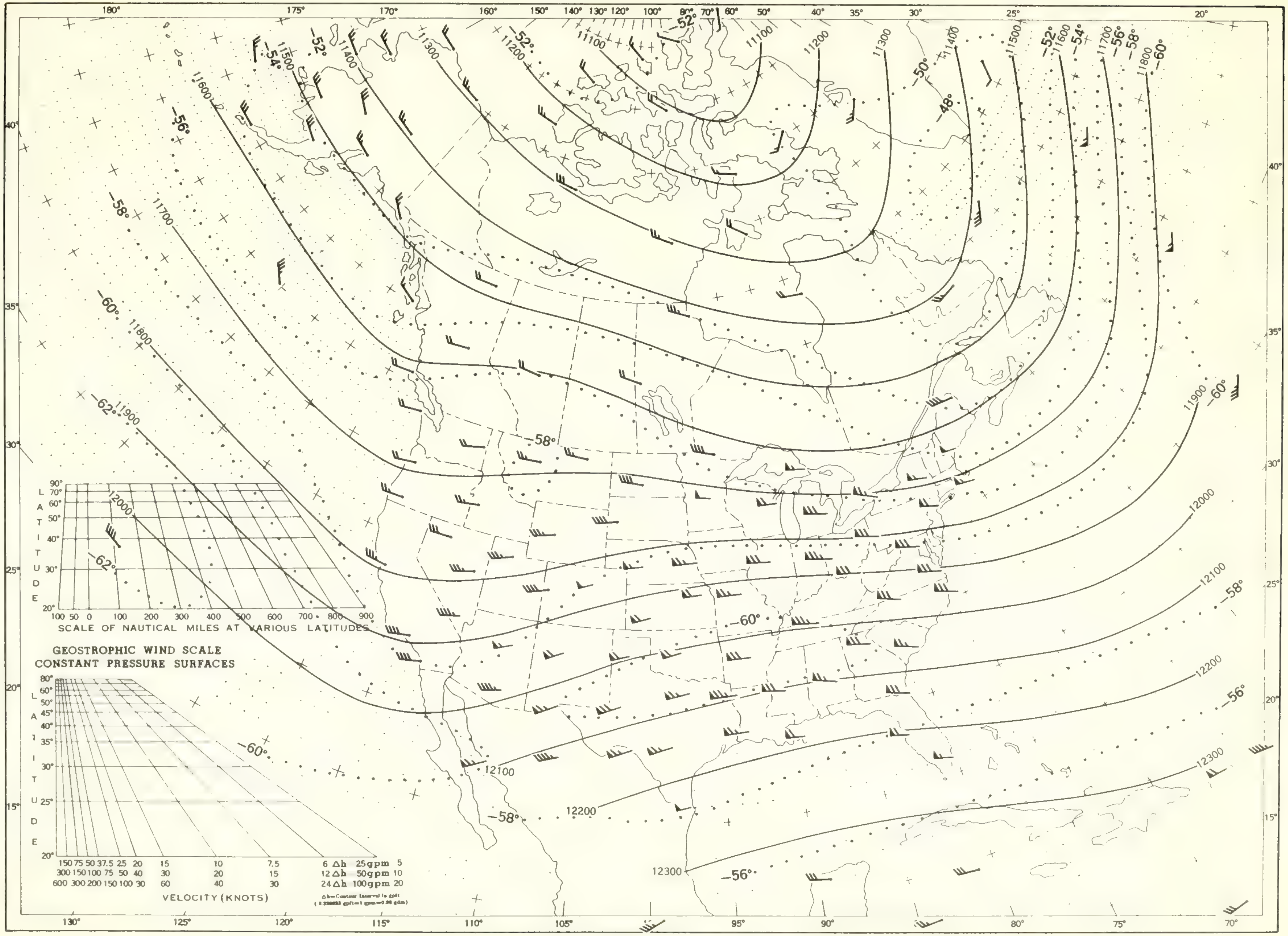
See Chart XI for explanation of map.

Chart XIV. 300-mb. Surface, 1200 GMT, April 1965. Average Height and Temperature, and Resultant Winds.



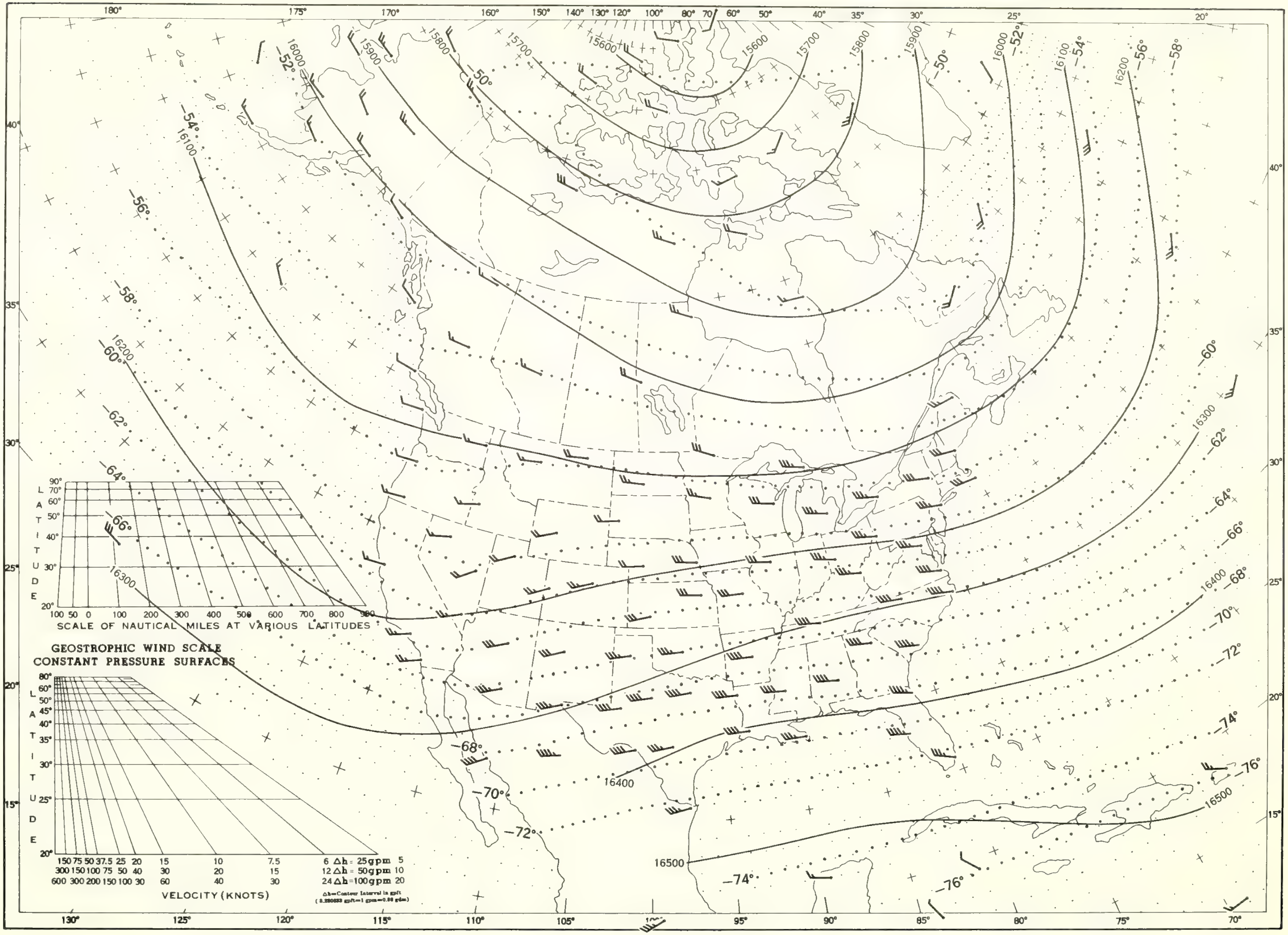
See Chart XI for explanation of map.

Chart XV. 200-mb. Surface, 1200 GMT, April 1965. Average Height and Temperature, and Resultant Winds.



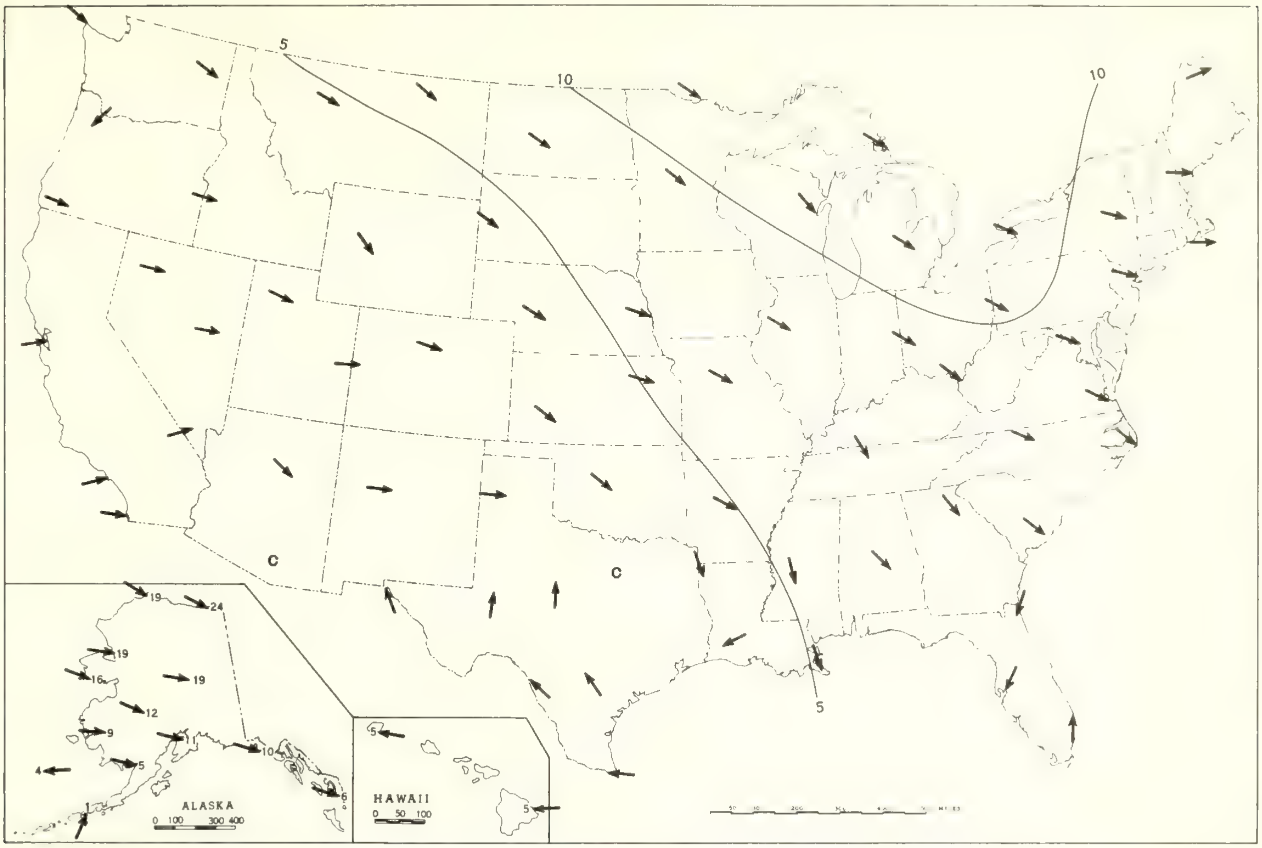
See Chart XI for explanation of map.

Chart XVI. 100-mb. Surface, 1200 GMT, April 1965. Average Height and Temperature, and Resultant Winds.

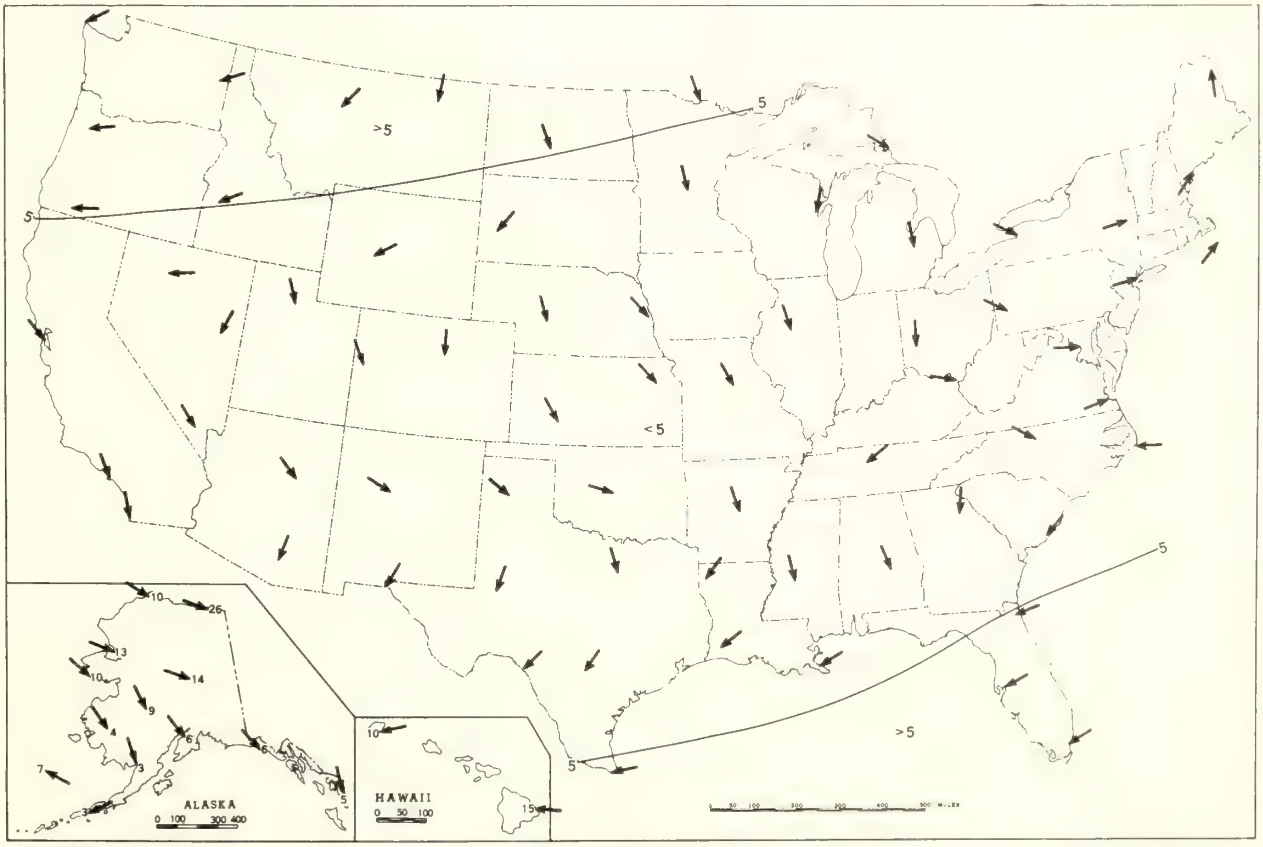


See Chart XI for explanation of map.

Chart XVII. A. 50-mb. Surface, 1200 GMT, April 1965. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, April 1965. Resultant Winds.



Wind speed (isotachs) in knots. Arrows show resultant wind direction. All wind data are based on rawin observations.

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NATIONAL SUMMARY

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NOTE: Delayed data and corrections will be carried in the June and December issues of this publication.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 16 No. 5

MAY 1965

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. Cool west; warm east.
2. Drought in Florida and parts of Northeast; ended over much of Great Plains.
3. Record number of tornadoes.

TEMPERATURE.--Strong southerly winds brought record-breaking temperatures to the Great Plains early in May. Hill City, Kans., registered 96° at 1 p.m. on the 2d. Further north, cool continental air pushed southward. Maximum temperatures over Wyoming and the Dakotas were generally in the 50's and 60's on May 2. Temperatures continued to climb over the Great Lakes region, reaching 86° at Detroit, Mich., on the 9th. Subfreezing temperatures occurred almost every morning over the intermountain region and the northern Rocky Mountains during the first 10 days of May. Afternoon temperatures remained in the 70's over the Northeast for a few days at mid-month but rose to the middle 80's over the northern Great Plains. Most North Dakota stations registered temperatures in the 80's on the afternoon of the 13th. Temperatures in the 80's and 90's continued over most of the Southeast to the end of May. The West remained unseasonably cool except for a few days near the end of the month when maximums in the eastern portions of Washington and Oregon reached the mid-80's.

Western stations noted that May 1965 was one of the coldest Mays in several years. Central and eastern stations recorded one of the warmest Mays of record. At Columbia, S. C., it was the warmest May since 1896. Over parts of the northern Great Plains it was the warmest May since 1936. At Columbus, Ga., the temperature reached 90° or higher on 21 days which is the most such days in May in 20 years of record. In parts of Florida, it was one of the sunniest Mays of record. Temperatures averaged below normal from the Pacific Ocean to the western edge of the Great Plains and above normal from the Great Plains to the Atlantic Ocean. Temperatures averaged 6° cooler than normal over central Arizona and more than 6° warmer than normal from central Missouri to central Ohio.

PRECIPITATION.--Cold rain and locally heavy snow fell over much of the western third of the Nation during the first part of May. East of the Rocky Mountains, a dome of high pressure, with generally clear cool weather stretched from the upper Midwest to New England. Warm, humid air streamed northward from the Gulf of Mexico. Showers and thunderstorms lined up along the front which separated the air masses. Towering thunderstorms dumped heavy rains over central Texas on the 9th and 10th. Hail, up to 2 1/2 inches in diameter, pounded Union, Tex., on the 10th. About 35 miles east of Lubbock, Tex., hail accumulated to a depth of several inches. More heavy rains fell over central Texas from the 12th to 14th. Portions of the Black Hills of South Dakota received from 3 to 7 inches of rain on the 15th and at some of the higher locations snow accumulated to 40 inches in depth. Flash floods in the Black Hills area damaged bridges, roads, streets, railroads, utility lines and commercial and residential property. Most of the damage occurred at Spearfish and Deadwood, S. Dak.

More torrential rains fell over central Texas on the 16th. By the 19th, it was evident that the rains had relieved the drought over portions of the western Great Plains from the Dakotas to Texas. Generous showers and thunderstorms continued from the Great Plains to the Middle Atlantic States. Cold wet weather continued west of the Rocky Mountains. A developing storm dropped 7 inches of snow at Austin, Nev., on the morning of the 22d. More beneficial rains fell over the Great Plains during the last week of May. Over portions of the northern Great Plains and over Central Texas, May 1965 was one of the wettest Mays in many years. Some other areas were missed by the rains and May 1965 was the driest May of record. Red Bluff, Calif., received only a light sprinkle during the entire month. At that location, it was the driest May since 1928. Los Angeles, Calif., received no rain and Mt. Shasta received only 1/3 of the normal. Much of the East was extremely dry and the agricultural crops suffered correspondingly. In portions of Florida, May 1965 was one of the driest since the turn of the century and in parts of New England, it was the driest May of record.

TORNADOES.--Several severe outbreaks of tornadoes occurred in May. At least a dozen tornadoes struck in Minnesota and Oklahoma on the 6th. More than 40 twisters hit South Dakota, Nebraska, Wisconsin, Iowa, and Oklahoma on the 8th. On the 24th, about 30 tornadoes struck 5 States - South Dakota, Nebraska, Kansas, Minnesota, and Iowa. Over 40 tornadoes hit areas from Minnesota to Oklahoma and eastward to Ohio on the 26th. Numerous other tornadoes occurred over the Great Plains from the Dakotas to Texas and eastward to Ohio on other dates throughout the month. For details of these and other severe storms that occurred in May, see the publication, Storm Data.

CONDENSED CLIMATOLOGICAL SUMMARY

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	3 Stations	98	24+	Aliceville	34	1	Mobile WBAP	4.33	2 Stations	0.00
Alaska	University Exp Station	75	30	Kobuk	-16	10	Whittier	20.51	Dot Lake	.00
Arizona	Gila Bend	107	30	Fort Valley	7	8	Jacob Lake	3.15	27 Stations	.00
Arkansas	Blytheville	94	25	Gilbert	35	1	Abbott	9.47	Keiser	1.87
California	Death Valley	107	29	White Mountain 2	-5	7	White Mountain 2	3.68	187 Stations	.00
Colorado	Wray	99	2	2 Stations	10	11+	Akron FAA AP	5.47	Powderhorn	.10
Connecticut	Hartford WBAP	94	27+	Coventry	27	15	Bridgeport WBAP	4.16	Hartford WBAP	1.20
Delaware	3 Stations	95	27	2 Stations	38	15	Middletown 1WSW	2.72	Selbyville	.39
Florida	4 Stations	98	30+	Fountain 3SSE	42	1	Fort Myers WBAP	4.70	4 Stations	.00
Georgia	Macon WBAP	98	19	Blairsville Exp Sta	35	1	Blairsville Exp Sta	5.50	Douglas 2NNE	T
Hawaii	Waikiki 717.2, Oahu	90	11	Mauna Loa Slope Obs.	31	27+	Pahoa 65, Hawaii	32.37	Polipoli Springs 267.2	.00
Idaho	4 Stations	91	29+	Dixie	7	3	Grangeville 11SE	4.39	2 Stations	.04
Illinois	do	92	31+	Chenoa	26	29	Morris 5N	7.05	Du Quoin 2S	.91
Indiana	Indianopolis WBAP	93	25	2 Stations	33	29	Covington 4NE	5.21	Evans Landing Dam 43	.81
Iowa	Shenandoah	93	1	Independence 2SW	23	29	Estherville	9.07	Keosauqua No 2	1.57
Kansas	Webster Dam	100	3	Brewster	28	10	Kirwin	8.25	Hoxie	.92
Kentucky	Maysville Water Plant	95	26	Blaine 2W	32	1	Scottsville 3SSW	6.24	Carrollton Lock 1	.63
Louisiana	Greensburg	97	4	Many	40	1	Gloster 1W	10.04	Diamond 4NW	.23
Maine	2 Stations	88	26	Squa Pan Dam	17	3	Houlton FAA AP	3.70	West Buxton 2NNW	.48
Maryland	4 Stations	95	27	2 Stations	30	30+	Millington	3.18	Pocomoke City 1S	.26
Massachusetts	3 Stations	93	27+	do	28	14	Amherst	2.69	Brockton	.34
Michigan	2 Stations	91	25	Vanderbilt Trout Sta	22	5	Stambaugh 1S	6.66	Hastings Fisheries	.47
Minnesota	Winona	90	3	Big Fork	20	29	Pipestone	9.00	Cook 18W	2.50
Mississippi	2 Stations	95	25+	Richton 3SSE	38	1	Cleveland	8.29	Collins	.14
Missouri	Clear Water Dam	93	8	Steelville 1NW	33	29	Oldfield	7.96	Waverly	.70
Montana	Haxby 18SW	89	20	2 Stations	9	8+	2 Stations	8.98	Telegraph Creek	.40
Nebraska	Beaver City	97	1	Brewster	24	10	Hastings	12.47	Haigler	1.69
Nevada	Sunrise Manor Las Vegas	102	30	Currie Highway Sta	3	6	Austin	3.70	Beatty	T
New Hampshire	2 Stations	92	11+	2 Stations	21	5+	South Lyndeboro	2.24	Conway 1N	.45
New Jersey	do	97	27	Layton 2	33	15+	Mays Landing 1W	3.13	Burlington	.92
New Mexico	Jal	101	21	5 Stations	12	10+	Abbott	5.35	11 Stations	.00
New York	Poughkeepsie	98	26	Elizabethtown	22	5	Portville	4.54	Ticonderoga	.05
North Carolina	New Bern 3NW	96	4	Oconalufty	30	1	Beetree Dam	7.56	Yanceville 2NNE	.30
North Dakota	3 Stations	89	13	Hansboro 3W	18	3	Alexander 2SW	9.09	Courtenay	1.45
Ohio	Toldeo Blade	95	26	2 Stations	31	14+	Tipp City	5.57	Dayton	.24
Oklahoma	4 Stations	96	2	do	32	9	Hee Mountain Tower	10.81	Sayre 1NE	1.19
Oregon	The Dalles	93	28	Hampton	10	5	Scotts Mills 9SE	4.36	2 Stations	.05
Pennsylvania	Burnt Cabins 2NE	95	4	Clermont 4NW	24	14	Lewis Run 3SE	6.23	Kegg	.29
Puerto Rico	Ponce Mercedita AP	93	14	3 Stations	59	15+	Maricao	27.59	Santa Isabel 3NW	1.38
Rhode Island	Providence WBAP	91	26	Kingston	34	15+	2 Stations	1.94	Providence WBAP	1.08
South Carolina	Bamburg	98	19	Ninety Nine Islands	40	1	Summerville 2WNW	7.04	Lockhart	.30
South Dakota	Yankton 3N	95	1	Deerfield 5NW	16	10	Lead 1SE	14.84	Oahe Dam	2.48
Tennessee	Waverly	95	25	2 Stations	34	2+	Woodbury 1NW	8.89	Pulaski Water Plant	1.02
Texas	3 Stations	106	25+	Gruver	30	9	Ross	18.42	2 Stations	.03
Utah	2 Stations	93	31+	Silver Lake Brighton	0	7+	Blowhard Mtn Radar	5.12	Park Valley	.33
Vermont	Vernon	92	27	West Burke	20	6+	Enosburg Falls	2.52	Cornwall	.11
Virginia	2 Stations	98	27	Monterey	32	30	Allisonia	5.63	Parramore Beach Lbs	.10
Washington	do	93	28	Mount Spokane Summit	15	5	Quinault River RS	8.06	White Swan	T
West Virginia	do	95	27+	Canaan Valley	25	30	Alpena 1NW	3.73	Spencer	.45
Wisconsin	Clintonville	92	2	Couderay 5W	22	29	Marinette	8.81	Kenosha	1.18
Wyoming	2 Stations	89	17+	Foxpark	3	10	Lusk 18ENE	8.07	Kendall	.31

+ And also on an earlier date or dates

NOTE: Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown (See individual Climatological Data for times of observations).

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	996.3	1018.4	85	59	71.8	0.0	90	26+	45	1	3	0	59	68	1.37	- 2.05	0.87	7	6	0.0	0	1.3	18	27	NW	27	7	12	12	5.6	69
HUNTSVILLE	600	995.6	1018.2	86	62	74.3	3.9	94	26	50	13+	6	0	59	61	3.10	- 0.29	2.87	6	6	0.0	0	2.1	19	21	18	23+	9	10	12	5.5	
MOBILE	211	1010.2	1017.8	87	65	75.7	0.1	93	12	53	1	5	0	63	70	4.33	- 0.55	3.80	3	2	0.0	0	4.5	17	27	36	28	5	17	9	5.7	
MONTGOMERY	194	1011.2	1018.4	88	62	74.8	2.4	92	26+	49	1	9	0	60	64	1.33	- 2.14	0.63	3	3	0.0	0	1.8	21	47	SE	22	5	17	9	5.9	68
ALASKA												B																				
ANCHORAGE PRK STRIP	85			51	36	43.2	- 2.7	60	29	25	4+	0	9			0.51	- 0.01	0.12	11	0	0.8	0										
ANCHORAGE	143	1007.1	1012.1	54	37	45.4		65	29	27	9+	0	9	29	53	0.51		0.17	10	1	0.2	T	3.0	19	24	17	21	3	9	19	7.8	46
ANNETTE	110	1014.2	1018.2	53	39	45.9	- 3.3	71	20	32	13+	1	3	38	78	8.24	1.17	2.46	13	0	0.6	T	2.4	19	35	16	2	4	5	22	7.7	
BARROW	22	1015.9	1016.5	23	11	16.9	- 1.5	42	22	-12	15	0	31	14	84	0.37	0.25	0.06	13	0	4.1	11	6.3	8	26	12	1	3	6	22	8.0	
BARTER ISLAND	39	1013.9	1015.8	24	15	19.7	- 1.0	42	23	- 5	6+	0	31	18	91	0.49	0.24	0.17	13	0	4.9	24	0.9	2	25	26	23	1	4	26	9.0	
BETHEL	125	1005.4	1011.2	39	26	32.6	- 6.4	57	27+	4	3	0	21	28	84	0.47	- 0.48	0.12	18	0	2.0	1	1.9	25	31	32	1	0	5	26	8.8	
COLD BAY	94	1007.1	1010.8	40	33	36.3	- 3.2	49	30+	24	4	0	15	31	83	2.66	0.37	0.50	23	0	5.3	1	2.4	25	44	14	29+	0	2	29	9.6	
FAIRBANKS	436	993.9	1011.0	53	32	42.9	- 4.2	78	30	13	5	4	17	27	55	0.14	- 0.57	0.09	4	0	0.7	T	2.0	26	25	23	3	0	14	17	7.9	
JUNEAU	12	1015.6	1016.2	51	34	42.4	- 3.2	63	27	25	11	0	13	37	82	4.45	1.21	1.10	16	0	0.2	T	5.4	13	40	12	2	3	4	24	8.2	43
KING SALMON	43	1007.8	1009.9	45	30	37.0	- 6.3	59	29	13	4+	0	17	30	77	1.67	0.71	0.45	16	0	5.6	1	3.5	14	35	9	25+	4	3	24	8.1	
KOTZEBUE	10	1011.5	1011.9	31	18	24.5	- 6.4	57	28	- 5	4	0	21	20	82	0.49	0.16	0.12	11	0	3.1	13	3.2	15	36	28	2	8	5	18	7.1	
MC GRATH	334	998.3	1011.1	49	30	39.5	- 4.6	70	27	10	4+	1	17	27	62	0.41	- 0.47	0.14	12	0	0.6	1	2.4	28	24	18	22	0	6	25	8.6	
NOME	13	1010.2	1010.9	33	22	27.5	- 7.5	52	30+	0	4+	0	25	23	82	1.15	0.46	0.26	13	0	4.5	4	4.7	7	39	28	2	7	6	18	7.1	36
ST. PAUL ISLAND	22	1009.8	1010.8	37	28	32.7	- 2.1	42	31+	16	7	0	21	30	90	1.35	0.05	0.25	22	0	2.7	T	2.5	32	44	10	29	0	2	29	9.5	
SHEMYA	122	1005.4	1009.0	41	36	38.9	0.9	46	5	31	6	0	1	35	88	1.81	- 0.59	0.48	15	0	0.8	T	7.7	21	47	18	15	1	2	28	9.1	
YAKUTAT	28	1013.5	1014.6	46	33	39.2	- 5.4	59	16	23	15	0	18	35	87	18.95	10.97	4.96	20	0	15.0	3	3.2	12	37	12	2	1	5	25	8.8	
ARIZONA																																
FLAGSTAFF	6993	785.0	1011.8	62	32	46.7	- 4.2	74	29+	17	8	0	15	25	47	1.88	1.37	1.11	6	2	7.0	7	5.5	19	29	17	3	14	9	8	4.4	
PHOENIX	1117	970.5	1008.7	89	54	71.8	- 3.2	104	29	40	8	15	0	33	27	0.16	0.03	0.16	1	0	0.0	0	2.2	23	40Y	S	12	22	8	1	1.9	91
TUCSON	2584	922.1	1008.6	86	54	70.1	- 3.4	100	29	40	8	11	0	24	20	T	- 0.13	T	0	1	0.0	0	4.7	22	42	NE	16	24	5	2	2.1	94
WINSLOW	4895	848.6	1010.9	76	42	58.8	- 6.0	90	19	27	8	1	2	28	37	0.92	0.60	0.41	5	4	0.0	0	7.5	22	46	19	7	15	12	4	3.3	
YUMA	194	1002.0	1009.2	90	61	75.8	- 3.8	103	29	50	8	15	0	36	27	0.37	0.36	0.37	1	1	0.0	0	3.8	26	29	SE	31	27	3	1	1.4	96
ARKANSAS																																
FORT SMITH	449	999.0	1015.3	83	61	71.9	2.0	88	25+	45	1	0	0	61	72	7.85	2.59	3.57	14	10	0.0	0	3.2	15	34	SW	27	5	10	16	6.8	62
LITTLE ROCK	257	1006.8	1016.1	83	62	72.7	2.2	88	8	47	2	0	0	63	76	5.42	0.14	3.64	10	8	0.0	0	3.8	18	28	S	14	7	9	15	6.2	66
TEXARKANA	372	1003.1	1016.0	83	65	74.1	2.5	88	26+	53	1	0	0	65	76	5.19	0.29	2.07	14	10	0.0	0	5.3	17				6	8	17	6.9	
CALIFORNIA																																
BAKERSFIELD	494	995.6	1013.1	83	56	69.3	- 1.1	98	29+	42	7	8	0	36	32	0.02	- 0.20	0.02	1	0	0.0	0	5.0	33	25	34	21	22	7	2	2.5	
BISHOP	4108			77	42	59.4	- 3.2	93	18+	27	7	4	2			0.02	- 0.18	0.02	1	0	T	0						11	14	6	4.8	
BLUE CANYON	5280			61	42	51.2	- 1.0	74	29	26	6	0	5			0.45	- 2.65	0.37	4	0	T	T			26	17	4	15	10	6	4.4	
BURBANK	724	987.5	1013.2	74	53	63.3	- 1.1	95	28	45	8	2	0	49	65	T	- 0.18	T	0	0	0.0	0	5.5	17	18	17	21+	12	13	6	4.6	
EUREKA U	43			54	46	49.9	- 3.1	58	19	39	7+	0	0			0.44	- 1.74	0.16	5	0	0.0	0			33	N	6	11	7	13	5.7	64
FRESNO	328	1001.7	1013.2	85	50	67.5	- 0.7	100	29	36	7	12	0	41	42	T	- 0.30	T	0	0	0.0	0	6.2	32	30	NW	19+	22	6	3	2.5	96
LONG BEACH	34	1012.9	1014.3	71	53	62.0	- 1.5	83	27	44	7	0	0	50	69	T	- 0.11	T	0	0	0.0	0	3.1	22	20	27	21+	12	15	4	4.5	
LOS ANGELES	97	1010.2	1013.9	67	54	60.6	- 1.4	73	17	50	8+	0	0	51	72	T	- 0.13	T	0	0	0.0	0	6.0	25	35Y	W	21	10	13	8	4.9	
LOS ANGELES U	270			72	55	63.4	- 1.4	83	28	49	8	0	0			0.00	- 0.16	0.00	0	0	0.0	0			25	SW	7	9	14	8	5.3	50
MT SHASTA R	3544			65	38	51.7	- 2.1	80	12	27	6	0	7			0.65	- 1.34	0.53	7	0	0.1	T										
OAKLAND	6	1015.6	1015.8	65	51	57.8	- 1.9	73	11	45	6	0	0	47	69	T	- 0.65	T	0	0	0.0	0	9.4	28	31	29	4	19	6	6	3.6	
RED BLUFF	341	1001.0	1013.7	82	53	67.4	- 0.9	94	29	42	5	8	0	38	37	T	- 1.13	T	0	0	0.0	0	4.3	33	32	N	6	20	2	9	3.5	91
SACRAMENTO	17	1012.9	1013.7	80	48	64.4	0.4	94	29+	38	5	4	0	44	55	0.09	- 0.50	0.09	1	0	0.0	0	4.0	26	32	NW	6	18	8	5	3.2	93
SANDBERG R	4517			64	43	53.7	- 2.9	82	29+	29	6	0	4			T	- 0.31	T	0	0	0.0	0	9.9	35	47	36	14	12	13	6	4.5	
SAN DIEGO	13	1013.5	1014.4	68	57	62.5	- 1.5	76	28	49	8	0	0	51	69	T	- 0.15	T	0	0	0.0	0	4.5	24	18	NW	28	5	15	11	5.9	65
SAN FRANCISCO	8	1015.9	1016.5	64	47	55.3	- 3.0	78	11	41	5	0	0	44	73	T	- 0.48	T	0	0	0.0	0	12.6	29	41	W	4	20	4	7	3.4	
SAN FRANCISCO U	52			61	49	54.9	- 2.5	74	11	46	5	0	0			T	- 0.63	T	0	0	0.0	0			38	W	4					79
SANTA CATALINA	1568			67	53	59.6	0.6	87	27	48	7	0	0			T	- 0.36	T	0	0	0.0	0						10	12	9	5.3	
SANTA MARIA	236			66	45	55.8	- 1.8	78	16	34	7	0	0			T	- 0.22	T	0	0	0.0	0						14	11	6	4.2	
STOCKTON	22	1013.5	1014.5	83	51	67.0	0.8	97	28	40	5	10	0	44	50	0.03	- 0.41	0.02	2	0	0.0	0	8.5	30	30	34	23	21	4	6	3.0	
COLORADO																																
ALAMOSA	7536			65	33	49.1	- 1.7	79	22	16	9	0	14			0.59	- 0.14	0.36	8	0	0.5	0						12	13	6	4.7	
COLORADO SPRINGS	6145	807.7	1009.3	68	42	54.9	- 0.1	81	20	31	11	0	1	31	46	1.81	- 0.32	0.77	8	6	0.0	0	0.8	1[illegible]	49	17	23	7	13	11	5.9	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 °F. or above	Min. 32 °F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
COLORADO																																
DENVER	5283	832.7	1008.6	71	44	57.1	0.9	84	20+	29	9	0	1	35	51	1.82	- 0.88	0.97	10	5	T	0	1.3	21	42	SE	23	5	12	14	6.5	64
GRAND JUNCTION	4855	848.0	1008.2	74	50	62.4	0.2	89	21+	33	9	0	0	32	38	1.35	0.75	0.53	8	2	T	0	2.7	19	35	S	7	6	14	11	6.2	65
PUEBLO	4684	851.7	1008.4	78	45	61.3	0.7	90	31+	32	11	3	1	32	39	0.30	- 1.50	0.15	6	6	0.0	0	1.3	27	49	N	2	8	14	9	5.2	74
CONNECTICUT																																
BRIDGEPORT	7	1016.6	1017.1	71	51	61.4	2.7	87	4	44	14+	0	0	50	71	4.16	0.45	2.14	8	4	0.0	0	4.1	24	35	12	26	9	15	7	5.6	
HARTFORD	169	1009.5	1015.9	79	50	64.4	4.5	94	27+	37	7	5	0	46	56	1.20	- 2.21	0.92	7	4	0.0	0	1.9	24	28	SW	28+	5	11	15	6.5	73
NEW HAVEN	6			70	49	59.7	2.5	85	4	41	7+	0	0			2.17	- 1.54	0.79	8	0	0.0	0			24	SW	27	7	17	7	5.5	73
DELAWARE																																
WILMINGTON	78	1014.2	1017.2	77	55	66.0	3.3	93	27	45	30+	2	0	52	66	1.41	- 2.12	0.58	8	6	0.0	0	2.0	25	22	29	27	5	13	13	6.5	
DIST.OF COLUMBIA																																
WASH NATL AP	14	1014.9	1017.4	81	57	69.1	3.3	95	27	49	14	5	0	54	64	1.72	- 2.42	0.95	7	2	0.0	0	1.3	18	26	NNW	16	4	16	11	6.4	62
FLORIDA																																
APALACHICOLA U	13			83	68	75.6	0.8	89	30	59	1	0	0			1.28	- 1.60	1.28	1	1	0.0	0			22	E	23	14	12	5	4.0	84
DAYTONA BEACH	31	1018.3	1019.6	84	61	72.3	- 1.9	89	29+	49	1	0	0	61	70	0.08	- 2.77	0.08	1	3	0.0	0	4.9	11	23	6	24	12	15	4	4.3	
FORT MYERS	15	1018.0	1018.1	89	65	76.8	- 0.6	93	31+	56	1	11	0	64	68	4.70	0.85	3.65	5	6	0.0	0	3.4	9	40	22	31	9	18	4	4.7	
JACKSONVILLE	24	1018.0	1018.9	89	65	76.7	0.9	96	20	56	2+	9	0	63	65	0.94	- 2.53	0.42	4	3	0.0	0	4.3	15	28	E	28	16	11	4	3.8	88
KEY WEST	4	1016.3	1017.0	86	77	81.5	2.5	89	31+	73	2+	0	0	68	66	0.69	- 2.04	0.63	3	1	0.0	0	11.0	9	26	E	7	13	13	5	4.5	88
LAKELAND U	214			87	66	76.9	0.0	92	29+	60	1	9	0			0.55	- 2.99	0.53	3	0	0.0	0						11	18	2	4.2	86
MIAMI	7	1017.6	1017.9	85	72	78.5	0.9	92	13	61	2	1	0	64	63	0.44	- 6.00	0.23	3	1	0.0	0	8.4	10	25	32	13	1	22	8	6.1	
ORLANDO	108	1014.9	1019.1	89	65	77.1	- 0.5	94	29+	56	1	12	0	62	67	0.52	- 3.05	0.52	2	2	0.0	0	5.5	11	22	4	29	12	17	2	4.2	
PENSACOLA	112	1014.6	1018.6	84	65	74.7	- 0.8	89	31+	52	1	0	0	64	72	0.30	- 4.26	0.18	3	0	0.0	0	3.9	16	27	SE	15					77
TALLAHASSEE	58	1016.6	1018.9	90	60	75.1	0.2	97	28	45	1	18	0	59	62	T	- 4.10	T	0	2	0.0	0	1.2	18	18	17	28	11	19	1	4.2	
TAMPA	19	1018.3	1018.4	89	64	76.3	- 0.5	95	22	52	1	12	0	62	66	0.67	- 2.18	0.40	4	4	0.0	0	2.1	8	18	10	22+	11	15	5	4.8	82
WEST PALM BEACH	15	1018.0	1018.5	85	69	77.0	- 0.6	91	13	56	2	2	0	63	63	1.38	- 3.73	0.40	3	1	0.0	0	8.7	10	35	1	13	14	11	6	4.7	
GEORGIA																																
ATHENS	802	989.5	1018.2	88	60	73.7	3.6	92	26+	47	1	8	0	60	66	0.93	- 2.68	0.93	8	9	0.0	0	1.7	27	20	30	12	12	10	9	5.0	
ATLANTA	1010	982.4	1018.6	83	60	71.8	2.7	90	19	50	30+	1	0	57	64	2.51	- 0.65	0.88	8	7	0.0	0	2.3	26	25	SE	20	10	13	8	5.3	76
AUGUSTA	143	1012.5	1017.7	90	59	74.8	3.2	96	19	44	1	21	0	60	67	1.88	- 1.11	0.90	7	7	0.0	0	1.3	22	28	31	28	13	9	9	4.9	
COLUMBUS	385			91	60	75.4	3.3	95	24	44	1	21	0	58	62	2.54	- 0.96	1.74	3	0	0.0	0	1.0	22	23	9	9	10	13	8	5.3	
MACON	354	1006.1	1018.8	90	60	75.1	1.2	98	19	45	1	17	0	59	62	1.62	- 1.70	1.34	5	6	0.0	0	0.7	26	28	SW	28	10	14	7	4.7	87
ROME	637			86	56	71.0	2.3	90	26+	42	1	3	0			0.92	- 2.88	0.36	8	0	0.0	0										
SAVANNAH	46	1016.9	1018.7	88	61	74.8	1.4	94	27+	47	1	9	0	62	69	2.62	- 1.15	1.53	6	6	0.0	0	3.3	20	42	N	12	14	14	3	4.1	84
HAWAII																																
HILO	31	1014.6	1015.9	82	67	74.5	1.5	87	14	64	1	0	0	66	79	21.05	11.72	10.26	25	6	0.0	0	4.3	17	26	11	9+	0	5	26	8.9	20
HONOLULU	7	1014.9	1015.5	82	72	77.0	1.1	86	11+	67	2	0	0	68	73	7.23	6.24	3.44	14	2	0.0	0	5.3	8	25	NE	29	2	12	17	7.5	55
KAHULUI	48	1012.9		84	66	75.1	- 0.1	96	23	62	2	1	0			0.43	- 0.26	0.31	6	1	0.0	0	4.9	7	30	NE	29	2	15	14	6.9	59
LIHUE	115	1010.8	1016.0	79	70	74.5	0.0	82	13+	66	2	0	0	69	84	8.48	5.89	4.06	20	3	0.0	0	3.6	7	26	S	13	2	10	19	7.5	39
IDAHO																																
BOISE	2838	913.6	1013.2	68	42	54.9	- 3.3	86	29	27	6	0	4	33	48	0.80	- 0.49	0.67	7	2	T	T	4.7	30	28	NW	23	8	9	14	6.1	67
IDAHO FALLS 42NW R	4790			63	35	49.0	- 3.7	80	29	22	4	0	13			1.11	0.23	0.36	8	0			2.7	29	35	SW	16					
IDAHO FALLS 46W R	4932			62	35	48.8	- 3.8	77	29	19	3	0	13			1.32	0.22	0.82	7	0	8.3	5	3.8	23	40	SW	16					
LEWISTON	1413			70	44	56.6	- 1.8	86	28	34	18+	0	0			0.48	- 1.07	0.32	6	0	T	0						7	9	15	6.5	
POCATELLO	4454	860.5	1012.4	64	37	50.5	- 4.6	80	29	26	6	0	9	32	53	0.84	- 0.29	0.31	11	3	0.4	T	4.1	25	34	SW	17	9	7	15	6.4	57
ILLINOIS																																
CAIRO U	314			83	64	73.4	4.4	89	31+	51	29	0	0			4.32	- 0.07	1.20	12	5	0.0	0			35	SW	9	9	5	17	6.2	69
CHICAGO O HARE	658	990.5	1014.8	74	49	61.7	3.9	87	1	32	29	0	1	50	68	2.36	- 1.40	0.67	8	6	0.0	0	4.2	20	46	22	15	2	16	13	6.7	
CHICAGO MIDWAY	607	992.6		75	53	64.0	4.0	85	1	37	29	0	0	50	62	1.47	- 2.26	1.00	8	7	0.0	0	4.7	22	34	SW	8	3	15	13	6.5	70
MOLINE	582	992.2	1013.4	77	55	65.9	4.7	88	7	34	29	0	0	54	67	4.04	0.24	0.99	13	10	0.0	0	5.0	20	38	SW	7	5	11	15	6.4	64
PEORIA	652	990.9	1014.6	78	55	66.7	5.2	87	31	33	29	0	0	55	69	3.85	- 0.42	1.08	10	8	0.0	0	4.4	21	34	Nw	4	8	10	13	6.0	71
ROCKFORD	724	987.1	1013.9	74	50	61.9	2.8	86	24	33	29	0	0	50	67	5.66	1.83	2.16	11	10	0.0	0	5.2	21	25	26	27+	3	16	12	6.5	
SPRINGFIELD	588	992.9	1014.6	83	58	70.3	6.4	92	22	39	29	2	0	54	60	1.67	- 2.21	0.90	6	5	0.0	0	7.8	19	31	W	26	9	10	12	5.7	65

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
INDIANA																																
EVANSVILLE	381	1003.1	1016.8	82	57	69.7	2.9	90	25	39	29	1	0	58	68	0.91	- 3.28	0.49	8	2	0.0	0	3.3	22	42	NW	18	6	13	12	5.5	66
FORT WAYNE	791	986.1	1016.0	77	53	65.1	4.4	85	25+	35	29	0	0	52	67	2.28	- 1.45	1.24	8	9	0.0	0	4.0	23	33	W	16	5	17	9	6.0	69
INDIANAPOLIS	792	987.5	1016.3	80	57	68.3	6.9	93	25	36	29	2	0	54	64	1.44	- 2.55	0.58	9	9	0.0	0	4.3	22	37	W	18	6	14	11	5.9	76
SOUTH BEND	773	987.5	1015.2	76	53	64.2	5.5	85	8	37	29	0	0	48	57	1.67	- 1.95	0.64	7	5	0.0	0	5.1	22	32	27	26	5	15	11	6.5	
IOWA																																
BURLINGTON	694			78	56	67.2	5.4	88	31	40	29	0	0	58	73	1.96	- 2.07		11	10	0.0		4.6	21	25	31	26	8	10	13	5.9	
DES MOINES	938	978.0	1012.4	77	55	66.2	5.6	88	1	39	28	0	0	54	67	3.89	- 0.18	1.05	12	12	0.0	0	5.0	20	42	SW	5	4	12	15	6.8	61
DUBUQUE	1065			72	51	61.3	3.2	85	25	31	29	0	1			6.30	2.08	2.25	12	0	0.0	0						2	13	16	7.5	
SIOUX CITY	1095	971.2	1010.6	77	54	65.2	3.8	91	2	38	28	2	0	53	68	5.78	2.55	1.76	15	12	0.0	0	3.4	20	50	SE	22	5	13	13	6.4	63
WATERLOO	868	980.7	1012.1	72	48	60.2	0.3	84	2	29	29	0	2	52	75	5.24	1.50	1.74	15	14	0.0	0	4.1	18	31	18	5	4	13	14	7.1	
KANSAS																																
CONCORDIA	1470	958.3	1010.4	79	55	67.1	4.0	90	1	39	10	1	0	54	65	5.19	1.30	1.77	13	14	0.0	0	8.8	18	47	S	7	11	5	15	5.9	64
DODGE CITY	2582	921.1	1010.2	79	54	66.4	2.7	95	2	37	9	3	0	51	64	5.65	2.43	2.72	11	11	0.0	0	8.1	18	42	W	25	12	8	11	5.5	69
GOODLAND	3645	884.5	1009.1	78	46	62.1	3.6	94	2	33	11	6	0	39	51	3.43	1.02	1.55	7	6	0.0	0	4.5	19	53	30	22	11	10	10	5.4	
TOPEKA	876	981.0	1012.2	79	58	68.6	4.2	86	17	44	12	0	0	57	66	3.41	- 0.97	0.99	9	11	0.0	0	7.0	19	33	SW	26	6	10	15	6.4	67
WICHITA	1321	964.8	1011.8	79	58	68.8	2.8	90	6	47	28	1	0	58	70	6.26	2.29	2.64	10	12	0.0	0	9.1	18	56	SW	6	7	8	16	6.4	57
KENTUCKY																																
COVINGTON	869	985.8	1017.0	80	54	67.1	4.6	88	25	34	29	0	0	53	63	1.46	- 2.13	0.82	8	4	0.0	0	4.0	23	35	24	16	7	13	11	5.9	
LEXINGTON	966	982.7	1017.8	80	58	68.9	4.4	89	26+	44	29	0	0	55	64	1.20	- 2.65	0.53	9	6	0.0	0	4.6	20	35	22	27	8	13	10	5.6	
LOUISVILLE	474	999.3	1016.9	81	59	70.0	5.6	88	25	43	29	0	0	57	66	1.60	- 2.30	0.72	8	6	0.0	0	3.5	24	23	N	29	7	13	11	5.8	75
LOUISIANA																																
ALEXANDRIA	92	1012.9	1017.1	84	62	73.2	0.3	89	26	43	1	0	0	64	77	1.75	- 3.79	0.50	6	5	0.0	0	3.2	16	18	19	26	1	13	17	7.6	
BATON ROUGE	64	1014.9	1017.7	85	65	75.2	0.4	90	26+	50	1	2	0	65	76	3.90	- 0.90	1.15	9	4	0.0	0	4.8	14	29	13	23	2	13	16	7.3	
LAKE CHARLES	14	1015.2	1016.4	85	66	75.5	- 0.1	90	12	50	1	1	0	66	79	4.05	- 0.56	2.60	6	2	0.0	0	7.9	15	25	18	26	1	15	15	7.3	
NEW ORLEANS	3	1016.6	1017.5	85	66	75.5	1.1	89	31+	49	2+	0	0	66	74	3.62	- 0.76	1.59	9	6	0.0	0	5.3	14	23	9	22	4	14	13	6.5	
SHREVEPORT	252	1006.4	1015.6	83	65	73.7	0.6	89	27	52	2	0	0	65	80	5.40	0.61	1.31	13	8	0.0	0	7.2	17	35	27	28	4	9	18	7.4	44
MAINE																																
CARIBOU	624			59	39	49.1	- 0.8	73	22	28	3+	0	6			2.35	- 0.68	0.50	14	0	0.0	0						4	10	17	7.0	
PORTLAND	61	1013.2	1015.5	67	43	54.8	1.8	86	26+	29	15+	0	2	41	64	0.49	- 2.92	0.20	8	2	0.0	0	1.1	20	26	W	28	8	9	14	6.4	63
MARYLAND																																
BALTIMORE	148	1011.9	1017.3	79	55	66.9	2.5	95	27	42	30	3	0	54	68	1.79	- 2.19	0.92	8	3	0.0	0	1.8	27	33	NW	16	6	16	9	6.0	53
MASSACHUSETTS																																
BLUE HILL OBS R	629			72	48	59.5	2.8	90	10	41	7	1	0			1.33	- 2.15	0.63	9	0	0.0	0			38	NNW	13					65
BOSTON	15	1014.6	1015.6	70	49	59.5	0.7	92	26	42	3	1	0	46	67	0.93	- 2.41	0.52	6	3	0.0	0	1.3	22	27	SW	22	11	7	13	5.9	67
NANTUCKET	43	1015.9	1016.1	61	45	53.0	0.4	78	26	38	15+	0	0	45	77	0.71	- 2.17	0.41	4	3	0.0	0	3.4	23	31	NE	14	8	7	16	6.5	63
PITTSFIELD	1170			72	44	57.8	3.2	85	26+	33	15+	0	0			1.55	- 2.32	0.52	9	0	0.0	0										
WORCESTER	986	979.3	1016.0	71	47	58.9	3.7	88	26	39	7	0	0	41	56	1.51	- 2.28	0.86	8	4	0.0	0	5.0	28	29	31	4	9	7	15	6.0	
MICHIGAN																																
ALPENA	689			69	41	54.9	4.3	87	25+	25	5	0	6			4.24	1.33	2.21	12	0	0.0	0			30	NW	3	6	15	10	6.1	74
DETROIT	619	993.2	1016.0	74	52	63.1	4.1	86	9	42	29	0	0	48	60	2.16	- 1.37	0.51	11	9	0.0	0	2.5	25	40	W	16	6	12	13	6.4	63
DETROIT M WAYNE CO	633	991.9	1015.8	75	49	62.4	4.0	88	25	38	29	0	0	48	62	1.15	- 2.39	0.49	9	6	0.0	0	3.4	22				5	13	13	6.3	
DETROIT WILLOW RUN	711	988.2	1016.2	73	47	60.2	1.5	84	25	35	21	0	0	47	64	1.86	- 1.62	0.77	12	7	0.0	0	4.0	22	35	22	16	5	12	14	6.4	
FLINT	770	987.8	1015.6	74	49	61.6	6.3	88	25	37	30	0	0	48	63	0.93	- 2.46	0.48	10	7	0.0	0	4.0	22	30	25	27	4	9	18	6.8	
GRAND RAPIDS	784	986.5	1015.3	75	50	62.3		89	7	34	30	0	0	48	65	1.53		0.63	9	5	0.0	0	4.0	21	36	SW	16	4	11	16	6.6	61
HOUGHTON LAKE	1150	973.6	1015.6	71	45	57.9		83	25	34	5	0	0	44	65	2.81		0.73	15	10	0.0	0	3.7	22	30	29	3	4	13	14	6.9	
LANSING	841	984.1	1015.6	74	49	61.2	4.1	86	25+	31	30	0	1	51	69	1.01	- 2.72	0.35	8	6	0.0	0	4.6	23	40	SW	26	6	11	14	6.4	60
MARQUETTE U	677			65	43	54.2	4.3	91	25	34	28+	1	0			3.61	0.65	1.02	13	6	T	0			35	SW	8	4	12	15	7.1	66
MUSKEGON	627	991.9	1014.8	72	51	61.4	5.6	83	24	35	30	0	0	48	64	2.27	- 0.70	1.35	7	5	0.0	0	4.7	20	40	23	26	7	9	15	6.4	
SAULT STE MARIE	721	987.8	1014.6	63	40	51.8	2.2	81	26+	30	1	0	4	40	69	4.42	1.65	1.02	12	8	0.0	0	1.5	19	32	26	9	4	12	15	7.0	60
MINNESOTA																																
DULUTH	1428	961.4	1012.8	63	41	52.0	2.8	80	25	32	28	0	1	39	66	2.96	- 0.33	0.66	21	11	1.0	T	1.6	11	41	SW	25	2	13	16	7.3	50

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90° F. or above	Min. 32° F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MINNESOTA																																
INTERNATIONAL FALLS	1179	968.8	1011.8	65	40	52.1	1.4	84	13	28	29	0	5	41	69	3.45	0.84	0.80	14	7	0.6	T	2.4	19	40	16	25	7	9	15	6.5	
MINNEAPOLIS	834	981.4	1011.7	69	48	58.7	1.4	85	2	33	29	0	0	47	68	7.86	4.67	3.03	18	13	T	T	1.8	16	38	W	24	3	9	19	7.5	39
ROCHESTER	1297	965.1	1012.5	68	49	58.4	1.7	83	24	33	29	0	0	49	72	4.14	0.49	1.49	14	13	T	0	5.6	20	35	23	24	4	6	21	7.6	
ST CLOUD	1034	973.9	1011.5	67	47	56.8	1.2	79	24+	33	29	0	0		68	6.78	3.27	1.58	14	0	T	T						4	9	18	7.5	
MISSISSIPPI																																
JACKSON	310	1006.1	1017.8	87	61	74.0		91	26+	43	1	8	0	62	71	1.36		0.63	5	4	0.0	0	5.0	16	21	SE	15	9	9	13	5.9	67
MERIDIAN	290	1007.5	1018.5	87	58	72.2	- 0.2	92	26+	42	1	6	0	60	69	0.30	- 3.61	0.27	3	3	0.0	0	3.2	19	20	20	27	6	13	12	5.9	
VICKSBURG U	234			84	66	75.0	1.6	88	31+	58	3+	0	0			2.30	- 1.83	1.24	8	0	0.0	0			19	SE	23	5	9	17	6.4	74
MISSOURI																																
COLUMBIA	778	985.8	1013.7	81	60	70.7	6.3	90	7	41	29	1	0	54	59	2.12	- 2.58	1.34	6	4	0.0	0	7.1	20	28	NW	29	7	11	13	6.1	65
KANSAS CITY	742	985.8	1012.4	83	61	71.6	6.0	90	31+	47	29	2	0	54	57	2.19	- 2.21	0.67	8	6	0.0	0	7.0	19	38	SE	21	5	9	17	6.7	69
SAINT JOSEPH	811			83	58	70.2	6.1	91	31	43	29+	1	0			2.01	- 2.38	0.59	8	5	0.0	0	7.3	19	35	27	26	8	10	13	5.9	
ST LOUIS	535	995.3	1015.3	81	60	70.5	6.3	89	31+	42	29	0	0	54	58	1.38	- 2.35	0.64	6	5	0.0	0	5.9	20	33	SE	26+	9	7	15	6.1	65
SPRINGFIELD	1268	970.2	1015.0	79	57	68.3	3.8	86	22	39	29	0	0	59	75	2.37	- 2.91	0.97	10	6	0.0	0	7.4	18	47	W	26	7	13	11	6.2	66
MONTANA																																
BILLINGS	3567	888.6	1012.1	64	42	52.6	- 4.2	84	30	32	6	0	1	35	57	1.89	0.01	0.80	8	1	3.5	0	3.6	31	47	NW	17	6	9	16	6.7	55
GLASGOW	2284			65	41	53.2	- 1.9	80	16	32	3	0	1			3.25	1.76	1.78	10	0	T	T						4	15	12	6.8	
GREAT FALLS	3662	886.6	1013.7	63	40	51.5	- 1.5	81	29	29	2	0	4	34	54	1.47	- 0.63	0.41	13	1	T	0	4.9	27	43	W	29+	2	11	18	7.5	71
HAVRE	2582			65	39	51.7	- 3.0	81	29	28	18	0	6			1.01	- 0.52	0.33	11	0	T	T			54	W	16	5	12	14	6.9	65
HELENA	3828	879.4	1014.3	62	38	50.1	- 2.8	78	29+	27	3	0	8	33	57	2.20	0.64	0.61	14	2	5.0	T	5.5	29	30	SW	16	5	10	16	7.0	60
KALISPELL	2965	909.6	1014.5	62	34	48.1	- 4.1	77	28	26	5	0	14	32	54	0.74	- 0.93	0.36	7	4	0.2	T	1.0	21	40	23	16	3	10	18	7.5	
MILES CITY	2629	919.1	1011.7	67	43	54.5	- 2.9	85	30	30	27	0	2	37	58	1.41	- 0.32		11	3	T		4.6	31								
MISSOULA	3190	903.5	1015.6	63	35	48.9	- 3.7	80	28	22	18	0	10	33	57	0.63	- 1.24	0.34	7	2	T	0	3.0	31	33	NW	25+	4	8	19	7.5	55
NEBRASKA																																
GRAND ISLAND	1841	945.1	1010.4	76	52	64.0	3.4	93	1	37	28	2	0	51		5.97	2.12	2.02	12	11	0.0	0	4.8	18	35	21	5	10	5	16	6.1	
LINCOLN U	1150			77	56	66.7	4.2	90	1	42	28	1	0			6.27	2.79	2.90	12	0	0.0	0			50	SE	5	7	9	15	6.4	52
NORFOLK	1544			76	51	63.6	3.4	90	1	36	28	1	0			6.62	2.96	1.57	12	0	0.0	0						7	12	12	6.1	
NORTH PLATTE	2775	912.3	1008.6	75	45	60.1	1.6	91	1	31	11+	1	2	44	61	4.18	1.23	1.92	11	8	0.0	0	1.5	12	43	W	5	5	12	14	6.4	69
OMAHA	978	976.3	1011.2	80	57	68.1	5.1	93	1	40	28	4	0	54	64	6.19	2.71	1.12	13	13	0.0	0	5.0	21	40	NW	17	7	8	16	6.5	58
SCOTTSBLUFF	3957	875.4	1009.7	71	44	57.4	0.6	87	30+	33	10	0	0	39	58	3.30	0.60	1.08	11	8	1.0	1	2.4	34	38	32	14	5	10	16	6.8	
VALENTINE	2587			72	45	58.1	1.0	90	1	30	28	1	1			3.73	1.06	1.44	10	8	0.0	0						7	13	11	6.1	62
NEVADA																																
ELKO	5050	842.5	1013.1	65	32	48.5	- 3.5	81	29+	10	6	0	15	29	52	1.08	0.12	0.34	11	1	0.8	T	3.0	26	36	24	1	7	8	16	6.8	
ELY	6253	805.6	1010.8	62	30	45.9	- 4.4	78	30+	8	7	0	18	25	48	0.54	- 0.31	0.35	4	0	1.0	1	1.3	26	48	S	21	2	15	14	6.9	76
LAS VEGAS	2162	933.6	1008.8	82	57	69.6	- 4.2	97	30	45	8	9	0	30	26	0.40	0.32	0.32	3	4	0.0	0	5.1	22	43	SW	21	20	3	8	3.7	86
RENO	4404	864.5	1013.5	72	36	54.0	0.1	87	29+	20	3	0	9	30	43	0.18	- 0.34	0.10	5	2	T	T	3.0	33	34	SW	1	9	9	13	6.0	63
WINNEMUCCA	4299	866.2	1013.7	66	34	50.3	- 3.4	84	29	13	6	0	14	27	45	1.08	0.14	0.32	7	0	5.4	4	3.8	33	33	W	16+	7	11	13	6.2	58
NEW HAMPSHIRE																																
CONCORD	339	1003.1	1015.6	74	41	57.1	1.6	89	10	29	24+	0	8	40	57	0.60	- 2.57	0.28	8	4	0.0	0	1.4	28	23	W	28+	10	10	11	5.8	67
MT WASHINGTON OBS	6262			43	29	36.4	1.4	56	27	17	5	0	22			2.40	- 3.44	0.90	11	0	1.1	7			90Y	W	26	6	9	16	6.9	43
NEW JERSEY																																
ATLANTIC CITY	64	1015.2	1017.6	76	52	64.1	2.8	93	26	42	31+	4	0	52	69	2.59	- 0.92	0.95	8	5	0.0	0	2.5	23	26	20	15	5	17	9	6.0	64
ATLANTIC CITY U	11			70	56	62.8	3.3	92	26	49	8	2	0			2.39	- 0.77	1.23	7	0					29	SSW	27					
NEWARK	11	1015.6	1016.8	78	57	67.3	4.8	97	27	47	7	4	0	50	58	1.23	- 2.42	0.53	7	3	0.0	0	3.1	24	28	25	27	6	19	6	5.5	
TRENTON U	56			77	56	66.3	4.0	92	27	44	7	2	0			0.95	- 2.67	0.30	8	5	0.0	0			35	W	27	7	17	7	5.4	71
NEW MEXICO																																
ALBUQUERQUE	5310	835.1	1009.1	78	46	61.7	- 3.4	89	20	33	8	0	0	28	34	0.19	- 0.56	0.16	3	4	0.0	0	3.1	21	52	E	10	16	11	4	3.7	81
CLAYTON	4969			75	46	60.4	0.6	87	21+	32	10	0	1			1.75	- 0.99	0.58	10	0	T	T						16	5	10	4.5	
RATON	6379			70	39	54.4	- 1.0	81	21+	24	9	0	3			3.46	1.17	1.94	10	0	1.0	1						15	10	6	4.3	
ROSWELL	3617			87	51	69.0	1.0	100	21	34	9	10	0			0.35	- 0.93	0.22	4	6	0.0	0			28	21	13+	17	4	10	4.5	76
SILVER CITY	5373			78	46	61.9	- 2.8	88	21	35	9	0	0			T	- 0.28	T	0	0	0.0	0						22	6	3	2.8	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW YORK																																
ALBANY	277	1005.4	1016.1	74	45	59.6	1.7	91	27	33	14	1	0	42	55	1.22	- 2.25	0.52	8	3	0.0	0	2.6	26	36	NW	11	5	11	15	6.5	57
BINGHAMTON	1590	958.0	1016.6	71	48	59.2	4.1	84	3	38	30	0	0	46	64	1.73	- 1.76	0.73	8	7	0.0	0	3.9	27	42	SW	16	4	13	14	6.6	79
BUFFALO	705	990.5	1016.2	71	49	59.6	4.8	84	16	36	1	0	0	46	65	1.21	- 1.74	0.31	11	3	0.0	0	5.1	23	34	SW	28	6	14	11	6.4	68
NEW YORK U	132	1014.2	1017.2	77	56	66.4	4.0	94	26	46	7	4	0	48	57	1.58	- 2.09	0.70	7	1	0.0	0	2.2	23	24	W	17	7	21	3	4.6	73
J.F. KENNEDY	15	1016.3	1016.9	71	53	61.8	1.6	91	26	43	7	1	0	50	70	1.61	- 2.06	0.66	10	1	0.0	0	4.2	20	24	21	28+	8	20	3	5.3	
NEW YORK LA GUARDIA	11	1014.9	1016.7	75	59	67.1	5.0	94	26	50	8+	2	0	50	58	1.35	- 2.23	0.67	6	1	0.0	0	3.1	22	25	W	28+	6	20	5	5.4	
ROCHESTER	547	997.0	1017.0	73	48	60.1	3.4	87	26	36	1	0	0	44	59	0.50	- 2.27	0.22	6	4	0.0	0	4.6	24	37	SW	27	7	11	13	5.9	72
SYRACUSE	417	1001.4	1016.1	73	46	59.4	1.7	89	9	35	14	0	0	45	62	1.61	- 1.66	0.55	7	4	0.0	0	3.5	28	31	W	27	8	13	10	5.8	60
NORTH CAROLINA																																
ASHEVILLE	2140	943.8	1019.3	79	52	65.8		85	3	39	1	0	0	56	77	3.33	1.37	1.25	12	12	0.0	0	1.8	35	28	35	11	12	8	11	5.5	64
CAPE HATTERAS R	7	1017.6	1018.0	76	62	68.9	0.9	82	27+	53	15+	0	0	61	79	0.92	- 3.06	0.59	7	6	0.0	0	1.8	19	27	SSW	29	10	10	11	5.4	75
CHARLOTTE	735	990.9	1017.8	86	61	73.4	4.4	91	28+	49	1	5	0	59	64	1.96	- 1.15	0.84	6	5	0.0	0	1.4	25	27	W	12	9	13	9	5.1	82
GREENSBORO	897	986.5	1017.9	85	60	72.6	5.7	90	27+	50	14	5	0	60	69	1.00	- 2.29	0.45	8	8	0.0	0	1.0	24	48	NW	12	8	17	6	5.3	66
RALEIGH	434	1001.7	1017.5	84	60	71.9	4.3	90	26+	49	1	3	0	59	68	2.20	- 1.32	1.30	6	7	0.0	0	1.4	21	26	27	27	8	15	8	5.2	72
WILMINGTON	28	1016.9	1018.3	85	64	74.4	3.9	91	19	52	15	4	0	62	70	2.76	- 0.76	1.12	8	9	0.0	0	2.0	22	26	N	24	12	15	4	4.2	82
NORTH DAKOTA																																
BISMARCK	1647	950.9	1010.3	66	43	54.5	- 1.4	85	13	29	28	0	2	40	62	5.18	3.21	1.65	12	7	8.0	3	1.6	32	52	NW	1	2	14	15	7.1	60
FARGO	896	978.3	1011.1	66	43	54.4	- 1.0	86	13	30	19	0	3	43	69	3.06	1.03	1.15	13	3	T	T	0.3	16	40	SE	25	7	7	17	6.9	50
WILLISTON	1899			65	41	52.9	- 1.8	85	13	29	3	0	4			7.38	5.95	2.05	13	0	1.4	1			50	NW	17	6	10	15	6.9	57
OHIO																																
AKRON	1208	972.9	1017.1	77	53	64.6	4.9	86	26	38	29	0	0	51	65	2.55	- 1.30	1.02	8	7	0.0	0	3.9	24	32	24	26	5	12	14	6.8	
CINCINNATI OBS	761			82	59	70.4	6.2	90	25	41	29	1	0			0.74	- 3.06	0.49	6	0	0.0	0			26	SW	16					66
CLEVELAND	777	987.5	1016.4	74	52	63.2	5.7	86	26+	40	29+	0	0	51	66	2.29	- 1.23	0.84	11	6	0.0	0	4.1	23	38	NW	26	4	17	10	6.4	60
COLUMBUS	812	987.5	1017.1	80	56	68.1	6.6	90	15	39	29	1	0	54	64	4.00	0.00	1.63	10	7	0.0	0	3.5	23	42	SW	16	4	21	6	6.0	66
DAYTON	1002	981.0	1016.8	81	57	69.4	7.8	89	15	38	29	0	0	55	63	2.33	- 1.40	1.22	10	6	0.0	0	5.2	21	41	S	22	7	13	11	5.7	75
MANSFIELD	1297			75	51	62.9	4.9	84	15	34	29	0	0			3.69	- 0.03	2.33	9	5	0.0	0						5	14	12	6.5	
TOLEDO	676	991.2	1016.3	76	51	63.5	5.2	87	25+	34	29	0	0	51	66	3.80	0.76	1.47	11	9	0.0	0	3.5	24	31	S	15	2	17	12	6.5	66
YOUNGSTOWN	1178	974.6	1017.0	75	52	63.1	5.2	86	9	37	14	0	0	49	64	2.98	- 1.09	1.21	11	7	0.0	0	3.4	24	23	24	27	5	11	15	6.8	
OKLAHOMA																																
OKLAHOMA CITY	1280	967.2	1012.8	81	62	71.3	2.9	88	30	52	1	0	0	59	69	2.14	- 3.05	0.64	9	9	0.0	0	10.0	16	47	SW	26	5	9	17	6.7	58
TULSA	650	989.8	1013.6	83	62	72.6	4.8	89	30	51	29	0	0	60	68	3.91	- 1.35	1.70	6	7	0.0	0	8.9	18	36	S	24	5	11	15	6.7	68
OREGON																																
ASTORIA	8	1020.3	1021.0	58	44	50.9	- 2.4	63	26	31	6	0	1	43	75	2.74	- 0.46	0.68	12	0	0.0	0	5.8	27	29	17	15	1	8	22	8.3	
BURNS U	4151	872.0	1014.9	64	35	49.6	- 3.8	80	29	20	5	0	10	28	45	0.75	- 0.14	0.56	4	0	T	T	6.0	33				6	17	8	5.9	
EUGENE	359	1006.8	1020.2	66	41	53.6	- 2.5	80	11	32	6	0	1	43	72	0.90	- 1.24	0.57	7	0	0.0	0	2.3	31	24	30	4	8	8	15	6.1	
MEACHAM	4050			56	36	45.6	- 2.4	73	28	24	5	0	10			1.83	- 0.62	0.77	10	0	3.2	1						8	7	16	6.6	
MEDFORD	1298	970.9	1018.6	73	40	56.5	- 1.0	91	28	30	7	1	2	39	57	0.31	- 1.16	0.24	5	1	T	T	3.8	31	20	32	28+	11	12	8	4.8	
PENDLETON	1482	962.8	1016.3	71	45	58.0	- 1.6	86	28	34	5+	0	0	33	41	0.57	- 0.55	0.50	6	1	0.0	0	7.3	26	41	28	16	11	8	12	5.5	
PORTLAND	21	1018.6	1019.9	65	44	54.3	- 3.1	78	27+	35	8	0	0	44	72	1.31	- 0.68	0.52	9	1	T	0	4.7	29	25	SW	16+	5	7	19	7.0	63
SALEM	196	1013.2	1020.5	64	40	52.2	- 4.1	79	11	32	14	0	1	44	76	1.16	- 0.95	0.37	8	1	0.0	0	2.7	29	22	32	4	7	8	16	6.5	
SEXTON SUMMIT R	3836	884.9	1017.7	58	36	46.9	- 3.1	76	28+	22	6	0	11			0.51	- 1.68	0.22	7	0	1.1	T	8.9	34	33	34	30	14	9	8	4.5	
PACIFIC AREA																																
CANTON ISLAND	8			88	78	82.9	- 1.0	90	29+	74	10	2	0			1.50	- 2.85	0.88	11	0	0.0	0						5	13	13	6.2	
ENIWETOK	13	1010.2	1010.7	86	78	82.0	- 0.4	88	30+	73	24	0	0	73	74	1.16	- 3.41	0.35	12	0	0.0	0	15.1	7								
TAGUAC GUAM R	361			87	74	80.5	0.1	89	25	67	10	0	0			1.69	- 2.50	0.31	21	0	0.0	0			22	E	31					70
JOHNSTON	7	1012.5	1013.1	82	75	78.4	- 0.8	87	12	68	17	0	0	70	74	4.47	3.48	1.84	8	1	0.0	0	10.6	9	28	E	26	7	7	17	6.5	80
KWAJALEIN	8	1009.1	1010.0	88	76	82.2	1.1	90	5	73	25	1	0	75	80	3.20	- 4.98	0.63	18	0	0.0	0	16.6	6	31	5	29	0	4	27	9.0	
MAJURO	10	1009.1	1009.5	85	77	81.0	0.6	87	6	74	15+	0	0	74	81	7.93	- 4.82	2.27	23	2	0.0	0	14.1	8	32	E	14	0	6	25	9.1	42
MARCUS ISLAND	20			83	72	77.9		86	31	69	19+	0	0			0.58		0.23	6	0	0.0	0			23	E	22	11	14	6	4.8	85
TRUK MOEN ISLAND	5	1008.5	1008.9	86	76	80.8	0.0	88	25+	73	17+	0	0	75	81	10.79	- 3.33	2.46	24	2	0.0	0	10.2	5	20	NE	28	0	8	23	8.6	63
WAKE	11	1014.9	1015.3	82	73	77.6	2.2	86	3	70	27+	0	0	68	74	2.23	0.19	0.61	21	0	0.0	0	16.4	5	25	4	23+	8	18	5	5.2	
YAP R	55	1006.8	1008.8	87	77	82.0	0.0	88	28+	74	23+	0	0	76	83	8.12	- 1.40	2.20	17	0	0.0	0	7.2	7	25	SE	20	0	7	24	8.9	46

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PENNSYLVANIA																																
ALLENTOWN	376	1003.4	1017.2	77	52	64.3	3.9	91	27+	39	31+	2	0	49	62	1.34	-2.74	0.41	9	4	0.0	0	4.5	26	28	29	17+	6	17	8	5.6	
ERIE	732	990.2	1016.8	71	51	61.0	4.6	87	26	39	14	0	0	48	64	3.40	-0.14	1.40	9	6	0.0	0	4.4	22	33	19	16	7	17	7	5.8	
HARRISBURG	338	1004.7	1017.4	79	54	66.5	3.8	92	27	41	14	3	0	50	59	2.38	-1.52	0.77	11	6	0.0	0	2.5	27	31	W	16	4	13	14	6.7	60
PHILADELPHIA	5	1015.9	1017.1	76	55	65.5	2.9	90	27	42	31	1	0	52	64	1.23	-2.51	0.34	9	3	0.0	0	2.8	27	34	NW	27	6	15	10	6.0	59
PITTSBURGH	1137	973.6	1017.0	77	55	65.9	6.1	87	26	42	18+	0	0	51	62	1.21	-2.70	0.58	7	11	0.0	0	3.1	26	32	30	26	4	7	20	7.4	54
PITTSBURGH U	1018			78	57	67.2	4.2	89	8	44	14	0	0			1.28	-2.47	0.36	11	0	0.0	0										52
READING U	266			79	56	67.4	4.1	90	27+	44	31	2	0			2.16	-1.63	0.99	10	0	0.0	0			44	NW	27	8	16	7	5.5	65
SCRANTON	930	983.1	1017.1	76	52	63.7	4.1	88	27	38	14	0	0	48	61	2.51	-1.44	0.92	10	10	0.0	0	2.7	25	26	SW	28+	5	17	9	6.3	67
WILLIAMSPORT	527	998.3	1017.2	74	49	61.5	1.1	86	26+	36	14	0	0	50	70	1.88	-2.20	0.68	8	7	0.0	0	2.1	26	29	32	25	4	11	16	6.7	
RHODE ISLAND																																
BLOCK ISLAND	110			62	47	54.6	0.7	81	26	41	24+	0	0			1.76	-1.25	1.00	6	0	0.0	0									5.4	
PROVIDENCE	51	1013.9	1016.1	71	49	60.0	2.5	91	26	41	15	1	0	44	60	1.08	-2.27	0.39	7	6	0.0	0	2.6	20	26	32	4	11	8	12	5.7	67
SOUTH CAROLINA																																
CHARLESTON	41	1016.6	1018.3	87	64	75.3	2.4	94	19	52	1	5	0	63	70	1.32	-2.29	0.54	6	8	0.0	0	4.4	20	33Y	NW	27	9	13	9	4.9	90
CHARLESTON U	9			83	69	76.0	2.7	91	19+	59	1	2	0			1.46	-1.63	0.63	7	0	0.0	0			28	NW	12					
COLUMBIA	217	1009.8	1017.7	90	63	76.1	3.9	94	27	49	1	16	0	60	62	1.46	-2.08	0.76	7	4	0.0	0	2.3	26	23	30	25	14	12	5	4.3	85
FLORENCE	146			86	62	73.8	1.9	91	24	49	1	3	0			1.89	-1.00		7	10	0.0											
GNVLE-SPARTANBURG	957	983.7	1017.8	85	61	73.1	2.9	89	26+	52	3+	0	0	58	63	1.09	-2.13	0.79	5	5	0.0	0	1.7	27	24	N	11	11	10	10	5.1	73
SOUTH DAKOTA																																
ABERDEEN	1296	963.8	1010.3	69	43	56.2	-1.1	87	13	30	28	0	3	43	65	3.01	0.67	1.23	14	10	T	T	1.1	3	46	16	5	7	10	14	6.5	
HURON	1282	963.8	1009.9	72	44	57.9	0.4	87	13	29	28	0	1	47	70	4.33	1.97	2.46	12	7	T	T	0.6	18	42	SW	5	9	6	16	6.3	61
RAPID CITY	3165	900.1	1010.5	67	43	54.7	-1.0	87	30	32	9+	0	2	39	60	6.97	4.31	3.40	13	8	8.8	7	7.0	33	50	NW	1	6	11	14	6.5	50
SIOUX FALLS	1418	959.7	1010.6	71	47	59.0	0.7	84	13+	30	28	0	1	51	78	7.29	3.91	2.26	14	12	0.0	0	1.8	20	37	25	9	5	14	12	6.5	
TENNESSEE																																
BRISTOL	1507	965.1	1018.9	80	56	68.1	2.4	87	26+	43	1	0	0	58	75	2.75	-0.70	0.94	8	10	0.0	0	1.4	26	22	34	12	10	9	12	5.5	
CHATTANOOGA	670	994.2	1018.5	84	57	70.4	0.3	89	26	44	1	0	0	59	72	1.65	-1.87	0.61	10	7	0.0	0	1.3	21	43	NW	18	8	12	11	5.6	73
KNOXVILLE	980	984.1	1018.8	84	61	72.3	4.6	90	26+	51	1	2	0	59	67	3.13	-0.37	1.04	10	6	0.0	0	2.4	25	40	SW	20	12	10	9	5.4	58
MEMPHIS	263	1006.8	1017.0	84	65	74.7	4.4	90	25	56	1	1	0	62	68	7.42	3.19	4.90	12	8	0.0	0	5.2	20	35	NW	26	8	9	14	5.9	61
NASHVILLE	590	995.9	1017.5	83	61	71.7	3.1	89	26+	49	30	0	0	58	66	3.12	-0.60	1.10	11	9	0.0	0	3.8	20	33	SW	23	7	12	12	5.9	65
OAK RIDGE	905			82	56	68.6	2.1	89	26	43	1	0	0			3.27	-0.46	1.38	9	0	0.0	0						14	6	11	4.9	
TEXAS																																
ABILENE	1762	951.2	1011.5	81	64	72.3	0.6	90	8	52	1	1	0	62	73	5.04	0.71	2.28	13	10	0.0	0	9.7	16	45	SE	31	5	12	14	6.6	44
AMARILLO	3604	888.3	1009.3	81	53	66.9	0.4	94	21	38	9	4	0	42	49	1.88	-1.49	0.76	7	8	0.0	0	7.9	19	40	S	23	15	7	9	4.6	80
AUSTIN	597	991.9	1013.5	82	68	74.7	-0.4	89	27	52	1	0	0	67	80	9.98	6.27	3.20	14	9	0.0	0	6.8	16	40	SE	17	0	8	23	8.5	27
BROWNSVILLE	16	1011.2	1011.8	86	72	79.0	0.0	90	27+	60	1	2	0	70	78	1.16	-1.20	0.92	4	3	0.0	0	14.9	14	46	SE	17	2	15	14	6.5	61
CORPUS CHRISTI	41	1010.8	1012.5	85	72	78.4	0.9	89	28+	54	1	0	0	71	82	4.01	1.02	1.62	7	6	0.0	0	13.2	14	36	S	13	1	11	19	7.8	28
DALLAS	481	996.6	1013.7	82	66	73.8	0.9	91	27	57	1	1	0	65	78	9.28	4.45	4.63	15	6	0.0	0	10.3	16	34	NW	15+	3	6	22	8.0	34
DEL RIO	1026	975.3	1010.8	85	67	75.9		95	26	56	1	4	0	65	74	2.34	3.48	0.85	10	12	0.0	0	9.6	12	25	9	4	2	7	22	8.0	
EL PASO	3918	878.8	1007.8	86	57	71.8	-0.1	96	22	40	9	9	0	31	26	0.11	-0.29	0.11	1	1	0.0	0	4.3	24	42	W	24	19	9	3	2.9	88
FORT WORTH	537	993.6	1013.9	81	65	72.9	0.2	90	27	51	1	1	0	65	79	8.97	4.38	4.86	16	7	0.0	0	8.2	16	30	9	10	3	7	21	7.7	
GALVESTON U	7			80	73	76.3	0.5	82	31+	66	1	0	0			2.57	-0.22	1.94	6	0	0.0	0			34	SE	8					52
HOUSTON U	41			83	72	77.3	1.1	88	27	63	1	0	0			4.66	0.23	3.34	10	0	0.0	0										
HOUSTON	50	1012.9	1015.0	85	69	77.1	1.1	89	28+	54	1	0	0	67	76	6.53	2.21	2.89	14	5	0.0	0	10.1	15	32	13	8	1	8	22	8.4	51
LUBBOCK	3243	900.8	1010.0	84	58	71.1	2.9	97	21	45	9	7	0	50	57	1.63	-1.55	0.86	6	6	0.0	0	10.1	17	40	8	27+	13	9	9	5.2	
MIDLAND	2851	913.0	1009.2	84	60	71.7	-1.7	96	2	50	1	7	0	54	64	3.04	0.96	1.32	10	8	0.0	0	7.4	16	31	18	25+	13	6	12	5.4	
PORT ARTHUR	16	1014.9	1015.7	85	70	77.3	2.6	89	12	51	1	0	0	68	79	3.15	-1.79	2.15	8	3	0.0	0	9.5	15	43	NE	28	1	9	21	7.9	38
SAN ANGELO	1903	945.1	1010.5	85	63	74.0	-0.3	94	27+	55	1	7	0	61	68	3.65	0.45	1.65	11	8	0.0	0	6.6	16	23	9	16	6	12	13	6.6	
SAN ANTONIO	788	985.4	1013.0	83	67	75.0	-0.3	89	27	49	1	0	0	67	80	8.18	4.73	3.05	15	10	0.0	0	8.3	13	45	SE	17	1	7	23	8.4	22
VICTORIA	104	1009.5	1013.5	85	70	77.3	1.1	89	31+	52	1	0	0	69	79	3.34	-0.78	1.92	9	8	0.0	0	10.4	13	47Y	SE	8	0	5	26	8.6	
WACO	500	995.6	1013.4	83	68	75.6	1.3	92	27	55	1	1	0	68	80	15.00	10.43	3.45	15	8	0.0	0	8.9	15	40	17	9	1	7	23	8.3	
WICHITA FALLS	994	976.3	1012.2	82	63	72.6	0.4	89	30	53	1	0	0	62	74	5.92	1.32	1.38	14	9	0.0	0	8.2	16	42	26	13	6	11	14	6.4	
UTAH																																
MILFORD	5028			69	37	52.8	-3.7	84	30	22	9	0	11			0.85	0.16	0.40	5	0	T	T						5	14	12	6.2	
SALT LAKE CITY	4220	867.9	1010.8	68	42	54.7	-4.2	86	30	25	6	0	4	35	53	2.02	0.62	1.12	9	2	5.3	2	0.5	30	34	NW	31	9	8	14	6.1	70

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

MAY 1965

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
UTAH																																
WENDOVER	4237			67	46	56.7	- 4.7	85	16	29	6	0	3			0.41	- 0.25	0.26	8	0	T	T						9	9	13	5.5	
VERMONT																																
BURLINGTON	332	1002.7	1015.2	71	44	57.2	3.4	86	26	29	5	0	4	41	59	1.05	- 1.94	0.40	11	4	0.0	0	1.8	23	34	SW	7	7	[illegible]	16	6.4	68
VIRGINIA																																
LYNCHBURG	916			80	57	68.8	3.5	88	26+	48	30	0	0			2.21	- 1.00	0.72	8	6	0.0	0			26	W	27	7	16	8	5.7	66
NORFOLK	26	1016.6	1017.5	80	60	69.7	2.2	94	27	45	15	4	0	59	74	1.48	- 1.88	0.67	8	6	0.0	0	2.6	15	53	SW	26	6	18	7	5.6	67
RICHMOND	162	1011.5	1017.6	82	57	69.6	2.6	92	27+	46	15	7	0	56	68	0.87	- 2.85	0.38	4	5	0.0	0	1.2	18	31	SW	27	7	14	10	6.0	66
ROANOKE	1149	976.0	1017.6	80	58	69.2	3.5	88	3	44	14	0	0	55	66	3.83	0.04	1.06	11	8	0.0	0	2.8	26	29	31	25	10	14	7	5.6	
WASHINGTON																																
OLYMPIA	195	1012.5	1019.8	64	40	51.6	- 3.5	78	11	27	6	0	5	41	71	1.89	- 0.12	0.91	9	0	0.0	0	4.6	21	30	27	16	5	5	21	7.3	
SEATTLE TACOMA	400	1003.1	1019.6	61	43	51.9	- 3.6	74	27+	36	7+	0	0	42	75	1.63	- 0.10	0.66	9	1	T	0	3.0	23	28	22	16	3	11	17	7.4	42
SPOKANE	2356	930.9	1014.6	65	40	52.4	- 3.8	82	28	26	6	0	4	34	54	1.02	- 0.19	0.60	9	2	0.0	0	5.0	22	42	SW	16	5	13	13	6.7	
STAMPEDE PASS R	3958			47	34	40.2	- 3.7	69	27	22	5	0	12			4.04	- 0.21	1.04	14	0	17.3	91						4	7	20	7.7	
TATOOSH ISLAND R	101	1016.6	1019.8	53	45	49.0	- 2.1	58	21	39	4	0	0	44	85	3.36	0.36	1.66	10	0	0.0	0	7.6	23	46	S	3	3	7	21	7.8	58
WALLA WALLA U	949			70	48	59.0	- 2.0	86	28	36	5	0	0			0.74	- 0.75	0.62	4	0	0.0	0			30	NW	16	11	8	12	5.8	69
YAKIMA	1052	977.3	1015.6	72	41	56.4	- 2.1	86	28	27	5	0	3	32	43	0.05	- 0.49	0.04	2	0	T	0	5.1	30	31	20	15	13	9	9	4.9	
WEST INDIES																																
SAN JUAN P.R.	15	1013.5	1016.0	84	74	78.9	0.2	89	31	70	15+	0	0	72	81	14.99	7.87	3.08	25	13	0.0	0	6.4	9	27	NE	5	1	12	18	7.9	36
SWAN ISLAND	28			86	77	81.4	- 1.1	88	21+	72	25	0	0			3.14	- 0.16	1.12	14	1	0.0	0						7	14	10	5.9	
WEST VIRGINIA																																
BECKLEY	2504	931.3	1018.1	76	53	64.6		84	26+	35	30	0	0	51	66	1.71		0.48	13	10	0.0	0	4.1	24	26	30	28	3	10	18	7.3	
CHARLESTON	939	983.4	1017.2	82	57	69.2	4.4	88	25+	41	30	0	0	55	65	1.90	- 1.81	0.81	11	7	0.0	0	3.7	23	32	28	23	7	12	12	6.0	
ELKINS	1970	947.9	1018.4	77	48	62.3	3.0	84	26	32	14	0	1	51	71	1.45	- 3.12	0.87	12	8	0.0	0	3.3	27	24	29	17	3	18	10	6.6	
HUNTINGTON	827	987.5	1017.2	82	57	69.3	4.7	91	25	43	30	2	0	56	68	0.93	- 2.96	0.36	9	8	0.0	0	2.9	23	21	24	16	9	10	12	5.9	
PARKERSBURG U	615			81	57	69.1	5.1	89	25+	45	14	0	0			1.22	- 2.48	0.54	6	0	0.0	0			27	NW	10					66
WISCONSIN																																
GREEN BAY	682	988.5	1013.9	71	49	60.0	5.2	87	25	32	29	0	1	49	69	3.95	0.89	1.18	11	12	0.0	0	2.8	20	27	S	26	4	9	18	7.3	48
LA CROSSE	651	988.8	1013.2	71	50	60.7	1.5	89	2	32	29	0	1	49	71	5.11	1.35	1.86	15	11	0.0	0	4.2	19	25	17	5	3	6	22	7.6	
MADISON	858	982.4	1013.7	73	47	59.6	3.5	87	25	30	30+	0	2	48	68	1.86	- 1.48	0.50	11	9	0.0	0	4.2	20	31	SW	25	2	12	17	7.3	59
MILWAUKEE	672	989.8	1015.1	70	47	58.6	5.2	86	2	35	30	0	0	49	73	2.12	- 1.04	1.40	9	7	0.0	0	2.8	20	39	SW	8	5	11	15	6.7	64
WYOMING																																
CASPER	5338	834.4	1011.0	62	38	49.9	- 3.2	79	30	27	10	0	9	31	55	2.64	0.61	0.88	11	5	7.1	6	2.0	28	35	20	19	6	12	13	6.4	
CHEYENNE	6126	809.0	1010.5	63	38	50.8	- 2.1	78	30	29	10+	0	4	32	56	3.11	0.59	1.36	10	8	1.4	1	5.2	31	56	NW	14	2	14	15	7.1	68
LANDER	5563	826.3	1011.4	61	38	49.6	- 3.3	79	31	26	6	0	8	32	58	3.15	0.50	1.36	14	2	16.0	11	2.8	28	56	W	31	5	8	18	7.1	52
SHERIDAN	3964	876.4	1012.9	63	37	49.8	- 3.8	80	30	29	27+	0	8	36	61	2.12	- 0.45	0.65	15	4	4.7	T	5.1	30	35	SW	1	6	8	17	7.1	46

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

A Maximum hourly average.
B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	°C.	°C.	C.	°C.	C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
ALABAMA																																
BIRMINGHAM	189	996.3	1018.4	29.4	15.0	22.1	0.0	32.2	26+	7.2	1	3	0	15.0	68	35	- 52	22	7	6	0	0	0.6	18	12.1	NW	27	7	12	12	5.6	69
HUNTSVILLE	183	995.6	1018.2	30.0	16.7	23.5	2.2	34.4	26	10.0	13+	6	0	15.0	61	79	- 7	73	6	6	0	0	0.9	19	9.4	18	23+	9	10	12	5.5	
MOBILE	64	1010.2	1017.8	30.6	18.3	24.3	0.1	33.9	12	11.7	1	5	0	17.2	70	110	- 14	97	3	2	0	0	2.0	17	12.1	36	28	5	17	9	5.7	
MONTGOMERY	59	1011.2	1018.4	31.1	16.7	23.8	1.3	33.3	26+	9.4	1	9	0	15.6	64	34	- 54	16	3	3	0	0	0.8	21	21.0	SE	22	5	17	9	5.9	68
ALASKA																																
ANCHORAGE PRK STRIP	26			10.6	2.2	6.2	-1.5	15.6	29	- 3.9	4+	0	9			13		3	11	0	20	0										
ANCHORAGE	44	1007.1	1012.1	12.2	2.8	7.4		18.3	29	- 2.8	9+	0	9	- 1.7	53	13		4	10	1	5	T	1.3	19	10.7	17	21	3	9	19	7.8	46
ANNETTE	34	1014.2	1018.2	11.7	3.9	7.7	-1.8	21.7	20	0.0	13+	1	3	3.3	78	209	30	62	13	0	15	T	1.1	19	15.6	16	2	4	5	22	7.7	
BARROW	7	1015.9	1016.5	- 5.0	-11.7	- 8.4	-0.8	5.6	22	-24.4	15	0	31	-10.0	84	9	6	2	13	0	104	279	2.8	8	11.6	12	1	3	6	22	8.0	
BARTER ISLAND	12	1013.9	1015.8	- 4.4	- 9.4	- 6.8	-0.6	5.6	23	-20.6	6+	0	31	- 7.8	91	12	6	4	13	0	124	610	0.4	2	11.2	26	23	1	4	26	9.0	
BETHEL	38	1005.4	1011.2	3.9	- 3.3	0.3	-3.6	13.9	27+	-15.6	3	0	21	- 2.2	84	12	- 12	3	18	0	51	T	0.8	25	13.9	32	1	0	5	26	8.8	
COLD BAY	29	1007.1	1010.8	4.4	0.6	2.4	-1.8	9.4	30+	- 4.4	4	0	15	- 0.6	83	68	9	13	23	0	135	T	1.1	25	19.7	14	29+	0	2	29	9.6	
FAIRBANKS	133	993.9	1011.0	11.7	0.0	6.1	-2.3	25.6	30	-10.6	5	4	17	- 2.8	55	4	- 14	2	4	0	18	T	0.9	26	11.2	23	3	0	14	17	7.9	
JUNEAU	4	1015.6	1016.2	10.6	1.1	5.8	-1.8	17.2	27	- 3.9	11	0	13	2.8	82	113	31	28	16	0	5	T	2.4	13	17.9	12	2	3	4	24	8.2	43
KING SALMON	13	1007.8	1009.9	7.2	- 1.1	2.8	-3.5	15.0	29	-10.6	4+	0	17	- 1.1	77	42	18	11	16	0	142	T	1.6	14	15.6	9	25+	4	3	24	8.1	
KOTZEBUE	3	1011.5	1011.9	- 0.6	- 7.8	- 4.2	-3.6	13.9	28	-20.6	4	0	21	- 6.7	82	12	4	3	11	0	79	330	1.4	15	16.1	28	2	8	5	18	7.1	
MC GRATH	102	998.3	1011.1	9.4	- 1.1	4.2	-2.6	21.1	27	-12.2	4+	1	17	- 2.8	62	10	- 12	4	12	0	15	T	1.1	28	10.7	18	22	0	6	25	8.6	
NOME	4	1010.2	1010.9	0.6	- 5.6	- 2.5	-4.2	11.1	30+	-17.8	4+	0	25	- 5.0	82	29	12	7	13	0	114	102	2.1	7	17.4	28	2	7	6	18	7.1	36
ST. PAUL ISLAND	7	1009.8	1010.8	2.8	- 2.2	0.4	-1.2	5.6	31+	- 8.9	7	0	21	- 1.1	90	34	1	6	22	0	69	T	1.1	32	19.7	10	29	0	2	29	9.5	
SHEMYA	37	1005.4	1009.0	5.0	2.2	3.8	0.5	7.8	5	- 0.6	6	0	1	1.7	88	46	- 15	12	15	0	20	T	3.4	21	21.0	18	15	1	2	28	9.1	
YAKUTAT	9	1013.5	1014.6	7.8	0.6	4.0	-3.0	15.0	16	- 5.0	15	0	18	1.7	87	481	279	126	20	0	381	76	1.4	12	16.5	12	2	1	5	25	8.8	
ARIZONA																																
FLAGSTAFF	2131	785.0	1011.8	16.7	0.0	8.2	-2.3	23.3	29+	- 8.3	8	0	15	- 3.9	47	48	35	28	6	2	178	178	2.5	19	13.0	17	3	14	9	8	4.4	
PHOENIX	340	970.5	1008.7	31.7	12.2	22.1	-1.8	40.0	29	4.4	8	15	0	0.6	27	4	1	4	1	0	0	0	1.0	23	17.9Y	S	12	22	8	1	1.9	91
TUCSON	788	922.1	1008.6	30.0	12.2	21.2	-1.9	37.8	29	4.4	8	11	0	- 4.4	20	T	- 3	T	0	1	0	0	2.1	22	18.8	NE	16	24	5	2	2.1	94
WINSLOW	1492	848.6	1010.9	24.4	5.6	14.9	-3.3	32.2	19	- 2.8	8	1	2	- 2.2	37	23	15	10	5	4	0	0	3.4	22	20.6	19	7	15	12	4	3.3	
YUMA	59	1002.0	1009.2	32.2	16.1	24.3	-2.1	39.4	29	10.0	8	15	0	2.2	27	9	9	9	1	1	0	0	1.7	26	13.0	SE	31	27	3	1	1.4	96
ARKANSAS																																
FORT SMITH	137	999.0	1015.3	28.3	16.1	22.2	1.1	31.1	25+	7.2	1	0	0	16.1	72	199	66	91	14	10	0	0	1.4	15	15.2	SW	27	5	10	16	6.8	62
LITTLE ROCK	78	1006.8	1016.1	28.3	16.7	22.6	1.2	31.1	8	8.3	2	0	0	17.2	76	138	4	92	10	8	0	0	1.7	18	12.5	S	14	7	9	15	6.2	66
TEXARKANA	113	1003.1	1016.0	28.3	18.3	23.4	1.4	31.1	26+	11.7	1	0	0	18.3	76	132	7	53	14	10	0	0	2.4	17				6	8	17	6.9	
CALIFORNIA																																
BAKERSFIELD	151	995.6	1013.1	28.3	13.3	20.7	-0.6	36.7	29+	5.6	7	8	0	2.2	32	1	- 5	1	1	0	0	0	2.2	33	11.2	34	21	22	7	2	2.5	
BISHOP	1252			25.0	5.6	15.2	-1.8	33.9	18+	- 2.8	7	4	2			1	- 5	1	1	0	T	0						11	14	6	4.8	
BLUE CANYON	1609			16.1	5.6	10.7	-0.6	23.3	29	- 3.3	6	0	5			11	- 67	9	4	0	T	T			11.6	17	4	15	10	6	4.4	
BURBANK	221	987.5	1013.2	23.3	11.7	17.4	-0.6	35.0	28	7.2	8	2	0	9.4	65	T	- 5	T	0	0	0	0	2.5	17	8.0	17	21+	12	13	6	4.6	
EUREKA U	13			12.2	7.8	9.9	-1.7	14.4	19	3.9	7+	0	0			11	- 44	4	5	0	0	0			14.8	N	6	11	7	13	5.7	64
FRESNO	100	1001.7	1013.2	29.4	10.0	19.7	-0.4	37.8	29	2.2	7	12	0	5.0	42	T	- 8	T	0	0	0	0	2.8	32	13.4	NW	19+	22	6	3	2.5	96
LONG BEACH	10	1012.9	1014.3	21.7	11.7	16.7	-0.8	28.3	27	6.7	7	0	0	10.0	69	T	- 3	T	0	0	0	0	1.4	22	8.9	27	21+	12	15	4	4.5	
LOS ANGELES	30	1010.2	1013.9	19.4	12.2	15.9	-0.8	22.8	17	10.0	8+	0	0	10.6	72	T	- 3	T	0	0	0	0	2.7	25	15.6Y	W	21	10	13	8	4.9	
LOS ANGELES U	82			22.2	12.8	17.4	-0.8	28.3	28	9.4	8	0	0			0	- 4	0	0	0	0	0			11.2	SW	7	9	14	8	5.3	50
MT SHASTA R	1080			18.3	3.3	10.9	-1.2	26.7	12	- 2.8	6	0	7			17	- 34	13	7	0	T	T										
OAKLAND	2	1015.6	1015.8	18.3	10.6	14.3	-1.1	22.8	11	7.2	6	0	0	8.3	69	T	- 17	T	0	0	0	0	4.2	28	13.9	29	4	19	6	6	3.6	
RED BLUFF	104	1001.0	1013.7	27.8	11.7	19.7	-0.5	34.4	29	5.6	5	8	0	3.3	37	T	- 29	T	0	0	0	0	1.9	33	14.3	N	6	20	2	9	3.5	91
SACRAMENTO	5	1012.9	1013.7	26.7	8.9	18.0	0.2	34.4	29+	3.3	5	4	0	6.7	55	2	- 13	2	1	0	0	0	1.8	26	14.3	NW	6	18	8	5	3.2	93
SANDBERG R	1377			17.8	6.1	12.1	-1.6	27.8	29+	- 1.7	6	0	4			T	- 8	T	0	0	0	0	4.4	35	21.0	36	14	12	13	6	4.5	
SAN DIEGO	4	1013.5	1014.4	20.0	13.9	16.9	-0.8	24.4	28	9.4	8	0	0	10.6	69	T	- 4	T	0	0	0	0	2.0	24	8.0	NW	28	5	15	11	5.9	65
SAN FRANCISCO	2	1015.9	1016.5	17.8	8.3	12.9	-1.7	25.6	11	5.0	5	0	0	6.7	73	T	- 12	T	0	0	0	0	5.6	29	18.3	W	4	20	4	7	3.4	
SAN FRANCISCO U	16			16.1	9.4	12.7	-1.4	23.3	11	7.8	5	0	0			T	- 16	T	0	0	0	0			17.0	W	4					79
SANTA CATALINA	478			19.4	11.7	15.3	0.3	30.6	27	8.9	7	0	0			T	- 9	T	0	0	0	0						10	12	9	5.3	
SANTA MARIA	72			18.9	7.2	13.2	-1.0	25.6	16	1.1	7	0	0			T	- 6	T	0	0	0	0						14	11	6	4.2	
STOCKTON	7	1013.5	1014.5	28.3	10.6	19.4	0.4	36.1	28	4.4	5	10	0	6.7	50	1	- 10	1	2	0	0	0	3.8	30	13.4	34	23	21	4	6	3.0	
COLORADO																																
ALAMOSA	2297			18.3	0.6	9.5	-0.9	26.1	22	- 8.9	9	0	14			15	- 4	9	8	0	13	0						12	13	6	4.7	
COLORADO SPRINGS	1873	807.7	1009.3	20.0	5.6	12.7	-0.1	27.2	20	- 0.6	11	0	1	- 0.6	46	46	- 8	20	8	6	0	0	0.4	18	21.9	17	23	7	13	11	5.9	
DENVER	1610	832.7	1008.6	21.7	6.7	13.9	0.5	28.9	20+	- 1.7	9	0	1	1.7	51	46	- 22	25	10	5	T	0	0.6	21	18.8	SE	23	5	12	14	6.5	64
GRAND JUNCTION	1480	848.0	1008.2	23.3	10.0	16.9	0.1	31.7	21+	0.6	9	0	0	0.0	38	34	19	13	8	2	T	0	1.2	19	15.6	S	7	6	14	11	6.2	65
PUEBLO	1428	851.7	1008.4	25.6	7.2	16.3	0.4	32.2	31+	0.0	11	3	1	0.0	39	8	- 38	4	6	6	0	0	0.6	27	21.9	N	2	8	14	9	5.2	74

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

MAY 1965

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
CONNECTICUT																																
BRIDGEPORT	2	1016.6	1017.1	21.7	10.6	16.3	1.5	30.6	4	6.7	14+	0	0	10.0	71	106	11	54	8	4	0	0	1.8	24	15.6	12	26	9	15	7	5.6	
HARTFORD	52	1009.5	1015.9	26.1	10.0	18.0	2.5	34.4	27+	2.8	7	5	0	7.8	56	30	- 56	23	7	4	0	0	0.8	24	12.5	SW	28+	5	11	15	6.5	73
NEW HAVEN	2			21.1	9.4	15.4	1.4	29.4	4	5.0	7+	0	0			55	- 39	20	8	0	0	0			10.7	SW	27	7	17	7	5.5	73
DELAWARE																																
WILMINGTON	24	1014.2	1017.2	25.0	12.8	18.9	1.8	33.9	27	7.2	30+	2	0	11.1	66	36	- 54	15	8	6	0	0	0.9	25	9.8	29	27	5	13	13	6.5	
DIST.OF COLUMBIA																																
WASH NATL AP	4	1014.9	1017.4	27.2	13.9	20.6	1.8	35.0	27	9.4	14	5	0	12.2	64	44	- 61	24	7	2	0	0	0.6	18	11.6	NNW	16	4	16	11	6.4	62
FLORIDA																																
APALACHICOLA U	4			28.3	20.0	24.2	0.4	31.7	30	15.0	1	0	0			33	- 41	33	1	1	0	0			9.8	E	23	14	12	5	4.0	84
DAYTONA BEACH	9	1018.3	1019.6	28.9	16.1	22.4	-1.1	31.7	29+	9.4	1	0	0	16.1	70	2	- 70	2	1	3	0	0	2.2	11	10.3	6	24	12	15	4	4.3	
FORT MYERS	5	1018.0	1018.1	31.7	18.3	24.9	-0.3	33.9	31+	13.3	1	11	0	17.8	68	119	22	93	5	6	0	0	1.5	9	17.9	22	31	9	18	4	4.7	
JACKSONVILLE	7	1018.0	1018.9	31.7	18.3	24.8	0.5	35.6	20	13.3	2+	9	0	17.2	65	24	- 64	11	4	3	0	0	1.9	15	12.5	E	28	16	11	4	3.8	88
KEY WEST	1	1016.3	1017.0	30.0	25.0	27.5	1.4	31.7	31+	22.8	2+	0	0	20.0	66	18	- 52	16	3	1	0	0	4.9	9	11.6	E	7	13	13	5	4.5	88
LAKELAND U	65			30.6	18.9	24.9	0.0	33.3	29+	15.6	1	9	0			14	- 76	13	3	0	0	0						11	18	2	4.2	86
MIAMI	2	1017.6	1017.9	29.4	22.2	25.8	0.5	33.3	13	16.1	2	1	0	17.8	63	11	-152	6	3	1	0	0	3.8	10	11.2	32	13	1	22	8	6.1	
ORLANDO	33	1014.9	1019.1	31.7	18.3	25.1	-0.3	34.4	29+	13.3	1	12	0	16.7	67	13	- 77	13	2	2	0	0	2.5	11	9.8	4	29	12	17	2	4.2	
PENSACOLA	34	1014.6	1018.6	28.9	18.3	23.7	-0.4	31.7	31+	11.1	1	0	0	17.8	72	8	-108	5	3	0	0	0	1.7	16	12.1	SE	15					77
TALLAHASSEE	18	1016.6	1018.9	32.2	15.6	23.9	0.1	36.1	28	7.2	1	18	0	15.0	62	T	-104	T	0	2	0	0	0.5	18	8.0	17	28	11	19	1	4.2	
TAMPA	6	1018.3	1018.4	31.7	17.8	24.6	-0.3	35.0	22	11.1	1	12	0	16.7	66	17	- 55	10	4	4	0	0	0.9	8	8.0	10	22+	11	15	5	4.8	82
WEST PALM BEACH	5	1018.0	1018.5	29.4	20.6	25.0	-0.3	32.8	13	13.3	2	2	0	17.2	63	35	- 95	10	3	1	0	0	3.9	10	15.6	1	13	14	11	6	4.7	
GEORGIA																																
ATHENS	244	989.5	1018.2	31.1	15.6	23.2	2.0	33.3	26+	8.3	1	8	0	15.6	66	24	- 68	24	8	9	0	0	0.8	27	8.9	30	12	12	10	9	5.0	
ATLANTA	308	982.4	1018.6	28.3	15.6	22.1	1.5	32.2	19	10.0	30+	1	0	13.9	64	64	- 17	22	8	7	0	0	1.0	26	11.2	SE	20	10	13	8	5.3	76
AUGUSTA	44	1012.5	1017.7	32.2	15.0	23.8	1.8	35.6	19	6.7	1	21	0	15.6	67	48	- 28	23	7	7	0	0	0.6	22	12.5	31	28	13	9	9	4.9	
COLUMBUS	117			32.8	15.6	24.1	1.8	35.0	24	6.7	1	21	0	14.4	62	65	- 24	44	3	0	0	0	0.4	22	10.3	9	9	10	13	8	5.3	
MACON	108	1006.1	1018.8	32.2	15.6	23.9	0.7	36.7	19	7.2	1	17	0	15.0	62	41	- 43	34	5	6	0	0	0.3	26	12.5	SW	28	10	14	7	4.7	87
ROME	194			30.0	13.3	21.7	1.3	32.2	26+	5.6	1	3	0			23	- 73	9	8	0	0	0										
SAVANNAH	14	1016.9	1018.7	31.1	16.1	23.8	0.8	34.4	27+	8.3	1	9	0	16.7	69	67	- 29	39	6	6	0	0	1.5	20	18.8	N	12	14	14	3	4.1	84
HAWAII																																
HILO	9	1014.6	1015.9	27.8	19.4	23.6	0.8	30.6	14	17.8	1	0	0	18.9	79	535	298	261	25	6	0	0	1.9	17	11.6	11	9+	0	5	26	8.9	20
HONOLULU	2	1014.9	1015.5	27.8	22.2	25.0	0.6	30.0	11+	19.4	2	0	0	20.0	73	184	158	87	14	2	0	0	2.4	8	11.2	NE	29	2	12	17	7.5	55
KAHULUI	15	1012.9		28.9	18.9	23.9	-0.1	35.6	23	16.7	2	1	0			11	- 7	8	6	1	0	0	2.2	7	13.4	NE	29	2	15	14	6.9	59
LIHUE	35	1010.8	1016.0	26.1	21.1	23.6	0.0	27.8	13+	18.9	2	0	0	20.6	84	215	150	103	20	3	0	0	1.6	7	11.6	S	13	2	10	19	7.5	39
IDAHO																																
BOISE	865	913.6	1013.2	20.0	5.6	12.7	-1.8	30.0	29	- 2.8	6	0	4	0.6	48	20	- 12	17	7	2	T	T	2.1	30	12.5	NW	23	8	9	14	6.1	67
IDAHO FALLS 42NW R	1460			17.2	1.7	9.4	-2.1	26.7	29	- 5.6	4	0	13			28	6	9	8	0			1.2	29	15.6	SW	16					
IDAHO FALLS 46W R	1503			16.7	1.7	9.3	-2.1	25.0	29	- 7.2	3	0	13			34	6	21	7	0	211	127	1.7	23	17.9	SW	16					
LEWISTON	431			21.1	6.7	13.7	-1.0	30.0	28	1.1	18+	0	0			12	- 27	8	6	0	T	0						7	9	15	6.5	
POCATELLO	1358	860.5	1012.4	17.8	2.8	10.3	-2.6	26.7	29	- 3.3	6	0	9	0.0	53	21	- 7	8	11	3	10	1	1.8	25	15.2	SW	17	9	7	15	6.4	57
ILLINOIS																																
CAIRO U	96			28.3	17.8	23.0	2.4	31.7	31+	10.6	29	0	0			110	- 2	30	12	5	0	0			15.6	SW	9	9	5	17	6.2	69
CHICAGO O HARE	201	990.5	1014.8	23.3	9.4	16.5	2.2	30.6	1	0.0	29	0	1	10.0	68	60	- 36	17	8	6	0	0	1.9	20	20.6	22	15	2	16	13	6.7	
CHICAGO MIDWAY	185	992.6		23.9	11.7	17.8	2.2	29.4	1	2.8	29	0	0	10.0	62	37	- 57	25	8	7	0	0	2.1	22	15.2	SW	8	3	15	13	6.5	70
MOLINE	177	992.2	1013.4	25.0	12.8	18.8	2.6	31.1	7	1.1	29	0	0	12.2	67	103	6	25	13	10	0	0	2.2	20	17.0	SW	7	5	11	15	6.4	64
PEORIA	199	990.9	1014.6	25.6	12.8	19.3	2.9	30.6	31	0.6	29	0	0	12.8	69	98	- 11	27	10	8	0	0	2.0	21	15.2	NW	4	8	10	13	6.0	71
ROCKFORD	221	987.1	1013.9	23.3	10.0	16.6	1.6	30.0	24	0.6	29	0	0	10.0	67	144	46	55	11	10	0	0	2.3	21	11.2	26	27+	3	16	12	6.5	
SPRINGFIELD	179	992.9	1014.6	28.3	14.4	21.3	3.6	33.3	22	3.9	29	2	0	12.2	60	42	- 56	23	6	5	0	0	3.5	19	13.9	W	26	9	10	12	5.7	65
INDIANA																																
EVANSVILLE	116	1003.1	1016.8	27.8	13.9	20.9	1.6	32.2	25	3.9	29	1	0	14.4	68	23	- 83	12	8	2	0	0	1.5	22	18.8	NW	18	6	13	12	5.5	66
FORT WAYNE	241	986.1	1016.0	25.0	11.7	18.4	2.4	29.4	25+	1.7	29	0	0	11.1	67	58	- 37	31	8	9	0	0	1.8	23	14.8	W	16	5	17	9	6.0	69
INDIANAPOLIS	241	987.5	1016.3	26.7	13.9	20.2	3.8	33.9	25	2.2	29	2	0	12.2	64	37	- 65	15	9	9	0	0	1.9	22	16.5	W	18	6	14	11	5.9	76
SOUTH BEND	236	987.5	1015.2	24.4	11.7	17.9	3.1	29.4	8	2.8	29	0	0	8.9	57	42	- 50	16	7	5	0	0	2.3	22	14.3	27	26	5	15	11	6.5	
IOWA																																
BURLINGTON	212			25.6	13.3	19.6	3.0	31.1	31	4.4	29	0	0	14.4	73	50	- 53		11	10	0	0	2.1	21	11.2	31	26	8	10	13	5.9	

See footnotes at end of table

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
IOWA																																
DES MOINES	286	978.0	1012.4	25.0	12.8	19.0	3.1	31.1	1	3.9	28	0	0	12.2	67	99	- 5	27	12	12	0	0	2.2	20	18.8	SW	5	4	12	15	6.8	61
DUBUQUE	325			22.2	10.6	16.3	1.8	29.4	25	- 0.6	29	0	1			160	53	57	12	0	0	0						2	13	16	7.5	
SIOUX CITY	334	971.2	1010.6	25.0	12.2	18.4	2.1	32.8	2	3.3	28	2	0	11.7	68	147	65	45	15	12	0	0	1.5	20	22.4	SE	22	5	13	13	6.4	63
WATERLOO	265	980.7	1012.1	22.2	8.9	15.7	0.2	28.9	2	- 1.7	29	0	2	11.1	75	133	3P	44	15	14	0	0	1.8	18	13.9	18	5	4	13	14	7.1	
KANSAS																																
CONCORDIA	448	958.3	1010.4	26.1	12.8	19.5	2.2	32.2	1	3.9	10	1	0	12.2	65	132	33	45	13	14	0	0	3.9	18	21.0	S	7	11	5	15	5.9	64
DODGE CITY	787	921.1	1010.2	26.1	12.2	19.1	1.5	35.0	2	2.8	9	3	0	10.6	64	144	62	69	11	11	0	0	3.6	18	18.8	W	25	12	8	11	5.5	69
GOODLAND	1111	884.5	1009.1	25.6	7.8	16.7	2.0	34.4	2	0.6	11	6	0	3.9	51	87	26	39	7	6	0	0	2.0	19	23.7	30	22	11	10	10	5.4	
TOPEKA	267	981.0	1012.2	26.1	14.4	20.3	2.3	30.0	17	6.7	12	0	0	13.9	66	87	- 25	25	9	11	0	0	3.1	19	14.8	SW	26	6	10	15	6.4	67
WICHITA	403	964.8	1011.8	26.1	14.4	20.4	1.6	32.2	6	8.3	28	1	0	14.4	70	159	58	67	10	12	0	0	4.1	18	25.0	SW	6	7	8	16	6.4	57
KENTUCKY																																
COVINGTON	265	985.8	1017.0	26.7	12.2	19.5	2.6	31.1	25	1.1	29	0	0	11.7	63	37	- 54	21	8	4	0	0	1.8	23	15.6	24	16	7	13	11	5.9	
LEXINGTON	294	982.7	1017.8	26.7	14.4	20.5	2.4	31.7	26+	6.7	29	0	0	12.8	64	30	- 67	13	9	6	0	0	2.1	20	15.6	22	27	8	13	10	5.6	
LOUISVILLE	144	999.3	1016.9	27.2	15.0	21.1	3.1	31.1	25	6.1	29	0	0	13.9	66	41	- 58	18	8	6	0	0	1.6	24	10.3	N	29	7	13	11	5.8	75
LOUISIANA																																
ALEXANDRIA	28	1012.9	1017.1	28.9	16.7	22.9	0.2	31.7	26	6.1	1	0	0	17.8	77	44	- 96	13	6	5	0	0	1.4	16	8.0	19	26	1	13	17	7.6	
BATON ROUGE	20	1014.9	1017.7	29.4	18.3	24.0	0.2	32.2	26+	10.0	1	2	0	18.3	76	99	- 23	29	9	4	0	0	2.1	14	13.0	13	23	2	13	16	7.3	
LAKE CHARLES	4	1015.2	1016.4	29.4	18.9	24.2	-0.1	32.2	12	10.0	1	1	0	18.9	79	103	- 14	66	6	2	0	0	3.5	15	11.2	18	26	1	15	15	7.3	
NEW ORLEANS	1	1016.6	1017.5	29.4	18.9	24.2	0.6	31.7	31+	9.4	2+	0	0	18.9	74	92	- 19	40	9	6	0	0	2.4	14	10.3	9	22	4	14	13	6.5	
SHREVEPORT	77	1006.4	1015.6	28.3	18.3	23.2	0.3	31.7	27	11.1	2	0	0	18.3	80	137	15	33	13	8	0	0	3.2	17	15.6	27	28	4	9	18	7.4	44
MAINE																																
CARIBOU	190			15.0	3.9	9.5	-0.4	22.8	22	- 2.2	3+	0	6			60	- 17	13	14	0	0	0						4	10	17	7.0	
PORTLAND	19	1013.2	1015.5	19.4	6.1	12.7	1.0	30.0	26+	- 1.7	15+	0	2	5.0	64	12	- 74	5	8	2	0	0	0.5	20	11.6	W	28	8	9	14	6.4	63
MARYLAND																																
BALTIMORE	45	1011.9	1017.3	26.1	12.8	19.4	1.4	35.0	27	5.6	30	3	0	12.2	68	45	- 56	23	8	3	0	0	0.8	27	14.8	NW	16	6	16	9	6.0	53
MASSACHUSETTS																																
BLUE HILL OBS R	192			22.2	8.9	15.3	1.6	32.2	10	5.0	7	1	0			34	- 55	16	9	0	0	0			17.0	NNW	13					65
BOSTON	5	1014.6	1015.6	21.1	9.4	15.3	0.4	33.3	26	5.6	3	1	0	7.8	67	24	- 61	13	6	3	0	0	0.6	22	12.1	SW	22	11	7	13	5.9	67
NANTUCKET	13	1015.9	1016.1	16.1	7.2	11.7	0.2	25.6	26	3.3	15+	0	0	7.2	77	18	- 55	10	4	3	0	0	1.5	23	13.9	NE	14	8	7	16	6.5	63
PITTSFIELD	357			22.2	6.7	14.3	1.8	29.4	26+	0.6	15+	0	0			39	- 59	13	9	0	0	0										
WORCESTER	301	979.3	1016.0	21.7	8.3	14.9	2.1	31.1	26	3.9	7	0	0	5.0	56	38	- 58	22	8	4	0	0	2.2	28	13.0	31	4	9	7	15	6.0	
MICHIGAN																																
ALPENA	210			20.6	5.0	12.7	2.4	30.6	25+	- 3.9	5	0	6			108	34	56	12	0	0	0			13.4	NW	3	6	15	10	6.1	74
DETROIT	189	993.2	1016.0	23.3	11.1	17.3	2.3	30.0	9	5.6	29	0	0	8.9	60	55	- 35	13	11	9	0	0	1.1	25	17.9	W	16	6	12	13	6.4	63
DETROIT M WAYNE CO	193	991.9	1015.8	23.9	9.4	16.9	2.2	31.1	25	3.3	29	0	0	8.9	62	29	- 61	12	9	6	0	0	1.5	22				5	13	13	6.3	
DETROIT WILLOW RUN	217	988.2	1016.2	22.8	8.3	15.7	0.8	28.9	25	1.7	21	0	0	8.3	64	47	- 41	20	12	7	0	0	1.8	22	15.6	22	16	5	12	14	6.4	
FLINT	235	987.8	1015.6	23.3	9.4	16.4	3.5	31.1	25	2.8	30	0	0	8.9	63	24	- 62	12	10	7	0	0	1.8	22	13.4	25	27	4	9	18	6.8	
GRAND RAPIDS	239	986.5	1015.3	23.9	10.0	16.8		31.7	7	1.1	30	0	0	8.9	65	39		16	9	5	0	0	1.8	21	16.1	SW	16	4	11	16	6.6	61
HOUGHTON LAKE	351	973.6	1015.6	21.7	7.2	14.4		28.3	25	1.1	5	0	0	6.7	65	71		19	15	10	0	0	1.7	22	13.4	29	3	4	13	14	6.9	
LANSING	256	984.1	1015.6	23.3	9.4	16.2	2.3	30.0	25+	- 0.6	30	0	1	10.6	69	26	- 69	9	8	6	0	0	2.1	23	17.9	SW	26	6	11	14	6.4	60
MARQUETTE U	206			18.3	6.1	12.3	2.4	32.8	25	1.1	28+	1	0			92	17	26	13	6	T	0			15.6	SW	8	4	12	15	7.1	66
MUSKEGON	191	991.9	1014.8	22.2	10.6	16.3	3.1	28.3	24	1.7	30	0	0	8.9	64	58	- 18	34	7	5	0	0	2.1	20	17.9	23	26	7	9	15	6.4	
SAULT STE MARIE	220	987.8	1014.6	17.2	4.4	11.0	1.2	27.2	26+	- 1.1	1	0	4	4.4	69	112	42	26	12	8	0	0	0.7	19	14.3	26	9	4	12	15	7.0	60
MINNESOTA																																
DULUTH	435	961.4	1012.8	17.2	5.0	11.1	1.6	26.7	25	0.0	28	0	1	3.9	66	75	- 8	17	21	11	25	T	0.7	11	18.3	SW	25	2	13	16	7.3	50
INTERNATIONAL FALLS	359	968.8	1011.8	18.3	4.4	11.2	0.8	28.9	13	- 2.2	29	0	5	5.0	69	88	21	20	14	7	15	T	1.1	19	17.9	16	25	7	9	15	6.5	
MINNEAPOLIS	254	981.4	1011.7	20.6	8.9	14.8	0.8	29.4	2	0.6	29	0	0	8.3	68	200	119	77	18	13	T	T	0.8	16	17.0	W	24	3	9	19	7.5	39
ROCHESTER	395	965.1	1012.5	20.0	9.4	14.7	0.9	28.3	24	0.6	29	0	0	9.4	72	105	12	38	14	13	T	0	2.5	20	15.6	23	24	4	6	21	7.6	
ST CLOUD	315	973.9	1011.5	19.4	8.3	13.8	0.7	26.1	24+	0.6	29	0	0		68	172	83	40	14	0	T	T						4	9	18	7.5	
MISSISSIPPI																																
JACKSON	94	1006.1	1017.8	30.6	16.1	23.3		32.8	26+	6.1	1	8	0	16.7	71	35		16	5	4	0	0	2.2	16	9.4	SE	15	9	9	13	5.9	67
MERIDIAN	88	1007.5	1018.5	30.6	14.4	22.3	-0.1	33.3	26+	5.6	1	6	0	15.6	69	8	- 92	7	3	3	0	0	1.4	19	8.9	20	27	6	13	12	5.9	
VICKSBURG U	71			28.9	18.9	23.9	0.9	31.1	31+	14.4	3+	0	0			58	- 46	31	8	0	0	0			8.5	SE	23	5	9	17	6.4	74

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
MISSOURI																																
COLUMBIA	237	985.8	1013.7	27.2	15.6	21.5	3.5	32.2	7	5.0	29	1	0	12.2	59	54	- 66	34	6	4	0	0	3.2	20	12.5	NW	29	7	11	13	6.1	65
KANSAS CITY	226	985.8	1012.4	28.3	16.1	22.0	3.3	32.2	31+	8.3	29	2	0	12.2	57	56	- 56	17	8	6	0	0	3.1	19	17.0	SE	21	5	9	17	6.7	69
ST JOSEPH	247			28.3	14.4	21.2	3.4	32.8	31	6.1	29+	1	0			51	- 60	15	8	5	0	0	3.3	19	15.6	27	26	8	10	13	5.9	
ST LOUIS	163	995.3	1015.3	27.2	15.6	21.4	3.5	31.7	31+	5.6	29	0	0	12.2	58	35	- 60	16	6	5	0	0	2.6	20	14.8	SE	26+	9	7	15	6.1	65
SPRINGFIELD	386	970.2	1015.0	26.1	13.9	20.2	2.1	30.0	22	3.9	29	0	0	15.0	75	60	- 74	25	10	6	0	0	3.3	18	21.0	W	26	7	13	11	6.2	66
MONTANA																																
BILLINGS	1087	888.6	1012.1	17.8	5.6	11.4	-2.3	28.9	30	0.0	6	0	1	1.7	57	48	0	20	8	1	89	0	1.6	31	21.0	NW	17	6	9	16	6.7	55
GLASGOW	696			18.3	5.0	11.8	-1.1	26.7	16	0.0	3	0	1			83	45	45	10	0	T	T						4	15	12	6.8	
GREAT FALLS	1116	886.6	1013.7	17.2	4.4	10.8	-0.8	27.2	29	- 1.7	2	0	4	1.1	54	37	- 16	10	13	1	T	0	2.2	27	19.2	W	29+	2	11	18	7.5	71
HAVRE	787			18.3	3.9	10.9	-1.7	27.2	29	- 2.2	18	0	6			26	- 13	8	11	0	T	T			24.1	W	16	5	12	14	6.9	65
HELENA	1167	879.4	1014.3	16.7	3.3	10.1	-1.6	25.6	29+	- 2.8	3	0	8	0.6	57	56	16	15	14	2	127	T	2.5	29	13.4	SW	16	5	10	16	7.0	60
KALISPELL	904	909.6	1014.5	16.7	1.1	8.9	-2.3	25.0	28	- 3.3	5	0	14	0.0	54	19	- 24	9	7	4	5	T	0.4	21	17.9	23	16	3	10	18	7.5	
MILES CITY	801	919.1	1011.7	19.4	6.1	12.5	-1.6	29.4	30	- 1.1	27	0	2	2.8	58	36	- 8		11	3	T		2.1	31								
MISSOULA	972	903.5	1015.6	17.2	1.7	9.4	-2.1	26.7	28	- 5.6	18	0	10	0.6	57	16	- 31	9	7	2	T	0	1.3	31	14.8	NW	25+	4	8	19	7.5	55
NEBRASKA																																
GRAND ISLAND	561	945.1	1010.4	24.4	11.1	17.8	1.9	33.9	1	2.8	28	2	0	10.6		152	54	51	12	11	0	0	2.1	18	15.6	21	5	10	5	16	6.1	
LINCOLN U	351			25.0	13.3	19.3	2.3	32.2	1	5.6	28	1	0			159	71	74	12	0	0	0			22.4	SE	5	7	9	15	6.4	52
NORFOLK	471			24.4	10.6	17.6	1.9	32.2	1	2.2	28	1	0			168	75	40	12	0	0	0						7	12	12	6.1	
NORTH PLATTE	846	912.3	1008.6	23.9	7.2	15.6	0.9	32.8	1	- 0.6	11+	1	2	6.7	61	106	31	49	11	8	0	0	0.7	12	19.2	W	5	5	12	14	6.4	69
OMAHA	298	976.3	1011.2	26.7	13.9	20.1	2.8	33.9	1	4.4	28	4	0	12.2	64	157	69	28	13	13	0	0	2.2	21	17.9	NW	17	7	8	16	6.5	58
SCOTTSBLUFF	1206	875.4	1009.7	21.7	6.7	14.1	0.3	30.6	30+	0.6	10	0	0	3.9	58	84	15	27	11	8	25	T	1.1	34	17.0	32	14	5	10	16	6.8	
VALENTINE	789			22.2	7.2	14.5	0.6	32.2	1	- 1.1	28	1	1			95	27	37	10	8	0	0						7	13	11	6.1	62
NEVADA																																
ELKO	1539	842.5	1013.1	18.3	0.0	9.2	-1.9	27.2	29+	-12.2	6	0	15	- 1.7	52	27	3	9	11	1	20	T	1.3	26	16.1	24	1	7	8	16	6.8	
ELY	1906	805.6	1010.8	16.7	- 1.1	7.7	-2.4	25.6	30+	-13.3	7	0	18	- 3.9	48	14	- 8	9	4	0	25	T	0.6	26	21.5	S	21	2	15	14	6.9	76
LAS VEGAS	659	933.6	1008.8	27.8	13.9	20.9	-2.3	36.1	30	7.2	8	9	0	- 1.1	26	10	8	8	3	4	0	0	2.3	22	19.2	SW	21	20	3	8	3.7	86
RENO	1342	864.5	1013.5	22.2	2.2	12.2	0.1	30.6	29+	- 6.7	3	0	9	- 1.1	43	5	- 9	3	5	2	T	T	1.3	33	15.2	SW	1	9	9	13	6.0	63
WINNEMUCCA	1310	866.2	1013.7	18.9	1.1	10.2	-1.9	28.9	29	-10.6	6	0	14	- 2.8	45	27	4	8	7	0	137	102	1.7	33	14.8	W	16+	7	11	13	6.2	58
NEW HAMPSHIRE																																
CONCORD	103	1003.1	1015.6	23.3	5.0	13.9	0.9	31.7	10	- 1.7	24+	0	8	4.4	57	15	- 65	7	8	4	0	0	0.6	28	10.3	W	28+	10	10	11	5.8	67
MT WASHINGTON OBS	1909			6.1	- 1.7	2.4	0.8	13.3	27	- 8.3	5	0	22			61	- 87	23	11	0	28	178			40.2Y	W	26	6	9	16	6.9	43
NEW JERSEY																																
ATLANTIC CITY	20	1015.2	1017.6	24.4	11.1	17.8	1.6	33.9	26	5.6	31+	4	0	11.1	69	66	- 23	24	8	5	0	0	1.1	23	11.6	20	15	5	17	9	6.0	64
ATLANTIC CITY U	3			21.1	13.3	17.1	1.8	33.3	26	9.4	8	2	0			61	- 20	31	7	0					13.0	SSW	27					
NEWARK	3	1015.6	1016.8	25.6	13.9	19.6	2.7	36.1	27	8.3	7	4	0	10.0	58	31	- 61	13	7	3	0	0	1.4	24	12.5	25	27	6	19	6	5.5	
TRENTON U	17			25.0	13.3	19.1	2.2	33.3	27	6.7	7	2	0			24	- 68	8	8	5	0	0			15.6	W	27	7	17	7	5.4	71
NEW MEXICO																																
ALBUQUERQUE	1618	835.1	1009.1	25.6	7.8	16.5	-1.9	31.7	20	0.6	8	0	0	- 2.2	34	5	- 14	4	3	4	0	0	1.4	21	23.2	E	10	16	11	4	3.7	81
CLAYTON	1515			23.9	7.8	15.8	0.3	30.6	21+	0.0	10	0	1			44	- 25	15	10	0	T	T						16	5	10	4.5	
RATON	1944			21.1	3.9	12.4	-0.6	27.2	21+	- 4.4	9	0	3			88	30	49	10	0	25	T						15	10	6	4.3	
ROSWELL	1102			30.6	10.6	20.6	0.6	37.8	21	1.1	9	10	0			9	- 24	6	4	6	0	0			12.5	21	13+	17	4	10	4.5	76
SILVER CITY	1638			25.6	7.8	16.6	-1.6	31.1	21	1.7	9	0	0			T	- 7	T	0	0	0	0						22	6	3	2.8	
NEW YORK																																
ALBANY	84	1005.4	1016.1	23.3	7.2	15.3	0.9	32.8	27	0.6	14	1	0	5.6	55	31	- 57	13	8	3	0	0	1.2	26	16.1	NW	11	5	11	15	6.5	57
BINGHAMTON	485	958.0	1016.6	21.7	8.9	15.1	2.3	28.9	3	3.3	30	0	0	7.8	64	44	- 45	19	8	7	0	0	1.7	27	18.8	SW	16	4	13	14	6.6	79
BUFFALO	215	990.5	1016.2	21.7	9.4	15.3	2.7	28.9	16	2.2	1	0	0	7.8	65	31	- 44	8	11	3	0	0	2.3	23	15.2	SW	28	6	14	11	6.4	68
NEW YORK U	40	1014.2	1017.2	25.0	13.3	19.1	2.2	34.4	26	7.8	7	4	0	8.9	57	40	- 53	18	7	1	0	0	1.0	23	10.7	W	17	7	21	3	4.6	73
J.F. KENNEDY	5	1016.3	1016.9	21.7	11.7	16.6	0.9	32.8	26	6.1	7	1	0	10.0	70	41	- 52	17	10	1	0	0	1.9	20	10.7	21	28+	8	20	3	5.3	
NEW YORK LA GUARDIA	3	1014.9	1016.7	23.9	15.0	19.5	2.8	34.4	26	10.0	8+	2	0	10.0	58	34	- 57	17	6	1	0	0	1.4	22	11.2	W	28+	6	20	5	5.4	
ROCHESTER	167	997.0	1017.0	22.8	8.9	15.6	1.9	30.6	26	2.2	1	0	0	6.7	59	13	- 58	6	6	4	0	0	2.1	24	16.5	SW	27	7	11	13	5.9	72
SYRACUSE	127	1001.4	1016.1	22.8	7.8	15.2	0.9	31.7	9	1.7	14	0	0	7.2	62	41	- 42	14	7	4	0	0	1.6	28	13.9	W	27	8	13	10	5.8	60
NORTH CAROLINA																																
ASHEVILLE	652	943.8	1019.3	26.1	11.1	18.8		29.4	3	3.9	1	0	0	13.3	77	85	35	32	12	12	0	0	0.8	35	12.5	35	11	12	8	11	5.5	64
CAPE HATTERAS R	2	1017.6	1018.0	24.4	16.7	20.5	0.5	27.8	27+	11.7	15+	0	0	16.1	79	23	- 78	15	7	6	0	0	0.8	19	12.1	SSW	29	10	10	11	5.4	75
CHARLOTTE	224	990.9	1017.8	30.0	16.1	23.0	2.4	32.8	28+	9.4	1	5	0	15.0	64	50	- 29	21	6	5	0	0	0.6	25	12.1	W	12	9	13	9	5.1	82

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	°C.	°C.	°C.	°C.	°C.		C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
NORTH CAROLINA																																
GREENSBORO	273	986.5	1017.9	29.4	15.6	22.6	3.2	32.2	27+	10.0	14	5	0	15.6	69	25	- 58	11	8	8	0	0	0.4	24	21.5	NW	12	8	17	6	5.3	66
RALEIGH	132	1001.7	1017.5	28.9	15.6	22.2	2.4	32.2	26+	9.4	1	3	0	15.0	68	56	- 34	33	6	7	0	0	0.6	21	11.6	27	27	8	15	8	5.2	72
WILMINGTON	9	1016.9	1018.3	29.4	17.8	23.6	2.2	32.8	19	11.1	15	4	0	16.7	70	70	- 19	28	8	9	0	0	0.9	22	11.6	N	24	12	15	4	4.2	82
NORTH DAKOTA																																
BISMARCK	502	950.9	1010.3	18.9	6.1	12.5	-0.8	29.4	13	- 1.7	28	0	2	4.4	62	132	82	42	12	7	203	76	0.7	32	23.2	NW	1	2	14	15	7.1	60
FARGO	273	978.3	1011.1	18.9	6.1	12.4	-0.6	30.0	13	- 1.1	19	0	3	6.1	69	78	26	29	13	3	T	T	0.1	16	17.9	SE	25	7	7	17	6.9	50
WILLISTON	579			18.3	5.0	11.6	-1.0	29.4	13	- 1.7	3	0	4			187	151	52	13	0	36	T			22.4	NW	17	6	10	15	6.9	57
OHIO																																
AKRON	368	972.9	1017.1	25.0	11.7	18.1	2.7	30.0	26	3.3	29	0	0	10.6	65	65	- 33	26	8	7	0	0	1.7	24	14.3	24	26	5	12	14	6.8	
CINCINNATI OBS	232			27.8	15.0	21.3	3.4	32.2	25	5.0	29	1	0			19	- 78	12	6	0	0	0			11.6	SW	16					66
CLEVELAND	237	987.5	1016.4	23.3	11.1	17.3	3.2	30.0	26+	4.4	29+	0	0	10.6	66	58	- 31	21	11	6	0	0	1.8	23	17.0	NW	26	4	17	10	6.4	60
COLUMBUS	247	987.5	1017.1	26.7	13.3	20.1	3.7	32.2	15	3.9	29	1	0	12.2	64	102	0	41	10	7	0	0	1.6	23	18.8	SW	16	4	21	6	6.0	66
DAYTON	305	981.0	1016.8	27.2	13.9	20.8	4.3	31.7	15	3.3	29	0	0	12.8	63	59	- 36	31	10	6	0	0	2.3	21	18.3	S	22	7	13	11	5.7	75
MANSFIELD	395			23.9	10.6	17.2	2.7	28.9	15	1.1	29	0	0			94	- 1	59	9	5	0	0						5	14	12	6.5	
TOLEDO	206	991.2	1016.3	24.4	10.6	17.5	2.9	30.6	25+	1.1	29	0	0	10.6	66	97	19	37	11	9	0	0	1.6	24	13.9	S	15	2	17	12	6.5	66
YOUNGSTOWN	359	974.6	1017.0	23.9	11.1	17.3	2.9	30.0	9	2.8	14	0	0	9.4	64	76	- 28	31	11	7	0	0	1.5	24	10.3	24	27	5	11	15	6.8	
OKLAHOMA																																
OKLAHOMA CITY	390	967.2	1012.8	27.2	16.7	21.8	1.6	31.1	30	11.1	1	0	0	15.0	69	54	- 77	16	9	9	0	0	4.5	16	21.0	SW	26	5	9	17	6.7	58
TULSA	198	989.8	1013.6	28.3	16.7	22.6	2.7	31.7	30	10.6	29	0	0	15.6	68	99	- 34	43	6	7	0	0	4.0	18	16.1	S	24	5	11	15	6.7	68
OREGON																																
ASTORIA	2	1020.3	1021.0	14.4	6.7	10.5	-1.3	17.2	26	- 0.6	6	0	1	6.1	75	70	- 12	17	12	0	0	0	2.6	27	13.0	17	15	1	8	22	8.3	
BURNS U	1265	872.0	1014.9	17.8	1.7	9.8	-2.1	26.7	29	- 6.7	5	0	10	- 2.2	45	19	- 4	14	4	0	T	T	2.7	33				6	17	8	5.9	
EUGENE	109	1006.8	1020.2	18.9	5.0	12.0	-1.4	26.7	11	0.0	6	0	1	6.1	72	23	- 31	14	7	0	0	0	1.0	31	10.7	30	4	8	8	15	6.1	
MEACHAM	1234			13.3	2.2	7.6	-1.3	22.8	28	- 4.4	5	0	10			46	- 16	20	10	0	81	25						8	7	16	6.6	
MEDFORD	396	970.9	1018.6	22.8	4.4	13.6	-0.6	32.8	28	- 1.1	7	1	2	3.9	57	8	- 29	6	5	1	T	T	1.7	31	8.9	32	28+	11	12	8	4.8	
PENDLETON	452	962.8	1016.3	21.7	7.2	14.4	-0.9	30.0	28	1.1	5+	0	0	0.6	41	14	- 14	13	6	1	0	0	3.3	26	18.3	28	16	11	8	12	5.5	
PORTLAND	6	1018.6	1019.9	18.3	6.7	12.4	-1.7	25.6	27+	1.7	8	0	0	6.7	72	33	- 17	13	9	1	T	0	2.1	29	11.2	SW	16+	5	7	19	7.0	63
SALEM	60	1013.2	1020.5	17.8	4.4	11.2	-2.3	26.1	11	0.0	14	0	1	6.7	76	29	- 24	9	8	1	0	0	1.2	29	9.8	32	4	7	8	16	6.5	
SEXTON SUMMIT R	1169	884.9	1017.7	14.4	2.2	8.3	-1.7	24.4	28+	- 5.6	6	0	11			13	- 43	6	7	0	28	T	4.0	34	14.8	34	30	14	9	8	4.5	
PACIFIC AREA																																
CANTON ISLAND	2			31.1	25.6	28.3	-0.6	32.2	29+	23.3	10	2	0			38	- 72	22	11	0	0	0						5	13	13	6.2	
ENIWETOK	4	1010.2	1010.7	30.0	25.6	27.8	-0.2	31.1	30+	22.8	24	0	0	22.8	74	29	- 87	9	12	0	0	0	6.8	7								
TAGUAC GUAM R	110			30.6	23.3	26.9	0.1	31.7	25	19.4	10	0	0			43	- 64	8	21	0	0	0			9.8	E	31					70
JOHNSTON	2	1012.5	1013.1	27.8	23.9	25.8	-0.4	30.6	12	20.0	17	0	0	21.1	74	114	88	47	8	1	0	0	4.7	9	12.5	E	26	7	7	17	6.5	80
KWAJALEIN	2	1009.1	1010.0	31.1	24.4	27.9	0.6	32.2	5	22.8	25	1	0	23.9	80	81	-126	16	18	0	0	0	7.4	6	13.9	5	29	0	4	27	9.0	
MAJURO	3	1009.1	1009.5	29.4	25.0	27.2	0.3	30.6	6	23.3	15+	0	0	23.3	81	201	-122	58	23	2	0	0	6.3	8	14.3	E	14	0	6	25	9.1	42
MARCUS ISLAND	6			28.3	22.2	25.5		30.0	31	20.6	19+	0	0			15		6	6	0	0	0			10.3	E	22	11	14	6	4.8	85
TRUK MOEN ISLAND	2	1008.5	1008.9	30.0	24.4	27.1	0.0	31.1	25+	22.8	17+	0	0	23.9	81	274	- 85	62	24	2	0	0	4.6	5	8.9	NE	28	0	8	23	8.6	63
WAKE	3	1014.9	1015.3	27.8	22.8	25.3	1.2	30.0	3	21.1	27+	0	0	20.0	74	57	5	15	21	0	0	0	7.3	5	11.2	4	23+	8	18	5	5.2	
YAP R	17	1006.8	1008.8	30.6	25.0	27.8	0.0	31.1	28+	23.3	23+	0	0	24.4	83	206	- 36	56	17	0	0	0	3.2	7	11.2	SE	20	0	7	24	8.9	46
PENNSYLVANIA																																
ALLENTOWN	115	1003.4	1017.2	25.0	11.1	17.9	2.2	32.8	27+	3.9	31+	2	0	9.4	62	34	- 70	10	9	4	0	0	2.0	26	12.5	29	17+	6	17	8	5.6	
ERIE	223	990.2	1016.8	21.7	10.6	16.1	2.6	30.6	26	3.9	14	0	0	8.9	64	86	- 4	36	9	6	0	0	2.0	22	14.8	19	16	7	17	7	5.8	
HARRISBURG	103	1004.7	1017.4	26.1	12.2	19.2	2.1	33.3	27	5.0	14	3	0	10.0	59	60	- 39	20	11	6	0	0	1.1	27	13.9	W	16	4	13	14	6.7	60
PHILADELPHIA	2	1015.9	1017.1	24.4	12.8	18.6	1.6	32.2	27	5.6	31	1	0	11.1	64	31	- 64	9	9	3	0	0	1.3	27	15.2	NW	27	6	15	10	6.0	59
PITTSBURGH	347	973.6	1017.0	25.0	12.8	18.8	3.4	30.6	26	5.6	18+	0	0	10.6	62	31	- 69	15	7	11	0	0	1.4	26	14.3	30	26	4	7	20	7.4	54
PITTSBURGH U	310			25.6	13.9	19.6	2.3	31.7	8	6.7	14	0	0			33	- 63	9	11	0	0	0										52
READING U	81			26.1	13.3	19.7	2.3	32.2	27+	6.7	31	2	0			55	- 41	25	10	0	0	0			19.7	NW	27	8	16	7	5.5	65
SCRANTON	283	983.1	1017.1	24.4	11.1	17.6	2.3	31.1	27	3.3	14	0	0	8.9	61	64	- 37	23	10	10	0	0	1.2	25	11.6	SW	28+	5	17	9	6.3	67
WILLIAMSPORT	161	998.3	1017.2	23.3	9.4	16.4	0.6	30.0	26+	2.2	14	0	0	10.0	70	48	- 56	17	8	7	0	0	0.9	26	13.0	32	25	4	11	16	6.7	
RHODE ISLAND																																
BLOCK ISLAND	34			16.7	8.3	12.6	0.4	27.2	26	5.0	24+	0	0			45	- 32	25	6	0	0	0									5.4	
PROVIDENCE	16	1013.9	1016.1	21.7	9.4	15.6	1.4	32.8	26	5.0	15	1	0	6.7	60	27	- 58	10	7	6	0	0	1.2	20	11.6	32	4	11	8	12	5.7	67
SOUTH CAROLINA																																
CHARLESTON	12	1016.6	1018.3	30.6	17.8	24.1	1.3	34.4	19	11.1	1	5	0	17.2	70	34	- 58	14	6	8	0	0	2.0	20	14.8Y	NW	27	9	13	9	4.9	90

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	°C.		°C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
SOUTH CAROLINA																																
CHARLESTON U	3			28.3	20.6	24.4	1.5	32.8	19+	15.0	1	2	0			37	- 41	16	7	0	0	0			12.5	NW	12					
COLUMBIA	66	1009.8	1017.7	32.2	17.2	24.5	2.2	34.4	27	9.4	1	16	0	15.6	62	37	- 53	19	7	4	0	0	1.0	26	10.3	30	25	14	12	5	4.3	85
FLORENCE	45			30.0	16.7	23.2	1.1	32.8	24	9.4	1	3	0			48	- 25		7	10	0											
GNVLE SPARTANBURG	292	983.7	1017.8	29.4	16.1	22.8	1.6	31.7	26+	11.1	3+	0	0	14.4	63	28	- 54	20	5	5	0	0	0.8	27	10.7	N	11	11	10	10	5.1	73
SOUTH DAKOTA																																
ABERDEEN	395	963.8	1010.3	20.6	6.1	13.4	-0.6	30.6	13	- 1.1	28	0	3	6.1	65	76	17	31	14	10	T	T	0.5	3	20.6	16	5	7	10	14	6.5	
HURON	391	963.8	1009.9	22.2	6.7	14.4	0.2	30.6	13	- 1.7	28	0	1	8.3	70	110	50	62	12	7	T	T	0.3	18	18.8	SW	5	9	6	16	6.3	61
RAPID CITY	965	900.1	1010.5	19.4	6.1	12.6	-0.6	30.6	30	0.0	9+	0	2	3.9	60	177	109	86	13	8	224	178	3.1	33	22.4	NW	1	6	11	14	6.5	50
SIOUX FALLS	432	959.7	1010.6	21.7	8.3	15.0	0.4	28.9	13+	- 1.1	28	0	1	10.6	78	185	99	57	14	12	0	0	0.8	20	16.5	25	9	5	14	12	6.5	
TENNESSEE																																
BRISTOL	459	965.1	1018.9	26.7	13.3	20.1	1.3	30.6	26+	6.1	1	0	0	14.4	75	70	- 18	24	8	10	0	0	0.6	26	9.8	34	12	10	9	12	5.5	
CHATTANOOGA	204	994.2	1018.5	28.9	13.9	21.3	0.2	31.7	26	6.7	1	0	0	15.0	72	42	- 47	15	10	7	0	0	0.6	21	19.2	NW	18	8	12	11	5.6	73
KNOXVILLE	299	984.1	1018.8	28.9	16.1	22.4	2.6	32.2	26+	10.6	1	2	0	15.0	67	80	- 9	26	10	6	0	0	1.1	25	17.9	SW	20	12	10	9	5.4	58
MEMPHIS	80	1006.8	1017.0	28.9	18.3	23.7	2.4	32.2	25	13.3	1	1	0	16.7	68	188	81	124	12	8	0	0	2.3	20	15.6	NW	26	8	9	14	5.9	61
NASHVILLE	180	995.9	1017.5	28.3	16.1	22.1	1.7	31.7	26+	9.4	30	0	0	14.4	66	79	- 15	28	11	9	0	0	1.7	20	14.8	SW	23	7	12	12	5.9	65
OAK RIDGE	276			27.8	13.3	20.3	1.2	31.7	26	6.1	1	0	0			83	- 12	35	9	0	0	0						14	6	11	4.9	
TEXAS																																
ABILENE	537	951.2	1011.5	27.2	17.8	22.4	0.3	32.2	8	11.1	1	1	0	16.7	73	128	18	58	13	10	0	0	4.3	16	20.1	SE	31	5	12	14	6.6	44
AMARILLO	1098	888.3	1009.3	27.2	11.7	19.4	0.2	34.4	21	3.3	9	4	0	5.6	49	48	- 38	19	7	8	0	0	3.5	19	17.9	S	23	15	7	9	4.6	80
AUSTIN	182	991.9	1013.5	27.8	20.0	23.7	-0.2	31.7	27	11.1	1	0	0	19.4	80	253	159	81	14	9	0	0	3.0	16	17.9	SE	17	0	8	23	8.5	27
BROWNSVILLE	5	1011.2	1011.8	30.0	22.2	26.1	0.0	32.2	27+	15.6	1	2	0	21.1	78	29	- 30	23	4	3	0	0	6.7	14	20.6	SE	17	2	15	14	6.5	61
CORPUS CHRISTI	12	1010.8	1012.5	29.4	22.2	25.8	0.5	31.7	28+	12.2	1	0	0	21.7	82	102	26	41	7	6	0	0	5.9	14	16.1	S	13	1	11	19	7.8	28
DALLAS	147	996.6	1013.7	27.8	18.9	23.2	0.5	32.8	27	13.9	1	1	0	18.3	78	236	113	118	15	6	0	0	4.6	16	15.2	NW	15+	3	6	22	8.0	34
DEL RIO	313	975.3	1010.8	29.4	19.4	24.4		35.0	26	13.3	1	4	0	18.3	74	59	88	22	10	12	0	0	4.3	12	11.2	9	4	2	7	22	8.0	
EL PASO	1194	878.8	1007.8	30.0	13.9	22.1	-0.1	35.6	22	4.4	9	9	0	- 0.6	26	3	- 7	3	1	1	0	0	1.9	24	18.8	W	24	19	9	3	2.9	88
FORT WORTH	164	993.6	1013.9	27.2	18.3	22.7	0.1	32.2	27	10.6	1	1	0	18.3	79	228	111	123	16	7	0	0	3.7	16	13.4	9	10	3	7	21	7.7	
GALVESTON U	2			26.7	22.8	24.6	0.3	27.8	31+	18.9	1	0	0			65	- 6	49	6	0	0	0			15.2	SE	8					52
HOUSTON U	12			28.3	22.2	25.2	0.6	31.1	27	17.2	1	0	0			118	6	85	10	0	0	0										
HOUSTON	15	1012.9	1015.0	29.4	20.6	25.1	0.6	31.7	28+	12.2	1	0	0	19.4	76	166	56	73	14	5	0	0	4.5	15	14.3	13	8	1	8	22	8.4	51
LUBBOCK	988	900.8	1010.0	28.9	14.4	21.7	1.6	36.1	21	7.2	9	7	0	10.0	57	41	- 39	22	6	6	0	0	4.5	17	17.9	8	27+	13	9	9	5.2	
MIDLAND	869	913.0	1009.2	28.9	15.6	22.1	-0.9	35.6	2	10.0	1	7	0	12.2	64	77	24	34	10	8	0	0	3.3	16	13.9	18	25+	13	6	12	5.4	
PORT ARTHUR	5	1014.9	1015.7	29.4	21.1	25.2	1.4	31.7	12	10.6	1	0	0	20.0	79	80	- 45	55	8	3	0	0	4.2	15	19.2	NE	28	1	9	21	7.9	38
SAN ANGELO	580	945.1	1010.5	29.4	17.2	23.3	-0.2	34.4	27+	12.8	1	7	0	16.1	68	93	11	42	11	8	0	0	3.0	16	10.3	9	16	6	12	13	6.6	
SAN ANTONIO	240	985.4	1013.0	28.3	19.4	23.9	-0.2	31.7	27	9.4	1	0	0	19.4	80	208	120	77	15	10	0	0	3.7	13	20.1	SE	17	1	7	23	8.4	22
VICTORIA	32	1009.5	1013.5	29.4	21.1	25.2	0.6	31.7	31+	11.1	1	0	0	20.6	79	85	- 20	49	9	8	0	0	4.6	13	21.0Y	SE	8	0	5	26	8.6	
WACO	152	995.6	1013.4	28.3	20.0	24.2	0.7	33.3	27	12.8	1	1	0	20.0	80	381	265	88	15	8	0	0	4.0	15	17.9	17	9	1	7	23	8.3	
WICHITA FALLS	303	976.3	1012.2	27.8	17.2	22.6	0.2	31.7	30	11.7	1	0	0	16.7	74	150	34	35	14	9	0	0	3.7	16	18.8	26	13	6	11	14	6.4	
UTAH																																
MILFORD	1533			20.6	2.8	11.6	-2.1	28.9	30	- 5.6	9	0	11			22	4	10	5	0	T	T						5	14	12	6.2	
SALT LAKE CITY	1286	867.9	1010.8	20.0	5.6	12.6	-2.3	30.0	30	- 3.9	6	0	4	1.7	53	51	16	28	9	2	135	51	0.2	30	15.2	NW	31	9	8	14	6.1	70
WENDOVER	1291			19.4	7.8	13.7	-2.6	29.4	16	- 1.7	6	0	3			10	- 6	7	8	0	T	T						9	9	13	5.5	
VERMONT																																
BURLINGTON	101	1002.7	1015.2	21.7	6.7	14.0	1.9	30.0	26	- 1.7	5	0	4	5.0	59	27	- 49	10	11	4	0	0	0.8	23	15.2	SW	7	7	8	16	6.4	68
VIRGINIA																																
LYNCHBURG	279			26.7	13.9	20.4	1.9	31.1	26+	8.9	30	0	0			56	- 25	18	8	6	0	0			11.6	W	27	7	16	8	5.7	66
NORFOLK	8	1016.6	1017.5	26.7	15.6	20.9	1.2	34.4	27	7.2	15	4	0	15.0	74	38	- 48	17	8	6	0	0	1.2	15	23.7	SW	26	6	18	7	5.6	67
RICHMOND	49	1011.5	1017.6	27.8	13.9	20.9	1.4	33.3	27+	7.8	15	7	0	13.3	68	22	- 72	10	4	5	0	0	0.5	18	13.9	SW	27	7	14	10	6.0	66
ROANOKE	350	976.0	1017.6	26.7	14.4	20.7	1.9	31.1	3	6.7	14	0	0	12.8	66	97	1	27	11	8	0	0	1.3	26	13.0	31	25	10	14	7	5.6	
WASHINGTON																																
OLYMPIA	59	1012.5	1019.8	17.8	4.4	10.9	-1.9	25.6	11	- 2.8	6	0	5	5.0	71	48	- 3	23	9	0	0	0	2.1	21	13.4	27	16	5	5	21	7.3	
SEATTLE TACOMA	122	1003.1	1019.6	16.1	6.1	11.1	-2.0	23.3	27+	2.2	7+	0	0	5.6	75	41	- 3	17	9	1	T	0	1.3	23	12.5	22	16	3	11	17	7.4	42
SPOKANE	718	930.9	1014.6	18.3	4.4	11.3	-2.1	27.8	28	- 3.3	6	0	4	1.1	54	26	- 5	15	9	2	0	0	2.2	22	18.8	SW	16	5	13	13	6.7	
STAMPEDE PASS R	1206			8.3	1.1	4.6	-2.1	20.6	27	- 5.6	5	0	12			103	- 5	26	14	0	439	2311						4	7	20	7.7	
TATOOSH ISLAND R	31	1016.6	1019.8	11.7	7.2	9.4	-1.2	14.4	21	3.9	4	0	0	6.7	85	85	9	42	10	0	0	0	3.4	23	20.6	S	3	3	7	21	7.8	58
WALLA WALLA U	289			21.1	8.9	15.0	-1.1	30.0	28	2.2	5	0	0			19	- 19	16	4	0	0	0			13.4	NW	16	11	8	12	5.8	69
YAKIMA	321	977.3	1015.6	22.2	5.0	13.6	-1.2	30.0	28	- 2.8	5	0	3	0.0	43	1	- 12	1	2	0	T	0	2.3	30	13.9	20	15	13	9	9	4.9	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
WEST INDIES																																
SAN JUAN P.R.	5	1013.5	1016.0	28.9	23.3	26.1	0.1	31.7	31	21.1	15+	0	0	22.2	81	381	200	78	25	13	0	0	2.9	9	12.1	NE	5	1	12	18	7.9	36
SWAN ISLAND	9			30.0	25.0	27.4	-0.6	31.1	21+	22.2	25	0	0			80	- 4	28	14	1	0	0						7	14	10	5.9	
WEST VIRGINIA																																
BECKLEY	763	931.3	1018.1	24.4	11.7	18.1		28.9	26+	1.7	30	0	0	10.6	66	43		12	13	10	0	0	1.8	24	11.6	30	28	3	10	18	7.3	
CHARLESTON	286	983.4	1017.2	27.8	13.9	20.7	2.4	31.1	25+	5.0	30	0	0	12.8	65	48	- 46	21	11	7	0	0	1.7	23	14.3	28	23	7	12	12	6.0	
ELKINS	600	947.9	1018.4	25.0	8.9	16.8	1.7	28.9	26	0.0	14	0	1	10.6	71	37	- 79	22	12	8	0	0	1.5	27	10.7	29	17	3	18	10	6.6	
HUNTINGTON	252	987.5	1017.2	27.8	13.9	20.7	2.6	32.8	25	6.1	30	2	0	13.3	68	24	- 75	9	9	8	0	0	1.3	23	9.4	24	16	9	10	12	5.9	
PARKERSBURG U	187			27.2	13.9	20.6	2.8	31.7	25+	7.2	14	0	0			31	- 63	14	6	0	0	0			12.1	NW	10					66
WISCONSIN																																
GREEN BAY	208	988.5	1013.9	21.7	9.4	15.6	2.9	30.6	25	0.0	29	0	1	9.4	69	100	23	30	11	12	0	0	1.3	20	12.1	S	26	4	9	18	7.3	48
LA CROSSE	198	988.8	1013.2	21.7	10.0	15.9	0.8	31.7	2	0.0	29	0	1	9.4	71	130	34	47	15	11	0	0	1.9	19	11.2	17	5	3	6	22	7.6	
MADISON	262	982.4	1013.7	22.8	8.3	15.3	1.9	30.6	25	- 1.1	30+	0	2	8.9	68	47	- 38	13	11	9	0	0	1.9	20	13.9	SW	25	2	12	17	7.3	59
MILWAUKEE	205	989.8	1015.1	21.1	8.3	14.8	2.9	30.0	2	1.7	30	0	0	9.4	73	54	- 26	36	9	7	0	0	1.3	20	17.4	SW	8	5	11	15	6.7	64
WYOMING																																
CASPER	1627	834.4	1011.0	16.7	3.3	9.9	-1.8	26.1	30	- 2.8	10	0	9	- 0.6	55	67	15	22	11	5	180	152	0.9	28	15.6	20	19	6	12	13	6.4	
CHEYENNE	1867	809.0	1010.5	17.2	3.3	10.4	-1.2	25.6	30	- 1.7	10+	0	4	0.0	56	79	15	35	10	8	36	T	2.3	31	25.0	NW	14	2	14	15	7.1	68
LANDER	1696	826.3	1011.4	16.1	3.3	9.8	-1.8	26.1	31	- 3.3	6	0	8	0.0	58	80	13	35	14	2	406	279	1.3	28	25.0	W	31	5	8	18	7.1	52
SHERIDAN	1208	876.4	1012.9	17.2	2.8	9.9	-2.1	26.7	30	- 1.7	27+	0	8	2.2	61	54	- 11	17	15	4	119	T	2.3	30	15.6	SW	1	6	8	17	7.1	46

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.
A Maximum hourly average.
B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

State and station	Current season		Normals
	This month	Period July through this month	July through this month
ALABAMA			
BIRMINGHAM	2	2748	2551
HUNTSVILLE	0	3253	3070
MOBILE	0	1565	1560
MONTGOMERY	0	2228	2291
ALASKA			
ANCHORAGE PRK STRIP	667	10710	10549
ANCHORAGE	598	10708	
ANNETTE	588	7484	6748
BARROW	1482	20108	19217
BARTER ISLAND	1397	19795	18938
BETHEL	997	13223	12794
COLD BAY	884	9315	9289
FAIRBANKS	680	14722	14057
JUNEAU	693	9088	8694
KING SALMON	861	11432	10935
KOTZEBUE	1247	15677	15469
MC GRATH	786	14189	14025
NOME	1157	13939	13598
ST. PAUL ISLAND	995	10734	10473
SHEMYA	802	9005	8991
YAKUTAT	791	9801	8657
ARIZONA			
FLAGSTAFF	560	7144	6972
PHOENIX	14	1814	1765
TUCSON	21	1852	1800
WINSLOW	217	4750	4782
YUMA	1	1116	974
ARKANSAS			
FORT SMITH	0	3425	3292
LITTLE ROCK	0	3113	3219
TEXARKANA	0	2499	2533
CALIFORNIA			
BAKERSFIELD	45	2286	2122
BISHOP	201	4060	4191
BLUE CANYON	421	5451	5312
BURBANK	88	1816	1628
EUREKA U	459	4524	4358
FRESNO	58	2480	2492
LONG BEACH	99	1797	1693
LOS ANGELES	130	1652	1745
LOS ANGLES U	70	1288	1331
MT SHASTA R	403	5533	5563
OAKLAND	218	2674	2780
RED BLUFF	47	2504	2515
SACRAMENTO	86	2699	2767
SANDBERG U	361	4544	4152
SAN DIEGO	73	1407	1403
SAN FRANCISCO	295	3059	2889
SAN FRANCISCO U	306	2825	2821
SANTA CATALINA	195	2155	1947
SANTA MARIA	279	3036	2802
STOCKTON	50	2562	2676
COLORADO			
ALAMOSA	484	9101	8361
COLORADO SPRINGS	306	6301	6339
DENVER	245	5967	6217
GRAND JUNCTION	158	5274	5620
PUEBLO	143	5350	5447
CONNECTICUT			
BRIDGEPORT	145	5722	5590
HARTFORD	99	6177	6148
NEW HAVEN	183	5886	5852
DELAWARE			
WILMINGTON	63	5125	4924
DIST.OF COLUMBIA			
WASH NATL AP	27	4420	4224
FLORIDA			
APALACHICOLA U	0	1161	1308
DAYTONA BEACH	1	696	879
FORT MYERS	0	196	442
JACKSONVILLE	0	1039	1239
KEY WEST	0	14	108
LAKELAND U	0	451	661
MIAMI	0	110	214
ORLANDO	0	454	766
PENSACOLA	0	1501	1463
TALLAHASSEE	1	1560	1485
TAMPA	0	546	683
WEST PALM BEACH	0	161	253
GEORGIA			
ATHENS	0	2784	2929
ATLANTA	0	2923	2961
AUGUSTA	0	2288	2397
COLUMBUS	0	2145	2383
MACON	0	2308	2136
ROME	[illegible]	3216	3326
SAVANNAH	0	1798	1819
IDAHO			
BOISE	317	5626	5728
IDAHO FALLS 42NW R	490	8508	8568
IDAHO FALLS 46W R	496	8171	8283
LEWISTON	260	5418	5452
POCATELLO	443	6787	6892
ILLINOIS			
CAIRO U	4	3876	3821
CHICAGO O HARE	157	7033	6567
CHICAGO MIDWAY	105	6322	6107
MOLINE	86	6600	6369
PEORIA	72	6341	5992
ROCKFORD	145	7262	6770
SPRINGFIELD	36	5614	5411
INDIANA			
EVANSVILLE	18	4844	4435
FORT WAYNE	73	6399	6166
INDIANAPOLIS	39	5556	5660
SOUTH BEND	99	6554	6379
IOWA			
BURLINGTON	72	6327	6081
DES MOINES	86	7190	6558
DUBUQUE	157	7660	7298
SIOUX CITY	89	7396	6912
WATERLOO	183	8043	7266
KANSAS			
CONCORDIA	51	5684	5461
DODGE CITY	65	5120	4977
GOODLAND	133	6006	6099
TOPEKA	30	5327	5170
WICHITA	23	4640	4614
KENTUCKY			
COVINGTON	43	5111	5241
LEXINGTON	26	4797	4683
LOUISVILLE	20	4525	4651
LOUISIANA			
ALEXANDRIA	6	2191	1921
BATON ROUGE	0	1605	1560
LAKE CHARLES	0	1437	1459
NEW ORLEANS	1	1407	1385
SHREVEPORT	0	2173	2184
MAINE			
CARIBOU	485	9713	9584
PORTLAND	320	7696	7400
MARYLAND			
BALTIMORE	55	4814	4654
MASSACHUSETTS			
BLUE HILL OBS R	190	6552	6299
BOSTON	195	6148	5598
NANTUCKET	366	6033	5762
PITTSFIELD	239	7563	7473
WORCESTER	206	7005	6891
MICHIGAN			
ALPENA	324	8460	8350
DETROIT	121	6286	6190
DETROIT M WAYNE CO	131	6797	6236
DETROIT WILLOW RUN	178	6945	6213
FLINT	158	7160	7287
GRAND RAPIDS	142	7133	
HOUGHTON LAKE	237	8430	
LANSING	162	7206	6840
MARQUETTE U	344	8509	8216
MUSKEGON	147	6736	6618
SAULT STE MARIE	409	9243	8847
MINNESOTA			
DULUTH	397	10283	9802
INTERNATIONAL FALLS	390	11032	10432
MINNEAPOLIS	211	8741	8301
ROCHESTER	223	8936	8202
ST CLOUD	247	9534	8774
MISSISSIPPI			
JACKSON	2	2329	
MERIDIAN	2	2438	2289
VICKSBURG U	0	2166	2041
MISSOURI			
COLUMBIA	22	5003	5034
KANSAS CITY	15	4914	4711
ST JOSEPH	23	5527	5469
ST LOUIS	19	5027	4885
SPRINGFIELD	21	4424	4555
MONTANA			
BILLINGS	381	7741	6947
GLASGOW	359	10002	8846
GREAT FALLS	411	8161	7564
HAVRE	405	9861	8538
HELENA	454	7900	7934
KALISPELL	515	8616	7984
MILES CITY	329	8579	7624
MISSOULA	491	8408	7906
NEBRASKA			
GRAND ISLAND	97	6945	6485
LINCOLN U	60	6361	5834
NORFOLK	113	7406	6931
NORTH PLATTE	173	6867	6627
OMAHA	55	6446	6188
SCOTTSBLUFF	245	6685	6598
VALENTINE	235	7582	7341
NEVADA			
ELKO	505	7064	7241
ELY	586	7552	7508
LAS VEGAS	49	2667	2709
RENO	336	5347	6143
WINNEMUCCA	448	6189	6608
NEW HAMPSHIRE			
CONCORD	257	7545	7308
MT WASHINGTON OBS	878	13739	13214
NEW JERSEY			
ATLANTIC CITY	109	5269	4797
ATLANTIC CITY U	126	4769	4717
NEWARK	55	5009	4859
TRENTON U	65	5073	4968
NEW MEXICO			
ALBUQUERQUE	128	4302	4348
CLAYTON	165	5092	5137
RATON	323	6318	6165
ROSWELL	22	3533	3793
SILVER CITY	124	3955	3705
NEW YORK			
ALBANY	197	7104	6830
BINGHAMTON	211	7176	7187
BUFFALO	186	6885	6984
NEW YORK U	64	4924	4862
J.F. KENNEDY	146	5166	5207
NEW YORK LA GUARDIA	47	4826	4805
ROCHESTER	192	6910	6700
SYRACUSE	215	6839	6711
NORTH CAROLINA			
ASHEVILLE	23		
CAPE HATTERAS R	15	2716	2612
CHARLOTTE	0	3185	3191
GREENSBORO	0	3747	3805
RALEIGH	0	3590	3393
WILMINGTON	1	2324	2347
NORTH DAKOTA			
BISMARCK	324	10065	8734
FARGO	324	10244	9127
WILLISTON	370	10443	9102
OHIO			
AKRON	94	6182	5998
CINCINNATI OBS	22	4885	4797
CLEVELAND	130	6203	6285
COLUMBUS	39	5593	5633
DAYTON	31	5439	5592
MANSFIELD	119	6367	6343
TOLEDO	123	6642	6434
YOUNGSTOWN	123	6471	6357
OKLAHOMA			
OKLAHOMA CITY	2	3791	3725
TULSA	[illegible]	3674	3860
OREGON			
ASTORIA	432	4998	4955
BURNS U	469	6806	6780
EUGENE	350	4463	4591
MEACHAM	592	7689	7535
MEDFORD	267	4402	4930
PENDLETON	223	5163	5064
PORTLAND	325	4874	4530
SALEM	390	4871	4610
SEXTON SUMMIT R	552	6137	5975
PENNSYLVANIA			
ALLENTOWN	92	5851	5786
ERIE	174	6475	6391
HARRISBURG	66	5450	5239
PHILADELPHIA	66	5179	5089
PITTSBURGH	63	5740	5948
PITTSBURGH U	48	5162	5041
READING U	52	5074	4945
SCRANTON	100	6218	6221
WILLIAMSPORT	137	6279	5910
RHODE ISLAND			
BLOCK ISLAND	320	5950	5705
PROVIDENCE	182	6024	5903
SOUTH CAROLINA			
CHARLESTON	0	2007	2033
CHARLESTON U	0	1696	1794
COLUMBIA	0	2445	2484
FLORENCE	0	2502	2387
GNVLE SPARTANBURG	0	3051	2980
SOUTH DAKOTA			
ABERDEEN	279	9624	8383
HURON	229	8886	8136
RAPID CITY	327	7550	7219
SIOUX FALLS	195	8451	7761
TENNESSEE			
BRISTOL	17	4084	4143
CHATTANOOGA	2	3419	3254
KNOXVILLE	0	3506	3494
TENNESSE			
MEMPHIS	0	3181	3232
NASHVILLE	3	3717	3578
OAK RIDGE	9	3789	3817
TEXAS			
ABILENE	0	2482	2624
AMARILLO	56	4081	3985
AUSTIN	0	1770	1711
BROWNSVILLE	0	673	600
CORPUS CHRISTI	0	1070	914
DALLAS	0	2390	2363
DEL RIO	0	1584	
EL PASO	7	2593	2700
FORT WORTH	0	2564	2405
GALVESTON U	0	1181	1235
HOUSTON U	0	1123	1278
HOUSTON	0	1294	1396
LUBBOCK	12	3375	3578
MIDLAND	5	2541	2591
PORT ARTHUR	0	1417	1447
SAN ANGELO	0	2321	2255
SAN ANTONIO	0	1715	1546
VICTORIA	0	1269	1173
WACO	0	2030	2030
WICHITA FALLS	2	3094	2832
UTAH			
MILFORD	374	6252	6410
SALT LAKE CITY	316	5860	5968
WENDOVER	263	5573	5727
VERMONT			
BURLINGTON	257	8128	8179
VIRGINIA			
LYNCHBURG	15	4397	4166
NORFOLK	29	3554	3421
RICHMOND	17	4127	3865
ROANOKE	21	4289	4150
WASHINGTON			
OLYMPIA	408	5637	5059
SEATTLE TACOMA	400	5050	4986
SPOKANE	387	7100	6520
STAMPEDE PASS R	760	9169	8800
TATOOSH ISLAND R	489	5673	5386
WALLA WALLA U	206	4794	4760
YAKIMA	264	6078	5872
WEST VIRGINIA			
BECKLEY	60	5338	
CHARLESTON	24	4579	4467
HUNTINGTON	17	4556	4434
PARKERSBURG U	21	4876	4748
WISCONSIN			
GREEN BAY	197	8143	7930
LA CROSSE	182	8181	7520
MADISON	208	7953	7761
MILWAUKEE	232	7514	7500
WYOMING			
CASPER	463	7879	7281
CHEYENNE	435	7228	7176
LANDER	469	7577	7717
SHERIDAN	464	8111	7533

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				∅ ALL OTHER			
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE	
								PROP-ERTY	CROPS			PROP-ERTY	CROPS			PROP-ERTY	CROPS			PROP-ERTY	CROPS			PROP-ERTY	CROPS			PROP-ERTY	CROPS
Alabama						0	0	1	0																				
Alaska N																													
Arizona						0	0	0	4																				
Arkansas	2	2	0	8	5					0	2	5	0	2	2	3	0												
California *																													
Colorado	16	9	0	0	5	0	0	5	4	1	0	3	3													0	0	F 3	3
Connecticut						0	0	3	5	0	0	4	0	0	2	6	0												
Delaware										0	0	3	0	0	0	3	0												
Florida						0	0	5	?	0	0	5	0	0	1	0	0												
Georgia	1	1	0	0	3	0	0	3	0	0	0	4	0	0	2	0	0												
Hawaii	W 8	1	0	0	0																					0	1	°6	C
Idaho									3						1														
Illinois	3	1	0	5	5																								
Indiana	4	2	0	0	5					1	0	4	0	0	1	0	0												
Iowa	17	6	0	12	6	0	0	4	3	0	15	6	0	2	2	4	0												
Kansas	36	9	0	13	6	0	1	6	6	0	2	5	0	0	0	4	0												
Kentucky	1	1	0	0	4					0	0	4		0	0	4													
Louisiana						0	0	3	4																	0	0	1	0
Maine *																													
Maryland										0	0	5	?	0	1	4	0												
Massachusetts	1	1	0	0	2					0	0	4	0	0	0	5	0												
Michigan						0	0	5	5	0	0	6	0	0	2	5	0												
Minnesota	17	4	14	691	7	0	1	5	0	0	0	5	0																
Mississippi	1	1	0	0	4					0	0	4	0																
Missouri	4	2	0	4	5					0	0	4	0																
Montana	1	1	0	0	2																								
Nebraska	32	6	4	50+	7	0	0	4	5	0	0	3	0	0	0	6	4									0	0	3	5
Nevada *																													
New Hampshire										0	0	1	0	0	0	4	0												
New Jersey										0	0	4	3																
New Mexico	2	2	0	0	1	0	0	5	5	0	5	3	0	1	0	0	0									1	2	4	0
New York	1	1	0	3	5							4				5													
North Carolina						0	0	4	6	1	0	5	4	1	2	5	0									0	0	4	4
North Dakota	7	4	0	0	5	0	0	3	0																				
Ohio	4	2	0	1	5	0	0	3	0					0	1	4	0												
Oklahoma	32	11	0	8	6	0	1	4	6	0	0	5	4	1	1	4	0									0	0	4	0
Oregon *																													
Pacific Area *																													
Pennsylvania	1	1	0	1	4					0	0	6	0	1	1	5	0												
Puerto Rico																										1	0	5	C
Rhode Island														0	1	4	0									0	0	4	0
South Carolina	5	5	0	0	5	0	0	3	4	0	0	4	0	1	5	0	0												
South Dakota	43	9	0	1	6	0	0	5	5									0	0	5	0					0	0	6	0
Tennessee						0	0	3	2	1	5	5	0	0	0	5	0									0	0	4	3
Texas	43	13	0	4	6	0	1	7	5	0	4	6	5	1	5	4	0									2	15	6	6
Utah *																													
Vermont *																													
U. S. Virgin Is.*																													
Virginia						0	0	0	3	0	0	3	0	1	1	3	0									0	0	3	0
Washington										1		4																	
West Virginia										0	0	3	0	1	0	3	0												
Wisconsin	9	6	0	5	6																								
Wyoming	1	1	0	0	4	0	0	°1	C									0	0	°5	C								

° Includes crop damage
C Crop damage
W Waterspouts
N No report received by printing deadline
F Flooding

* No occurrence of storms or unusual weather phenomena.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
∅ For breakdown of "All Others", and for detailed listing of other storms, see the U. S. Weather Bureau monthly publication STORM DATA.

† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5,000,000
7 $5,000,000 to $50,000,000
8 $50,000,000 to $500,000,000
9 $500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

MAY 1965

The most important flooding during May was the record flooding that began along the upper Mississippi River during April. Record crests occurred during the first few days of May in the reach from Keokuk, Iowa, to Hannibal, Mo. Near record flooding occurred below Hannibal to Winfield, Mo. The Red River of the North, which was 4 to 6.5 feet above flood stage in the reach at and below Drayton, N. Dak., on May 1, receded within its banks during the first decade. Record flooding occurred in the Missouri Basin on the Little Blue River at Deweese, Nebr.

HUDSON BAY DRAINAGE

Red River of the North Basin.--The Red River of the North was in recession along its entire course on May 1. It was still above flood stage at Halstad, Minn., and Grand Forks, N. Dak., but receded within its banks before the end of the day. The stage at Drayton, N. Dak., in the beginning of the month was 38.5 feet, 6.5 feet above flood stage and at Pembina, N. Dak., it was 46.3 feet, 4.3 feet above flood stage. The Red River of the North was back within its banks at all points within the United States on May 8.

ATLANTIC SLOPE DRAINAGE

This was the 11th consecutive month that flooding had been reported on some stream in Georgia. The Savannah River that has been out of its banks at Clyo, Ga., since February 16, receded within its banks on the 15th. The flooding during May was very minor and no damages were reported.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--Precipitation during the month was excessive in the Upper Mississippi Basin in Minnesota, Wisconsin, and northeastern Iowa. It averaged 3 to 4 inches above the long-term mean in Minnesota and 1 1/2 to 3 inches above the mean in Wisconsin and northeastern Iowa. No major rises occurred as the rains were well spaced. Within bankfull rises occurred in the Minnesota Valley, the Chippewa Valley, and along the upper Mississippi River.

Streams in the Upper Mississippi Basin that had reached record to near record crests during April were in recession on May 1, except the main stem of the Mississippi in the reach from Keokuk, Iowa, to Alton, Ill.

The Crow River which had reached a record crest of 19.28 feet at Rockford, Minn., on April 15, was back within its banks by May 4.

The Minnesota River had receded within its banks in the reach at and above Mankato, Minn., by May 1. In the reach below, where record crests occurred on April 12-14, it receded within its banks by the 17th except at Savage, Minn., where it continued in flood until June 20. Three rises occurred during the month on the Minnesota River and its tributaries upstream from Mankato, Minn. The Cottonwood River near New Ulm, Minn., came closest to reaching flood stage (11 feet) on May 9 when it crested at 10.7 feet. The main stem of the Minnesota approached within 4 to 5 feet of flood stage on the 12th, 19th, and 30th. These rises were caused by heavy rains on the 9th, 16th, and 23d.

The Chippewa River at Durand, Wis., crested 4 feet below flood stage on May 11 and 2.5 feet below flood stage on May 19. The increased flow along the Chippewa produced a slight rise along the Mississippi River from its mouth, near Alma, Wis., through La Crosse, Wis.

Frequent thundershowers throughout central Iowa produced minor flooding on the Raccoon and Des Moines Rivers during the latter part of the month. The showers on the 25th totaled 3 inches or more in the area from Carroll to Iowa Falls, Iowa. The North Raccoon at Jefferson, Iowa, crested nearly 5 feet above flood stage.

In Illinois, minor flooding on the Kaskaskia and Illinois Rivers, which began in April, continued into May. General rains of 1 to 2 inches on May 6-10 prolonged the high stages. At some points on the Illinois, secondary crests above flood stage were recorded, but they were lower than the April crests. The Vermillion River at Lowell, Ill., was slightly above flood stage on May 5-8.

The main stem of the Mississippi River, which reached the highest level in April that white men had ever seen, was in recession from its mouth to below Burlington, Iowa, on May 1. It had receded within its banks at a few upstream points (Minneapolis, Hastings, and Wabasha, Minn., and Alma, Wis.,) by May 1. It was still above record levels in the beginning of the month in the reach from McGregor, Iowa, to below Burlington, Iowa, a distance of more than 230 miles. It remained above the previous record stage at Burlington, Iowa, for a total of 13 days, and above flood stage for a total of 36 days before receding within its banks on the 16th. In the reach from Hannibal, Mo., to Clarksville, Mo., the Mississippi was out of its banks for a total of 43 days. In the reach below the Missouri River there was no flooding during the month. The Mississippi was back within its banks at all points on the 19th. Perhaps the 1965 flood can be called the "worst" because of its magnitude in Iowa, Minnesota, and parts of Wisconsin, Illinois, and Missouri. In other years floods have been more severe in nearly all basins of the Mississippi System.

Heavy rains on May 23-25 produced a rise over the upper Mississippi River at Fort Ripley, Minn., cresting at 9.65 feet on the 28th (flood stage 10 feet) after receding to 8.35 feet on the 19th. The combination of the rises on the Minnesota River and the upper Mississippi River resulted in the main stem rising at both Minneapolis and St. Paul, Minn., during the last week in May.

As the Mississippi River was receding from a crest of 10.5 feet at St. Paul, Minn., (flood stage 14 feet), on the morning of May 31, heavy showers occurred over the area around 9 p.m. that evening. By early June 1, 7.44 inches of rain had fallen at South St. Paul. Stillwater, Minn., recorded 7.98 inches during the same period.

Missouri Basin.--Scattered heavy rain on May 20-25 caused flooding along a few creeks in South Dakota. No significant damage is believed to have occurred.

Minor rises occurred on the Elkhorn at and below West Point, Nebr., to its mouth on May 9-11, when the river ran near bankfull. Heavy rains on the 25th over the central and southeastern portions of the Elkhorn Basin caused brief overflow on some smaller tributaries. Below Winslow, Nebr., the river ran near bankfull on May 25-27. No damage was reported.

Locally heavy rains during the afternoon of the 25th over the upper and middle reaches of the Little Sioux and Boyer Rivers in northwestern Iowa resulted in some slight overflows. Flooding at Linn Grove, Iowa, was minor in comparison to the record flooding during April. The Boyer River near Denison, Iowa, was out of its banks for a brief period on May 25. Two bridges were washed out. Locally heavy rains during the night of May 25 over parts of the Loup River Basin in Nebraska resulted in some slight overflows in the lower reaches. Locally heavy rains on the 21st caused more than 2 feet of overflow on Salt Creek at Ashland, Nebr., on the 22d. Some county roads were inundated. Mill Creek which flows into the Platte River at Louisville, Nebr., overflowed its banks from the heavy rain. Several families were evacuated from their homes for a short period.

Major tributary flooding occurred on Beaver Creek in northwest Kansas on May 24-26 which extended downstream to the vicinity of Danbury, Nebr., on the 27th. The Little Blue River at Deweese, Nebr., exceeded the previous record stage of 13.3 feet recorded on June 17, 1957, by 1.3 feet on May 22. This was the most extensive local overflow in 45 years. The only flooding on the Big Blue, was at Crete, Nebr., on May 22-27. Minor overflows occurred on the Republican at Orleans, Nebr., on May 27 and on the West Fork Big Blue at Dorchester, Nebr., on the 25th. Turkey Creek was out of its banks at Wilber, Nebr., on May 24-27 with a crest over 3 feet above flood stage on the 24th. The crest of 14.05 feet was 1.5 feet below the record crest of June 1957. This flooding was due to general rains of 2 to 5 inches with local reports of 6 to 8 inches of rain on the 22d. This was augmented by 1- to 3-inch rains on May 23 in extreme northwest Kansas. Comparatively heavy agricultural and highway losses were sustained in limited areas.

Heavy rain on May 7-8 resulted in minor flooding on the lower Grand on May 9-10. Heavy rain in southwest Iowa on the night of May 21-22 caused brief flooding on the lower Nishnabotna River on the 22d.

Heavy rains in western Iowa and eastern Nebraska on the 22d brought rises to near flood stage along the Missouri above Boonville, Mo., on the 23d. This was followed by general moderate rains on May 25-26 which caused the Missouri to rise over its banks at St. Joseph, Mo., on the 27th.

Ohio Basin.--The middle Wabash River in Indiana which went out of its banks during the latter part of April receded within its banks on May 1. The lower White River began overflowing at Petersburg, Ind., on the 1st and at Hazleton, Ind., on the 2d. It was back within its banks on the 3d. The light flooding was due to rains the latter part of April.

Arkansas Basin.--Lowland agricultural flooding occurred on the Little Caney River at Copan, Okla., on May 9. This overflow was due to rainfall averaging 2.04 inches over a short period of time.

General rains of 1 to 3 inches along the North Canadian on the 13th caused minor lowland overflow at Woodward and Seiling, Okla. Losses were negligible.

Brief flooding occurred on the Chikaskia River at Blackwell, Okla., on the 27th. Intermittent showers averaging 1.36 inches on the 26th, preceded by heavy showers (2.46 inches) caused the minor lowland flooding. Major lowland flooding occurred along the Poteau River at Panama, Okla., on the 27-29th, due to rainfall averaging 3.09 inches.

Red Basin.--Rainfall ranging from 3 to 6 inches from the afternoon of the 9th through the evening of the 10th caused 6 to 8 feet of overflow along the Sulphur River in Texas. Additional rainfall of 1/2 to 2 inches on the 27th and 28th caused additional flooding on the Sulphur which continued into June. No damages were reported.

WEST GULF OF MEXICO DRAINAGE

Unusually heavy rains during May caused extensive flooding over the Trinity and Brazos Basins in Texas during the last 3 weeks of the month. The heaviest rain occurred on the 9-11th, 14-17th, and 27-28th. Rain during this period averaged about 9 inches below the reservoirs and up to 14 inches in the extreme southern portion. Waco, Tex., had a total of 15 inches of precipitation during May, which exceeded the previous monthly record of 13.37 inches recorded in April 1957.

Flash flooding began in the Upper Trinity, below the reservoirs, about noon on the 10th. There were three rises to above flood stage at Dallas, Tex., beginning on the 10th, 16th, and 28th. In the reach at and below Midway, Tex., flooding continued into June. One to 4 feet of overflow occurred on Chambers and Richland Creeks from the 11th through the 21st. Damage was due largely to inundation of farm and grazing lands, highways, and fences.

On the main channel of the Brazos, the river level approached within 3.5 feet of flood stage. Although more rainfall occurred this month over the Brazos than in April 1957, the crests downstream were lower than in 1957. The reason for this was the enlargement of Lake Waco. In 1957, the capacity of Lake Waco was only 22,000 acre-feet. This time, Lake Waco stored more than 122,000 acre-feet between May 6 and 20. The main flooding along the Brazos occurred at Valley Junction, Hempstead, and East Columbia, Tex. Lowland flooding occurred on the Brazos at the mouth of the Navasota and along Mill Creek. The lower Brazos, as in 1957, overflowed the divide into Oyster Creek. Flooding was reported both above and below Richmond, Tex., on May 22-27.

Minor flooding occurred on the Neches River near Alto, Tex., from the 15th to the 19th.

Light flooding occurred on smaller streams in the Colorado Basin in Texas during May. Heavy rainfall of 2 to 5 inches during the night of the 10-11th caused minor flooding on the lower Pedernales River above Austin, Tex., and on minor tributaries of the Colorado below Austin. There was also some minor flooding of smaller streams around Brownwood. One to 3 inches of rain on the 15-16th caused moderate rises on the San Saba and Llano Rivers and sharp rises on the Pedernales and Colorado. There was some minor overflow of lowlands at some points above Austin. Damages from the overflows were negligible.

Heavy rainfall (4 to 10 inches) over the San Antonio, Guadalupe, Lavaca, and Navidad Rivers from the 16th through the 18th caused flooding of the lowlands along these streams. Flooding of the San Antonio River was confined to the extreme upper portion and tributary creeks in the San Antonio area. Two lives were lost at low water crossings in the San Antonio area during the flash flooding on the 16th. Damage in the San Antonio area has been estimated at more than $1 million. Damage elsewhere was mostly light with most of the flooding confined to grazing land.

Moderate rains on May 13 caused minor flooding on Turkey Creek at Crystal City, Tex., on the 16th. Additional heavy rains on the 16th to the 18th caused moderate flooding on Turkey Creek from the 18th to the 23d. These heavy rains caused considerable flooding on the Frio River from Fowlerton to Three Rivers, Tex., and the highest flooding on the Atascosa River at Pleasanton, Tex., since 1939. Minor flooding resulted on the middle Nueces from above Cotulla to Lake Corpus Christi, Tex., during the last 2 weeks of the month. Flooding was comparable to that of October 1964 and February 1965. Lake Corpus Christi filled and began running over Wesley Seale Dam late on the 19th and continued to run over the dam through the end of the month. Flooding below the dam began on the 20th, reaching Calallen on the 22d.

Many dwellings were isolated, but damage was minor. Damage to crops in the fields exceeded that of the earlier floods because of the spring season. The heavy rains on the night of the 16th caused flash flooding in the middle Nueces and on Gulf drainage creeks west of Corpus Christi. Locally heavy rains up to 5 inches during the day of the 18th caused flash flooding of fields, streets, and highways in Pearsall and between Pearsall and Dilley, Texas.

PACIFIC SLOPE DRAINAGE

Columbia Basin.--May precipitation was well below normal throughout most of the Columbia River Basin. Monthly temperatures averaged generally 2° to 4° below normal.

Minor flooding occurred on the Big Wood River at Hailey, Idaho, and on the Big Lost River in the Mackay, Idaho, area during May. Some farmland was inundated.

The upper Snake River and tributaries between Heise and Weiser, Idaho, had high runoff. Streamflow ranged from excessive in parts of the south to near or below median in the north. Snowmelt was moderate, but considerably delayed due to cool weather. Extremely high flows were reached only in a few small subbasins. Higher elevations were still covered by record snowpacks during May.

A cold period from May 1 to 8 curtailed streamflow rises in the lower Snake and other lower Columbia tributaries produced by the warm weather at the end of April. The temperature pattern was favorable for orderly snowmelt runoff during May. The warm weather on the 9-14th and 26-29th, followed by cooler weather, kept the Columbia River nearly stationary at Vancouver, Wash., during the latter half of the month. The highest stage reached at this point was 15.7 feet on the 4th, 0.3 foot below flood stage. The lowest stage reached was 12.0 feet on the 13th.

FLOOD STAGE DATA

(All dates in May unless otherwise specified)

River and station	Flood stage	Above flood stages -dates From–	Above flood stages -dates To–	Crest * Stage	Crest * Date
	Ft.			Ft.	
HUDSON BAY DRAINAGE					
Red River of the North. Halstad, Minn.	24	Apr. 12	1	35.35	Apr. 17
Grand Forks, N. Dak.	28	Apr. 12	1	44.9	Apr. 17
Drayton, N. Dak.	32	Apr. 14	8	40.4	Apr. 22
Pembina, N. Dak.	42	Apr. 16	7	47.4	Apr. 25
ATLANTIC SLOPE DRAINAGE					
Savannah: Clyo, Ga.	11	Feb. 16	15	(14.1 (14.6 (16.5 (12.7	Feb. 23 Mar. 12 Apr. 5 8
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Minnesota: Carver, Minn.	18	Apr. 7	8	34.3	Apr. 12
Chaska, Minn.	18	Apr. 7	9	34.25	Apr. 13
Savage, Minn.	698	Apr. [illegible]	Jun. 20	719.35	Apr. 14
Mendota, Minn.	699	Apr. 8	17	717.5	Apr. 16
North Raccoon: Jefferson, Iowa	10	26	29	14.9	27
Des Moines: Des Moines (SE 14th St.), Iowa	21	30	30	21.1	30
Ottumwa, Iowa	10	30	30	10.0	30
Illinois: La Salle, Ill.	20	Apr. 25 6	1 9	23.35 21.3	Apr. 26 6
Peoria, Ill.	18	Apr. 27 8	4 11	19.4 18.3	Apr. 29 9
Havana, Ill.	14	Apr. 6	20	17.2 17.4	Apr. 16 Apr. 29
Beardstown, Ill.	14	Apr. 7	20	18.45 17.7	Apr. 17 2
Meredosia, Ill.	10	Mar. 17	25	12.3 17.65 16.9	Mar. 22 Apr.18,19 3
Kaskaskia: Carlyle, Ill.	21	3	5	21.4	4
Mississippi: Libby, Minn.	13	Apr. 21	6	14.5	Apr. 24
Aitkin, Minn.	12	Apr. 14	[illegible]	(14.4 (14.5	Apr. 18 Apr. 26
Fort Ripley, Minn.	10	Apr. 12	4	13.55	Apr. 16
St. Paul, Minn.	14	Apr. 10	2	26.0	Apr. 16
Red Wing, Minn.	14	Apr. 12	1	20.9	Apr. 18
Lake City, Minn.	14	Apr. 10	7	22.2	Apr. 19
Winona, Minn.	13	Apr. 10	4	20.7	Apr. 19
La Crosse, Wis.	12	Apr. 9	6	17.9	Apr. 21
Lansing, Iowa	18	Apr. 18	3	22.5	Apr. 22
McGregor, Iowa	18	Apr. 14	6	25.4	Apr. 24
Guttenberg, Iowa	15	Apr. 12	9	23.65	Apr. 24
Dubuque, Iowa	17	Apr. 13	11	26.8	Apr. 26
Clinton, Iowa	16	Apr. 15	13	24.85	Apr. 28
Davenport, Iowa	15	Apr. 16	12	22.5	Apr. 28
Muscatine, Iowa	16	Apr. 13	14	24.8	Apr. 29
Keithsburg, Ill.	12	Apr. [illegible]	17	16.5 20.4	Apr. 17 Apr. 27
Burlington, Iowa	15	Apr. 11	16	21.0	Apr. 30
Keokuk, Iowa	16	Apr. 10	13	22.1	1
Gregory Landing, Mo.	15	Apr. 7	15	(21.6 (22.7	Apr. 16 1
Quincy, Ill.	17	Apr. 7	17	(24.7 (24.3	1 4
Hannibal, Mo.	16	Apr. 6	18	(23.8 (24.3	Apr. 17 3
Louisiana, Mo.	15	Apr. 7	19	(21.6 (22.1	Apr. 17 1
Clarksville, Mo.	25	Apr. 7	19	31.9 32.2	Apr. 18 2
Winfield, Mo.	26	Apr. 8	19	(32.4 (32.7	Apr. 19 2
Grafton, Ill.	18	Apr. [illegible]	19	(23.8 (23.4	Apr. 19 2
Alton, Ill.	21	Apr. 8	14	25.2 23.3	Apr. 17 1

River and station	Flood stage	Above flood stages -dates From–	Above flood stages -dates To–	Crest * Stage	Crest * Date
MISSISSIPPI SYSTEM (Cont'd.)	Ft.			Ft.	
Missouri Basin					
Little Sioux: Spencer, Iowa	10	27	27	10.3	27
Linn Grove, Iowa	12	28	31	13.5	29
Salt Creek: Ashland, Nebr.	11	22	23	13.25	22
Nishnabotna: Hamburg, Iowa	18	22	22	21.1	22
Beaver Creek: Cedar Bluffs, Kans.	14	26	26	16.7	26
Republican: Orleans, Nebr.	11	27	27	11.4	27
West Fork Big Blue: Dorchester, Nebr.	15	25	25	15.05	25
Turkey Creek: Wilber, Nebr.	11	24	27	14.05	24
Little Blue: Deweese(nr), Nebr.	8	22	26	14.6 11.55	22 25
Fairbury(nr), Nebr.	10	24 27	25 27	12.1 10.3	25 27
Big Blue: Crete, Nebr.	16	22	27	20.2	23
Grand: Chillicothe, Mo.	24	9	9	24.4	9
Sumner, Mo.	26	9	10	29.15	9
Missouri: St. Joseph, Mo.	17	27	27	17.3	27
Ohio Basin					
White: Petersburg, Ind.	16	1	2	16.4	2
Hazleton, Ind.	16	2	3	16.5	3
Wabash: Montezuma, Ind.	14	Apr. 26	1	#17.2	Apr.28-29
Terre Haute, Ind.	14	Apr. 27	1	15.4	Apr. 29
Ohio: Cairo, Ill.	40	3	4	40.2	4
Arkansas Basin					
Chikaskia: Blackwell, Okla.	26	27	27	26.7	27
Little Caney: Copan, Okla.	21	9	9	21.3	9
North Canadian: Woodward, Okla.	10	17	17	10.8	17
Seiling, Okla.	11	18	18	11.0	18
Poteau: Panama, Okla.	24	27	29	28.7	28
Red Basin					
Sulphur: Hagansport, Tex.	38	10 28	20 Jun. 1	45.8 42.75	11 31
Naples, Tex.	22	14	27	28.4	16
WEST GULF OF MEXICO DRAINAGE					
Neches: Alto, Tex.	16	15	19	19.05	18
Trinity: Dallas, Tex.	30	10 16 28	12 18 29	35.5 34.6 30.3	11 17 28
Rosser, Tex.	26	12 31	21 31	30.9 26.4	13 31
Trinidad, Tex.	28	14	25	36.0	17
Long Lake, Tex.	40	16	28	#44.5	21
Midway, Tex.	40	21	Jun. 1	#43.7	25
Liberty, Tex.	24	16	Jun. 12	#28.3	Jun. 2
Moss Bluff, Tex.	4	14	Jun. 17	# 8.1	Jun. 3
Little: Cameron, Tex.	30	12 16 29	13 21 30	#31.4 #38.4 #31.7	12 18 29
Navasota: Easterly, Tex.	14	16	21	#20.6	17
Bryan, Tex.	12	17	26	#16.4	19
Brazos: Valley Junction, Tex.	44	18	19	#44.95	19
Hempstead, Tex.	40	21	24	#41.25	22
East Columbia, Tex.	30	20	Jun. 17	#32.8	28
Navidad: Ganado, Tex.	21	18	23	28.35	21
Lavaca: Edna, Tex.	21	19	21	24.3	20
Guadalupe: Gonzales, Tex.	20	18	21	29.8	20
Cuero, Tex.	23	22	23	24.2	22
Victoria, Tex.	21	19	26	26.95	24
Turkey Creek: Crystal City, Tex.	8	16 18	16 23	8.5 10.3	16 21
Frio: Calliham, Tex.	12	17	24	26.9	21

FLOOD STAGE DATA

(All dates in May unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
WEST GULF OF MEXICO DRAINAGE (Cont'd.)	Ft.			Ft.	
Atascosa: Whitsett, Tex.	20	20	22	26.8	21
Nueces: Cotulla, Tex.	15	20	22	16.0	21
Tilden(nr), Tex.	14	18	Jun. 3	18.5 18.6	23 27
Three Rivers, Tex.	35	22	23	36.1	22
WEST GULF OF MEXICO DRAINAGE (Cont'd.)	Ft.			Ft.	
Nueces (Cont'd.): Calallen, Tex.	7	22	Jun. 7	9.0	28-29

* Provisional
# Highest Stage Observed
____ Exceeded Previous Maximum Crest of Record

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	ALBANY, N. Y. 1007 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	86	12.2	70	250	1.9
1000	31	139			286	1.2
950	31	569	11.6	57	287	6.0
900	31	1,020	10.0	55	294	9.5
850	31	1,494	7.6	55	299	13.4
800	31	1,992	5.4	51	297	16.5
750	31	2,518	3.0	47	295	19.2
700	31	3,073	.2	44	291	21.8
650	31	3,664	- 2.9	40	290	25.3
600	31	4,295	- 6.5	36	292	27.4
550	31	4,964	-10.7	35	291	31.5
500	31	5,697	-15.2	35	290	33.8
450	31	6,480	-20.6	34	289	34.0
400	31	7,348	-26.9	35	288	36.3
350	31	8,297	-33.9	33	289	38.1
300	31	9,359	-41.8	R29	291	44.7
250	31	10,570	-50.9		296	49.9
200	31	11,993	-58.9		299	47.0
175	31	12,928	-60.1		299	39.8
150	31	13,791	-59.3		298	35.5
125	31	14,935	-58.5		300	25.6
100	31	16,336	-59.2		306	20.0
80	30	17,734	-58.1		309	13.4
70	30	18,576	-56.9		319	9.3
60	30	19,556	-55.4		345	7.0
50	30	20,725	-53.4		18	4.1
40	30	22,167	-51.7		66	5.2
30	28	24,042	-49.8		69	4.9
25	27	25,233	-48.4		80	4.5
20	23	26,701	-46.2		75	6.2
15	16	28,598	-43.6		59	9.7
10	5	31,337	-39.5			
7						
5						

Standard pressure surface (mb)	ALBUQUERQUE, N. MEX. 836 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,619	9.5	51	84	2.1
1000	31	99				
950	31	532				
900	31	995				
850	31	1,478				
800	31	1,985	11.2	37	303	1.9
750	31	2,520	8.0	37	272	7.2
700	31	3,086	3.8	40	264	11.8
650	31	3,679	- .5	37	254	16.1
600	31	4,319	- 5.2	37	241	22.1
550	31	4,993	-10.3	37	238	28.7
500	31	5,723	-15.3	32	239	31.3
450	31	6,506	-20.6	R26	240	33.2
400	31	7,373	-27.2	R24	240	36.1
350	31	8,322	-34.3	R24	242	34.8
300	31	9,383	-42.4	R25	242	37.3
250	31	10,594	-50.6		242	42.7
200	30	12,019	-57.0		244	44.7
175	30	12,863	-58.2		245	41.6
150	30	13,831	-59.4		247	39.4
125	30	14,968	-61.0		243	33.6
100	30	16,351	-62.2		241	21.6
80	29	17,722	-63.1		238	12.0
70	29	18,544	-62.5		218	5.8
60	29	19,500	-60.6		131	2.5
50	28	20,645	-57.3		97	4.9
40	26	22,060	-54.2		75	7.2
30	26	23,913	-51.9		84	10.3
25	25	25,100	-49.5		92	8.9
20	23	26,568	-46.4		100	6.0
15	18	28,492	-43.5		293	2.5
10						
7						
5						

Standard pressure surface (mb)	AMARILLO, TEXAS 889 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,095	13.6	74	199	7.2
1000	31	86				
950	31	531				
900	31	996				
850	31	1,472	14.5	62	221	15.9
800	31	1,984	12.8	50	234	15.2
750	31	2,521	9.7	45	236	14.4
700	31	3,092	5.8	45	234	15.9
650	31	3,689	1.7	42	232	18.5
600	31	4,334	- 3.4	44	233	20.8
550	31	5,009	- 8.7	45	233	22.9
500	31	5,747	-13.9	42	234	27.2
450	31	6,532	-19.6	38	235	29.7
400	31	7,403	-25.8	36	238	31.9
350	31	8,356	-33.1	32	240	36.1
300	31	9,421	-41.3	29	241	42.9
250	31	10,635	-49.9		243	49.1
200	31	12,064	-58.2		243	53.2
175	31	12,900	-60.5		246	52.6
150	30	13,859	-60.7		249	46.6
125	30	14,991	-61.8		250	36.1
100	30	16,365	-63.4		253	24.3
80	29	17,733	-63.7		248	11.3
70	29	18,553	-63.1		221	5.6
60	29	19,507	-60.1		154	1.7
50	29	20,654	-56.7		93	4.5
40	29	22,077	-54.1		89	5.8
30	29	23,935	-51.2		87	8.7
25	28	25,120	-49.0		94	8.5
20	26	26,595	-46.6		93	8.2
15	21	28,517	-43.1		100	7.0
10	13	31,263	-38.6		174	4.1
7	7	33,695	-36.1			
5	6	36,044	-33.4			

Standard pressure surface (mb)	ANCHORAGE, ALASKA 1008 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	29	5.3	61	175	3.3
1000	31	105			162	5.8
950	31	521	2.1	61	150	3.7
900	31	956	- 1.1	67	127	4.9
850	31	1,409	- 4.2	73	133	8.0
800	31	1,885	- 7.2	76	149	10.7
750	31	2,382	-10.2	73	157	12.4
700	31	2,914	-12.9	68	167	13.2
650	31	3,473	-16.2	60	172	12.6
600	31	4,074	-19.9	62	172	12.4
550	31	4,709	-24.4	61	179	12.2
500	31	5,401	-29.2	55	191	11.1
450	31	6,141	-34.1	52	210	9.7
400	31	6,962	-39.5	51	220	8.9
350	31	7,864	-45.1	51	233	8.0
300	31	8,984	-48.7		246	9.9
250	31	10,077	-50.2		252	13.8
200	31	11,538	-48.9		250	11.3
175	31	12,417	-47.8		235	11.5
150	31	13,433	-48.2		239	11.1
125	31	14,634	-48.5		239	8.5
100	31	16,098	-49.3		235	7.8
80	31	17,559	-49.6		238	4.5
70	31	18,432	-49.7		247	2.5
60	31	19,441	-49.6		198	1.4
50	31	20,635	-49.3		131	1.2
40	31	22,099	-48.8		69	3.5
30	29	23,992	-48.0		75	8.0
25	29	25,197	-46.9		75	9.7
20	27	26,685	-45.5		75	13.4
15	24	28,610	-42.5		72	15.5
10						
7						
5						

Standard pressure surface (mb)	* ANNETTE, ALASKA 1015 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	29	37	4.9	86	315	.2
1000	29	158	5.5	75	219	.4
950	29	577	3.1	73	179	2.5
900	29	1,013	.3	73	198	4.7
850	29	1,468	- 2.6	65	204	6.4
800	29	1,948	- 4.9	58	211	7.4
750	29	2,451	- 7.5	54	220	9.3
700	29	2,988	-10.5	53	223	10.3
650	29	3,551	-13.6	54	230	12.0
600	29	4,160	-17.2	53	238	12.8
550	29	4,803	-21.1	52	242	15.9
500	28	5,508	-25.6	49	247	17.7
450	28	6,256	-31.1	47	250	18.5
400	28	7,090	-37.1	46	258	23.3
350	28	8,000	-43.5	51	263	27.6
300	28	9,023	-49.3		266	26.2
250	28	10,208	-52.6		272	28.6
200	28	11,647	-52.6		268	22.7
175	28	12,512	-51.4		266	19.2
150	28	13,513	-51.4		260	16.7
125	27	14,689	-51.8		267	13.6
100	27	16,133	-52.4		260	10.3
80	26	17,578	-52.7		269	7.0
70	26	18,439	-52.5		268	5.6
60	26	19,437	-52.1		263	4.1
50	26	20,619	-51.5		258	2.3
40	25	22,076	-50.9		13	2.5
30	25	23,953	-49.8		83	1.9
25	25	25,147	-49.0		51	2.9
20	24	26,612	-47.7		56	4.9
15	23	28,527	-44.9		84	8.0
10	19	31,269	-39.6		79	10.9
7	9	33,792	-34.1			
5						

Standard pressure surface (mb)	ATHENS, GA. 990 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	246	16.4	88	316	2.1
1000	31	161				
950	31	601	20.2	56	293	5.8
900	31	1,067	17.5	51	291	6.6
850	31	1,553	14.0	53	270	6.2
800	31	2,062	10.5	52	260	5.8
750	31	2,592	7.5	45	265	6.6
700	31	3,163	4.6	37	272	9.1
650	31	3,759	1.0	35	273	11.8
600	31	4,403	- 3.1	34	278	13.6
550	31	5,083	- 7.3	31	284	14.6
500	31	5,824	-12.4	29	278	16.5
450	31	6,615	-17.8	30	278	18.1
400	31	7,493	-24.0	30	285	20.2
350	31	8,453	-31.0	28	289	23.3
300	31	9,527	-39.4	28	289	24.3
250	31	10,749	-49.1		293	26.0
200	31	12,177	-59.4		295	33.4
175	31	13,005	-63.3		295	36.5
150	31	13,949	-64.2		294	33.8
125	31	15,063	-64.6		297	28.7
100	31	16,422	-65.9		300	21.2
80	31	17,778	-65.1		322	12.0
70	31	18,593	-63.7		346	8.7
60	31	19,545	-61.1		26	8.2
50	30	20,687	-56.7		60	9.7
40	29	22,113	-53.6		90	10.1
30	29	23,974	-50.5		88	9.7
25	29	25,167	-48.9		88	8.5
20	26	26,639	-46.1		80	6.6
15	22	28,579	-42.1		67	5.6
10	6	31,327	-39.2			
7						
5						

Standard pressure surface (mb)	* BARROW, ALASKA 1015 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	8	-10.0	89	81	5.8
1000	31	123	- 8.9	91	85	5.2
950	31	525	- 7.7	86	90	5.6
900	31	942	- 8.0	80	103	4.1
850	31	1,386	- 9.3	76	122	3.3
800	31	1,853	-11.2	76	136	3.5
750	31	2,346	-13.4	74	158	3.3
700	31	2,870	-16.2	72	179	3.3
650	31	3,426	-19.3	67	181	5.2
600	31	4,016	-23.0	63	204	7.0
550	31	4,647	-27.2	58	208	8.4
500	31	5,330	-31.7	56	216	10.1
450	31	6,063	-37.0	52	218	11.3
400	31	6,874	-42.3	51	216	12.0
350	31	7,765	-48.1		223	13.6
300	31	8,773	-50.9		236	14.0
250	30	9,962	-48.7		244	12.0
200	29	11,437	-45.9		255	8.4
175	29	12,326	-45.8		255	8.0
150	29	13,352	-46.0		261	6.4
125	29	14,563	-46.5		258	4.9
100	28	16,035	-47.0		254	3.9
80	28	17,513	-46.6		204	2.7
70	27	18,394	-46.4		231	1.2
60	27	19,418	-46.0		72	1.0
50	27	20,631	-45.5		73	3.1
40	27	22,119	-45.2		73	4.5
30	26	24,041	-44.6		65	6.8
25	26	25,262	-44.1		68	9.3
20	26	26,761	-43.1		70	11.1
15	26	28,705	-41.5		70	13.8
10	23	31,476	-38.1		71	14.4
7	17	33,968	-33.4		78	18.5
5	8	36,337	-28.1			

Standard pressure surface (mb)	BARTER IS., ALASKA 1014 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	15	- 8.0	93	108	.6
1000	31	120	- 7.0	85	123	1.0
950	31	523	- 5.7	85	218	1.2
900	31	945	- 5.8	81	250	1.7
850	31	1,392	- 7.0	78	264	2.9
800	31	1,863	- 9.4	75	250	4.5
750	31	2,357	-12.1	74	257	6.8
700	31	2,885	-14.8	69	252	7.6
650	31	3,440	-17.8	68	255	8.2
600	31	4,037	-21.2	67	257	9.1
550	31	4,670	-25.3	64	252	11.5
500	31	5,359	-29.7	60	254	14.4
450	31	6,096	-34.8	57	255	13.6
400	31	6,915	-40.5	52	254	17.3
350	31	7,813	-46.5		249	22.0
300	31	8,824	-51.3		251	22.3
250	31	10,010	-50.1		256	22.7
200	31	11,480	-46.5		252	15.0
175	31	12,368	-45.8		256	11.7
150	31	13,395	-45.9		264	9.7
125	31	14,606	-46.5		258	7.4
100	31	16,085	-47.1		258	4.7
80	31	17,562	-46.9		270	2.3
70	31	18,446	-46.7		313	1.0
60	31	19,468	-46.5		39	1.4
50	31	20,679	-46.2		51	2.7
40	30	22,162	-45.7		54	6.2
30	30	24,083	-44.7		56	10.3
25	30	25,305	-43.7		59	10.9
20	29	26,802	-42.7		59	12.8
15	24	28,758	-40.5		59	14.0
10	8	31,614	-35.4			
7						
5						

Standard pressure surface (mb)	BETHEL, ALASKA 1006 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	39	- 1.3	91	304	1.4
1000	31	87			269	2.7
950	31	495	- 3.1	82	210	2.3
900	31	922	- 5.2	79	197	3.9
850	31	1,369	- 6.9	75	195	4.3
800	31	1,841	- 8.9	76	201	4.9
750	31	2,335	-11.2	73	200	6.4
700	31	2,866	-13.8	67	209	5.8
650	31	3,423	-16.7	61	225	6.4
600	31	4,024	-19.8	58	242	6.6
550	31	4,662	-23.6	57	257	7.4
500	31	5,356	-28.0	54	246	9.5
450	31	6,098	-32.8	55	247	10.7
400	31	6,925	-38.3	52	256	13.6
350	31	7,832	-44.0	46	258	14.8
300	31	8,854	-49.0		249	15.2
250	31	10,045	-50.5		244	14.2
200	31	11,504	-48.3		241	13.0
175	31	12,385	-47.8		240	10.9
150	30	13,403	-48.0		233	9.7
125	30	14,603	-48.8		232	7.6
100	30	16,067	-49.4		220	6.0
80	30	17,527	-49.5		207	3.7
70	30	18,401	-49.6		205	3.3
60	30	19,410	-49.2		173	1.6
50	30	20,605	-49.1		113	3.1
40	30	22,070	-48.7		94	4.3
30	30	23,962	-48.1		84	5.2
25	30	25,164	-47.7		84	7.8
20	28	26,635	-46.6		79	9.1
15	22	28,543	-44.0		79	11.3
10	6	31,268	-40.8			
7						
5						

Standard pressure surface (mb)	BISMARCK, N. DAK. 951 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	505	7.6	75	352	3.1
1000	31	86				
950	31	514			37	2.7
900	31	961	8.3	64	308	5.8
850	31	1,431	6.4	64	302	8.7
800	31	1,927	4.4	61	297	10.7
750	31	2,450	2.0	57	288	12.4
700	31	3,005	- .8	55	276	14.4
650	31	3,590	- 4.5	55	274	15.3
600	31	4,220	- 8.4	52	277	17.7
550	31	4,883	-13.0	53	271	19.8
500	31	5,610	-17.7	53	263	22.3
450	31	6,380	-23.0	52	264	27.4
400	31	7,244	-29.3	48	261	30.1
350	31	8,184	-36.1	41	256	33.2
300	31	9,236	-43.8		255	35.2
250	31	10,438	-51.7		248	37.3
200	31	11,867	-56.0		244	39.6
175	30	12,716	-54.9		257	34.6
150	30	13,703	-54.2		257	25.6
125	30	14,869	-55.0		256	20.4
100	30	16,289	-56.3		257	15.0
80	30	17,705	-56.6		257	8.7
70	30	18,551	-56.5		264	5.1
60	30	19,533	-55.3		276	1.7
50	30	20,701	-53.6		32	2.9
40	30	22,142	-51.9		78	4.9
30	30	24,012	-50.3		74	5.8
25	30	25,208	-48.4		86	7.8
20	26	26,667	-47.3		111	6.6
15	17	28,588	-44.4		118	4.1
10						
7						
5						

Standard pressure surface (mb)	BOISE, IDAHO 915 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	868	7.1	65	206	1.2
1000	31	123				
950	31	552				
900	31	1,000	9.1	54	284	1.7
850	31	1,474	8.3	47	327	6.6
800	31	1,971	4.8	48	326	7.2
750	31	2,489	.9	49	323	8.0
700	31	3,045	- 3.0	51	316	8.5
650	31	3,623	- 7.1	52	306	9.1
600	31	4,247	-11.2	46	299	10.5
550	31	4,907	-15.4	42	295	9.7
500	31	5,624	-20.0	39	277	10.3
450	31	6,392	-25.5	41	270	11.3
400	31	7,242	-31.8	42	268	11.5
350	31	8,172	-38.6	40	262	12.0
300	31	9,215	-45.8		259	13.6
250	31	10,412	-52.1		265	14.2
200	31	11,942	-55.7		272	16.1
175	31	12,694	-54.9		266	16.3
150	31	13,580	-54.8		258	16.1
125	31	14,843	-55.7		255	15.0
100	31	16,263	-56.2		245	11.3
80	30	17,682	-56.5		235	8.0
70	30	18,529	-56.5		233	4.3
60	30	19,506	-56.2		203	1.6
50	30	20,669	-54.3		107	2.5
40	30	22,105	-52.8		82	4.9
30	28	23,968	-51.0		81	6.8
25	26	25,165	-49.5		73	10.3
20	24	26,532	-47.0		87	9.7
15	11	28,542	-43.5			
10						
7						
5						

Standard pressure surface (mb)	* BOOTHVILLE, LA. 1017 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1	21.0	94	97	3.1
1000	31	149	22.0	86	121	4.9
950	31	594	19.5	72	144	8.7
900	31	1,058	17.0	59	150	8.9
850	31	1,544	14.4	52	152	9.1
800	31	2,054	12.3	40	159	8.5
750	31	2,594	10.1	32	175	6.8
700	31	3,164	7.0	32	195	5.6
650	31	3,766	3.3	37	230	5.4
600	31	4,413	- .9	38	265	6.0
550	31	5,101	- 5.3	38	274	7.2
500	31	5,845	-10.1	40	275	10.7
450	31	6,652	-15.4	38	284	15.0
400	31	7,530	-21.5	34	281	18.3
350	31	8,499	-28.7	35	280	21.8
300	31	9,584	-36.9	33	284	27.6
250	31	10,919	-46.7		286	34.4
200	31	12,262	-57.7		282	46.2
175	31	13,095	-62.1		287	49.0
150	31	14,040	-65.2		288	40.2
125	31	15,145	-66.9		285	35.5
100	31	16,485	-69.2		286	22.0
80	31	17,818	-68.7		305	8.9
70	31	18,620	-66.8		336	5.2
60	31	19,558	-63.4		31	7.6
50	31	20,692	-58.3		74	10.3
40	31	22,109	-54.4		87	12.4
30	30	23,966	-50.8		83	13.2
25	30	25,158	-49.0		87	13.0
20	29	26,631	-45.7		83	11.5
15	28	28,555	-42.4		93	9.5
10	23	31,334	-36.7		82	9.1
7						
5						

Standard pressure surface (mb)	* BROWNSVILLE, TEXAS 1011 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	7	22.8	91	138	7.8
1000	31	101	22.8	89	139	10.3
950	31	546	20.3	88	155	21.8
900	31	1,015	19.1	69	165	22.5
850	31	1,506	18.1	48	172	19.4
800	31	2,024	16.1	39	178	15.9
750	31	2,570	13.5	33	189	10.9
700	31	3,148	10.3	31	224	6.2
650	31	3,756	6.0	35	246	8.0
600	31	4,410	1.2	39	264	11.1
550	31	5,100	- 4.0	44	277	13.8
500	31	5,850	- 8.9	39	268	13.4
450	31	6,651	-14.4	34	262	15.5
400	31	7,541	-21.1	35	258	20.8
350	31	8,513	-28.0	37	266	26.6
300	30	9,603	-36.3	33	267	34.0
250	30	10,842	-46.0		270	42.5
200	30	12,290	-56.9		271	53.8
175	30	13,125	-62.4		269	55.4
150	30	14,065	-66.7		270	50.7
125	30	15,158	-69.9		264	39.8
100	30	16,474	-73.2		262	27.8
80	29	17,780	-72.3		242	9.5
70	29	18,570	-69.2		155	2.5
60	28	19,499	-64.5		85	10.7
50	28	20,629	-59.4		89	13.4
40	28	22,040	-54.9		89	15.2
30	28	23,995	-51.3		89	17.1
25	28	25,084	-49.0		91	16.9
20	27	26,559	-46.3		89	19.2
15	27	28,486	-42.1		87	20.8
10	27	31,262	-37.2		79	18.6
7	15	33,748	-34.7		90	14.6
5	5	36,103	-28.5			

Standard pressure surface (mb)	BUFFALO, N. Y. 991 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	218	11.5	76	214	3.9
1000	31	141				
950	31	574	13.2	57	244	8.7
900	31	1,024	10.9	58	268	11.7
850	31	1,498	8.3	57	276	14.6
800	31	1,997	6.1	50	280	19.0
750	31	2,525	3.6	48	279	22.7
700	31	3,081	.6	45	277	25.1
650	31	3,670	- 2.9	43	277	27.2
600	31	4,303	- 6.5	40	281	28.0
550	30	4,973	-11.1	33	282	29.5
500	30	5,704	-15.7	32	280	31.5
450	30	6,486	-21.0	33	279	33.8
400	30	7,351	-27.4	32	281	36.7
350	30	8,297	-34.6	32	284	37.9
300	30	9,357	-42.6	28	283	41.2
250	30	10,565	-50.8		282	44.9
200	30	11,990	-58.6		287	45.6
175	30	12,825	-60.5		290	40.6
150	30	13,786	-59.7		291	33.0
125	30	14,929	-58.8		292	28.0
100	30	16,330	-58.9		301	20.8
80	29	17,727	-58.8		319	14.8
70	29	18,566	-57.7		335	10.5
60	29	19,540	-56.3		352	7.8
50	29	20,704	-54.0		21	5.1
40	29	22,145	-51.5		41	5.2
30	29	24,021	-49.4		88	4.9
25	25	25,218	-48.1		85	4.1
20	24	26,696	-46.2		107	2.9
15	12	28,601	-44.3			
10						
7						
5						

Standard pressure surface (mb)	*CANTON IS., PACIFIC AREA + 1009 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	4	30.0	70	79	10.3
1000	31	80	28.5	70	77	11.3
950	31	526	23.3	73	81	12.0
900	31	1,004	20.5	66	87	15.5
850	31	1,497	18.1	61	89	16.1
800	31	2,014	15.8	53	88	16.3
750	31	2,555	13.4	44	86	15.7
700	31	3,138	10.5	39	87	14.4
650	31	3,746	7.2	35	81	13.0
600	31	4,405	3.2	35	79	13.6
550	31	5,096	- .7	30	86	14.6
500	31	5,861	- 4.9	27	93	12.0
450	31	6,675	- 9.8	26	101	12.2
400	31	7,581	-15.5	25	102	11.8
350	31	8,575	-22.4	24	116	11.7
300	31	9,689	-31.0	24	134	12.2
250	31	10,954	-41.4		162	12.4
200	31	12,429	-53.5		198	11.5
175	31	13,275	-60.4		219	13.0
150	31	14,219	-67.8		241	13.6
125	31	15,294	-75.2		256	18.5
100	31	16,569	-80.2		252	21.2
80	31	17,841	-75.6		265	24.5
70	31	18,622	-71.1		269	29.7
60	31	19,545	-66.3		270	34.2
50	31	20,656	-63.5		268	26.0
40	31	22,035	-61.1		88	15.3
30	30	23,843	-55.8		90	48.2
25	29	25,012	-52.3		90	54.2
20	29	26,466	-49.1		89	60.2
15	26	28,377	-44.2		90	68.0
10	18	31,119	-37.7		89	74.8
7						
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

•1/CAPE HATTERAS, N. C.
1017 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	4	18.8	87	219	2.1
1000	31	150	19.5	79	240	5.2
950	31	590	18.8	64	269	8.7
900	31	1,055	16.4	59	287	8.0
850	31	1,540	13.1	59	291	9.3
800	31	2,047	9.7	60	292	8.5
750	31	2,581	6.4	55	288	9.7
700	31	3,143	3.1	47	295	11.3
650	31	3,736	- .2	47	297	11.8
600	31	4,377	- 3.8	44	303	13.6
550	31	5,052	- 7.7	36	301	14.6
500	31	5,795	-12.4	33	298	17.7
450	31	6,586	-17.7	R33	295	17.9
400	31	7,464	-23.8	R30	304	18.8
350	31	8,426	-30.9	R27	304	20.0
300	31	9,501	-39.5	R27	306	22.1
250	31	10,723	-49.3		307	24.5
200	31	12,151	-59.5		306	27.0
175	31	12,978	-63.3		304	28.4
150	31	13,923	-64.4		304	26.4
125	31	15,042	-62.8		306	21.8
100	31	16,416	-63.0		311	18.1
80	31	17,792	-61.9		326	11.5
70	31	18,620	-60.4		344	7.8
60	31	19,586	-57.7		23	5.8
50	31	20,744	-54.7		63	5.6
40	31	22,178	-52.2		83	8.4
30	29	24,056	-48.9		96	9.9
25	29	25,257	-47.4		100	9.7
20	29	26,740	-44.7		104	11.7
15	25	28,667	-40.9		105	7.6
10	17	31,460	-36.4		242	6.4
7	8	33,960	-31.4			

CARIBOU, ME.
992 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	191	6.0	74	277	4.3
1000	31	126				
950	31	546	5.2	66	286	7.4
900	31	987	4.1	65	300	12.2
850	31	1,450	1.9	63	305	15.7
800	31	1,937	- .1	60	305	18.3
750	31	2,453	- 2.3	56	301	20.6
700	31	2,998	- 4.7	53	297	25.3
650	31	3,575	- 7.9	48	296	27.2
600	31	4,197	-11.5	44	296	28.4
550	31	4,857	-15.3	42	296	32.1
500	31	5,574	-19.3	R37	298	35.9
450	31	6,348	-24.3	R33	294	38.1
400	31	7,199	-30.5	R32	295	41.4
350	31	8,135	-37.0	R32	296	46.0
300	31	9,185	-44.3		295	48.2
250	31	10,387	-51.3		293	49.5
200	31	11,822	-54.9		292	45.5
175	31	12,675	-54.4		293	36.3
150	31	13,663	-54.4		285	31.1
125	31	14,929	-54.9		291	22.1
100	31	16,253	-55.9		293	15.9
80	31	17,675	-55.2		305	9.7
70	31	18,527	-54.4		318	7.2
60	31	19,518	-53.1		331	2.9
50	31	20,696	-51.8		40	1.2
40	31	22,146	-50.4		60	3.9
30	29	24,029	-48.6		111	3.5
25	29	25,231	-47.3		107	4.3
20	27	26,717	-45.3		105	5.8
15	26	28,641	-42.8		90	6.0
10	13	31,322	-37.7			

CHARLESTON, S. C.
1017 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	13	19.0	87	239	2.9
1000	31	160	20.1	77	244	6.0
950	31	605	19.8	59	266	9.3
900	31	1,068	17.1	56	292	6.8
850	31	1,553	13.5	59	316	6.2
800	31	2,060	9.7	62	322	5.8
750	31	2,594	7.0	51	314	5.8
700	31	3,158	4.2	43	305	7.2
650	31	3,757	.8	39	303	9.3
600	31	4,397	- 3.1	34	301	11.3
550	31	5,081	- 7.2	29	305	13.2
500	31	5,818	-12.0	R27	303	14.6
450	31	6,615	-17.6	R30	300	15.7
400	31	7,489	-24.0	R29	303	16.9
350	31	8,449	-31.1	R29	301	18.3
300	31	9,524	-39.4	R27	300	20.2
250	31	10,746	-49.1		307	21.2
200	31	12,176	-59.1		304	27.6
175	31	13,004	-63.1		305	31.1
150	31	13,947	-65.1		302	30.1
125	30	15,061	-64.4		307	28.0
100	30	16,420	-65.9		308	20.4
80	30	17,775	-64.9		326	13.4
70	30	18,592	-63.3		346	9.1
60	30	19,544	-60.7		16	8.0
50	30	20,687	-57.0		66	8.9
40	30	22,110	-53.3		85	10.5
30	29	23,975	-50.2		96	9.9
25	26	25,172	-48.2		96	8.2
20	22	26,645	-45.9		85	9.5
15	5	28,602	-41.7			

CHIHUAHUA, MEXICO
855 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,428	15.7	31	233	3.7
1000	31	64				
950	31	509				
900	31	985				
850	31	1,475	16.3	30	234	4.1
800	31	1,991	16.0	28	251	6.8
750	31	2,533	12.3	27	254	11.3
700	31	3,110	8.8	27	242	14.6
650	31	3,717	4.4	29	236	14.4
600	31	4,365	- .6	31	234	15.5
550	31	5,050	- 5.8	32	233	20.2
500	31	5,794	-11.2	29	234	25.8
450	31	6,589	-16.9	29	240	30.7
400	31	7,469	-23.2	R27	241	35.9
350	31	8,433	-30.4	R27	241	42.7
300	31	9,510	-38.6	R26	245	49.0
250	30	10,739	-47.4		248	60.8
200	30	12,182	-57.2		250	68.6
175	29	13,019	-61.1		252	71.5
150	29	13,969	-63.9		251	63.5
125	29	15,081	-66.0		247	48.6
100	29	16,427	-68.3		249	28.4
80	26	17,762	-68.3		239	12.0
70	22	18,570	-67.2		222	3.3
60	22	19,514	-63.0		94	2.9
50	21	20,647	-58.2		85	7.0
40	18	22,076	-54.9		89	7.2
30	17	23,933	-50.6		90	7.8
25	17	25,127	-48.6		90	9.3
20	17	26,605	-45.7		82	8.4
15	10	28,531	-42.3			
10	5	31,276	-39.1			

• COLD BAY, ALASKA
1008 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	30	1.5	85	241	3.9
1000	31	88			266	5.4
950	31	497	- 1.2	86	246	6.2
900	31	929	- 2.9	84	259	8.0
850	31	1,381	- 5.0	84	275	8.5
800	31	1,856	- 7.0	76	280	10.7
750	31	2,357	- 9.0	68	277	12.2
700	31	2,890	-11.4	64	274	12.8
650	31	3,455	-14.0	61	269	13.0
600	31	4,061	-17.2	57	268	16.5
550	31	4,706	-21.1	54	266	15.0
500	31	5,406	-25.5	52	272	16.7
450	31	6,157	-30.8	52	274	19.2
400	31	6,990	-36.2	46	276	21.8
350	31	7,904	-42.4	53	275	22.5
300	31	8,933	-47.6		276	24.5
250	31	10,129	-50.3		278	27.2
200	31	11,584	-49.6		265	22.0
175	31	12,458	-49.5		262	18.1
150	31	13,468	-49.6		255	14.8
125	31	14,660	-50.3		254	13.6
100	30	16,113	-50.7		237	11.1
80	30	17,565	-50.7		228	7.4
70	30	18,435	-50.6		216	6.8
60	30	19,439	-50.2		190	4.3
50	30	20,628	-50.2		178	3.9
40	30	22,084	-50.0		143	3.3
30	30	23,964	-49.5		106	3.7
25	30	25,159	-49.1		104	5.2
20	27	26,616	-48.0		75	7.2
15	27	28,520	-46.0		87	11.7
10	19	31,248	-42.3		77	15.3
7	10	33,717	-37.4			

COLUMBIA, MO.
986 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	238	16.0	77	181	5.8
1000	31	119				
950	31	555	17.5	62	217	16.3
900	31	1,018	15.7	60	237	21.4
850	31	1,501	12.8	60	243	17.5
800	31	2,009	9.9	55	241	15.5
750	31	2,537	6.7	53	242	16.7
700	31	3,106	3.6	46	248	14.6
650	31	3,698	- .3	41	245	16.1
600	31	4,340	- 4.4	36	248	17.3
550	31	5,013	- 8.9	31	250	18.5
500	31	5,752	-13.8	28	249	21.6
450	31	6,535	-19.3	27	252	24.3
400	31	7,410	-25.6	29	255	28.0
350	31	8,365	-32.5	31	255	33.8
300	31	9,434	-40.5	29	256	37.3
250	31	10,652	-49.7		258	43.7
200	30	12,080	-59.1		263	44.5
175	30	12,912	-61.4		265	39.6
150	30	13,866	-61.2		264	36.3
125	30	15,001	-60.8		266	28.6
100	30	16,386	-61.6		265	20.8
80	30	17,766	-62.1		271	12.2
70	30	18,591	-61.6		275	6.8
60	30	19,550	-59.5		343	2.5
50	29	20,698	-56.2		67	6.4
40	29	22,127	-53.3		82	8.0
30	29	23,990	-51.0		81	11.1
25	29	25,180	-49.6		80	11.7
20	28	26,653	-47.3		84	10.3
15	22	28,567	-44.0		83	9.3
10	8	31,292	-41.0			

DAYTON, OHIO
982 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	297	14.6	79	196	2.1
1000	31	144				
950	31	584	16.3	60	243	10.9
900	31	1,039	14.2	58	265	15.9
850	31	1,520	11.3	55	268	16.7
800	31	2,024	8.5	51	265	18.8
750	31	2,551	4.9	48	263	19.8
700	31	3,115	1.8	43	265	20.8
650	31	3,704	- 1.7	43	267	20.6
600	31	4,342	- 5.6	47	269	22.0
550	31	5,010	- 9.4	39	268	24.1
500	31	5,751	-14.0	35	269	25.8
450	31	6,536	-19.7	30	273	26.4
400	31	7,407	-26.1	30	274	28.7
350	31	8,359	-33.4	30	276	30.9
300	31	9,423	-41.6	30	276	33.2
250	31	10,637	-50.2		278	34.6
200	31	12,063	-59.1		282	37.5
175	31	12,994	-62.0		286	35.7
150	31	13,847	-61.5		283	31.9
125	30	14,976	-60.9		285	24.7
100	30	16,362	-61.4		291	20.6
80	30	17,745	-61.2		310	13.0
70	30	18,574	-60.4		327	8.0
60	29	19,537	-58.4		4	4.7
50	29	20,691	-55.3		62	5.1
40	29	22,124	-52.6		78	6.0
30	29	23,990	-50.3		81	7.0
25	29	25,184	-48.7		79	8.5
20	25	26,654	-45.8		76	11.8
15	15	28,563	-43.6			

DEL RIO, TEXAS
975 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	314	20.8	86	117	7.6
1000	31	94				
950	31	538	19.8	83	134	14.0
900	31	1,005	17.8	82	156	19.4
850	31	1,494	16.6	75	168	19.0
800	31	2,010	14.6	61	180	15.9
750	31	2,552	12.1	51	203	12.8
700	31	3,129	8.8	43	227	8.9
650	31	3,730	4.5	40	248	8.9
600	31	4,386	- .1	38	241	13.6
550	31	5,065	- 5.5	39	241	19.6
500	31	5,817	-10.8	41	244	26.4
450	31	6,614	-16.2	34	244	29.7
400	31	7,497	-22.5	33	246	31.3
350	31	8,464	-29.4	R30	248	37.7
300	31	9,546	-37.6	R31	250	43.3
250	31	10,778	-47.1		250	55.0
200	31	12,221	-57.0		254	65.5
175	31	13,058	-61.4		257	67.0
150	31	14,006	-64.5		256	55.9
125	31	15,114	-66.5		253	45.5
100	31	16,457	-68.2		249	26.6
80	30	17,790	-69.1		229	11.5
70	30	18,594	-65.6		217	4.1
60	30	19,535	-62.7		77	4.9
50	30	20,673	-57.8		95	11.1
40	30	22,092	-54.6		83	11.8
30	30	23,950	-50.6		85	14.0
25	30	25,144	-48.2		86	12.4
20	28	26,625	-44.8		90	11.7
15	26	28,563	-41.2		88	8.4
10	14	31,325	-36.8			

DENVER, COLO.
835 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,611	8.0	67	202	3.1
1000	31	91				
950	31	524				
900	31	981				
850	31	1,459				
800	31	1,962	9.0	52	253	2.9
750	31	2,496	6.1	50	285	4.1
700	31	3,057	2.5	52	259	6.8
650	31	3,651	- 1.6	50	255	11.8
600	31	4,284	- 6.4	50	247	15.5
550	31	4,953	-11.4	47	243	18.5
500	31	5,682	-16.5	43	236	22.0
450	31	6,460	-22.2	37	230	25.6
400	31	7,321	-28.5	35	232	26.8
350	31	8,264	-35.5	35	231	29.7
300	31	9,319	-43.7		229	32.2
250	31	10,522	-51.5		231	34.2
200	31	11,950	-57.5		234	36.9
175	31	12,790	-58.3		239	35.7
150	31	13,764	-57.2		242	32.2
125	31	14,916	-57.9		240	22.9
100	31	16,319	-59.4		238	15.0
80	31	17,715	-60.0		245	9.3
70	31	18,547	-60.1		224	3.7
60	31	19,516	-58.1		121	1.7
50	31	20,672	-55.8		84	4.7
40	30	22,106	-53.1		82	6.6
30	30	23,969	-51.3		84	8.7
25	30	25,160	-49.5		83	10.9
20	30	26,631	-47.0		88	8.4
15	24	28,532	-44.5		98	7.8

DODGE CITY, KANS.
921 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	792	13.5	85	195	7.2
1000	31	89				
950	31	528				
900	31	984	14.6	72	205	14.0
850	31	1,469	15.0	54	220	21.6
800	31	1,981	13.1	43	225	19.2
750	31	2,517	9.6	40	225	16.5
700	31	3,089	5.6	39	225	16.9
650	31	3,687	1.1	40	229	18.8
600	31	4,329	- 3.9	37	236	21.6
550	31	5,003	- 9.3	39	237	25.4
500	31	5,740	-14.4	36	236	28.0
450	31	6,523	-20.0	29	235	30.3
400	31	7,394	-26.8	29	237	31.1
350	31	8,344	-34.0	30	247	37.9
300	31	9,407	-42.0	33	242	40.6
250	31	10,619	-50.8		238	44.7
200	31	12,045	-58.1		247	48.6
175	31	12,883	-59.8		245	46.4
150	31	13,846	-59.7		248	40.4
125	31	14,986	-60.1		251	30.5
100	31	16,373	-61.9		248	21.8
80	30	17,752	-62.4		243	11.8
70	30	18,576	-61.5		234	6.0
60	30	19,536	-59.2		117	1.4
50	30	20,687	-55.9		80	5.8
40	29	22,112	-53.4		88	5.4
30	29	23,975	-50.8		79	10.3
25	29	25,167	-49.1		85	11.3
20	29	26,640	-46.2		94	10.3
15	26	28,564	-43.4		67	4.7
10	11	31,339	-38.8			

EL PASO, TEXAS
880 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,193	15.6	38	296	3.3
1000	31	87				
950	31	528				
900	31	1,001				
850	31	1,487	16.6	35	280	3.7
800	31	2,000	13.4	35	256	5.8
750	31	2,534	10.0	34	252	10.1
700	31	3,111	6.0	31	245	13.2
650	31	3,705	1.4	33	234	17.3
600	31	4,353	- 3.4	32	228	22.0
550	31	5,025	- 8.4	34	231	27.2
500	31	5,770	-13.6	R30	233	31.7
450	31	6,557	-19.2	R28	235	33.6
400	31	7,430	-25.7	R28	237	37.9
350	31	8,385	-32.8	R25	239	42.9
300	31	9,454	-40.9	R25	242	47.8
250	31	10,672	-49.5		244	55.4
200	31	12,106	-57.8		247	61.4
175	31	12,943	-59.9		248	57.5
150	31	13,901	-61.4		248	51.5
125	31	15,027	-63.2		244	39.4
100	30	16,396	-64.9		240	26.8
80	30	17,754	-65.5		235	14.0
70	30	18,568	-64.1		232	6.0
60	30	19,516	-61.2		94	4.1
50	30	20,658	-57.2		89	8.7
40	29	22,077	-54.4		81	10.1
30	28	23,930	-51.1		80	12.0
25	28	25,123	-48.2		75	11.1
20	25	26,598	-45.4		74	10.3
15	20	28,555	-41.0		54	4.7
10	11	31,393	-33.6		333	2.7
7	7	33,887	-29.4			

ELY, NEV.
806 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,908	1.5	65	199	2.9
1000	31	127				
950	31	555				
900	31	1,005				
850	31	1,473				
800	31	1,967	3.9	58	212	2.7
750	31	2,494	3.0	51	348	4.3
700	31	3,047	- 1.0	51	345	3.7
650	31	3,631	- 5.3	51	209	4.7
600	31	4,258	- 9.7	51	267	8.0
550	31	4,918	-14.5	45	256	10.3
500	31	5,639	-19.5	42	238	13.2
450	31	6,409	-25.1	38	245	14.2
400	31	7,259	-31.3	36	245	16.3
350	31	8,191	-38.4	33	240	18.3
300	31	9,235	-45.6		250	15.0
250	31	10,434	-51.1		258	19.6
200	30	11,876	-54.7		256	22.1
175	30	12,728	-55.6		254	22.9
150	29	13,702	-56.3		248	20.2
125	29	14,857	-57.1		247	17.9
100	28	16,270	-58.7		238	12.2
80	27	17,675	-58.8		236	8.2
70	27	18,511	-59.3		225	4.1
60	27	19,478	-58.4		109	2.5
50	27	20,630	-56.1		89	3.3
40	27	22,054	-54.2		80	8.4
30	25	23,915	-51.9		78	9.5
25	25	25,101	-50.1		77	10.7
20	24	26,573	-47.2		78	10.7
15	23	28,503	-42.7		88	6.2
10	15	31,280	-36.1		302	2.1
7	11	33,742	-31.3			

EMPALME, MEXICO
1009 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	12	16.7	64	358	2.9
1000	31	90	19.7	59	340	2.9
950	31	532	21.3	42	313	4.5
900	31	1,002	19.5	35	276	4.1
850	31	1,491	16.7	34	224	5.8
800	31	2,004	14.1	31	207	9.5
750	31	2,543	10.8	30	216	12.0
700	31	3,118	7.4	29	226	13.8
650	31	3,720	3.5	29	230	15.2
600	31	4,369	- .9	29	239	19.2
550	31	5,050	- 6.2	31	242	22.9
500	31	5,795	-11.7	32	248	25.1
450	31	6,590	-17.7	34	247	30.7
400	31	7,466	-24.1	34	249	33.4
350	31	8,426	-31.2	36	250	40.0
300	31	9,500	-39.3	R34	250	48.4
250	31	10,725	-48.1		250	57.3
200	31	12,164	-57.2		251	67.4
175	31	13,001	-60.8		251	66.4
150	31	13,952	-63.4		251	59.6
125	31	15,065	-65.9		246	46.2
100	31	16,413	-67.8		242	34.4
80	31	17,754	-67.6		236	15.5
70	30	18,560	-65.9		231	9.7
60	30	19,500	-63.0		132	3.1
50	30	20,634	-58.7		93	9.7
40	30	22,046	-55.2		89	12.6
30	27	23,895	-51.4		97	13.6
25	26	25,090	-49.1		104	10.9
20	26	26,562	-46.5		93	11.3
15	21	28,472	-43.4		96	11.3
10	[illegible]	31,219	-37.9			

* FAIRBANKS, ALASKA
995 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	135	2.5	69	321	2.7
1000	30	90				
950	30	505	3.4	50	249	3.9
900	30	942	.4	54	236	6.8
850	30	1,398	- 2.7	58	231	8.0
800	30	1,876	- 6.2	64	217	8.2
750	30	2,376	- 9.7	70	209	9.7
700	30	2,907	-13.2	73	205	10.7
650	30	3,465	-16.5	67	211	11.5
600	30	4,065	-20.3	62	215	11.3
550	30	4,698	-24.5	60	216	12.6
500	30	5,392	-29.1	57	218	13.4
450	30	6,130	-34.2	54	218	13.4
400	30	6,952	-39.9	53	221	13.6
350	30	7,852	-46.0	54	230	13.8
300	30	8,867	-50.2		237	15.2
250	30	10,052	-51.2		243	14.0
200	30	11,509	-48.7		244	13.4
175	30	12,388	-47.7		240	12.8
150	30	13,406	-47.7		240	12.4
125	30	14,608	-48.3		247	11.1
100	30	16,075	-48.9		247	7.2
80	30	17,539	-48.9		259	4.1
70	30	18,415	-49.0		242	3.3
60	30	19,427	-48.8		225	1.0
50	30	20,624	-48.3		61	2.9
40	29	22,096	-47.9		61	5.2
30	28	23,989	-47.0		65	8.2
25	27	25,205	-45.9		70	10.1
20	27	26,693	-44.4		76	12.2
15	25	28,628	-41.9		71	16.3
10	15	31,395	-38.3		71	21.2

FLINT, MICH.
988 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	234	12.4	73	188	2.5
1000	31	135				
950	31	569	12.7	60	224	7.4
900	31	1,019	11.7	59	253	10.9
850	31	1,496	9.4	59	269	15.9
800	31	1,998	7.1	54	270	18.1
750	31	2,521	3.9	51	269	[illegible]
700	31	3,084	.8	45	267	20.4
650	31	3,674	- 2.6	42	266	23.9
600	31	4,307	- 6.3	38	267	25.3
550	31	4,974	-10.5	38	271	28.0
500	31	5,710	-15.3	36	273	30.7
450	31	6,490	-20.6	34	274	33.4
400	31	7,359	-26.7	32	276	35.2
350	31	8,309	-33.9	30	278	35.9
300	31	9,371	-42.1	33	279	40.2
250	31	10,583	-50.3		283	45.6
200	31	12,011	-58.2		[illegible]	42.5
175	30	12,847	-60.0		286	42.2
150	30	13,811	-58.6		283	34.8
125	30	14,955	-58.8		285	26.8
100	30	16,355	-59.0		294	19.2
80	30	17,755	-58.9		310	12.4
70	29	18,588	-58.1		332	9.1
60	29	19,563	-56.4		3	5.4
50	29	20,726	-54.1		51	[illegible]
40	29	22,166	-51.6		71	[illegible]
30	28	24,047	-49.0		83	[illegible]
25	28	25,247	-47.6		87	7.8
20	27	26,722	-46.0		90	8.5
15	20	28,677	-42.3		125	5.2
10	10	31,463	-40.1			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

MAY 1965

FORT WORTH, TEXAS
993 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	180	19.6	89	159	6.0
1000	31	122				
950	31	570	18.4	85	171	13.4
900	31	1,027	16.4	79	190	18.8
850	31	1,513	14.8	68	200	18.8
800	31	2,025	12.8	55	208	15.7
750	31	2,571	10.2	50	219	12.6
700	31	3,136	6.7	43	237	10.5
650	31	3,742	2.7	38	248	12.2
600	31	4,383	- 1.8	34	243	13.8
550	31	5,067	- 6.5	32	242	15.5
500	31	5,808	-11.5	28	245	19.0
450	31	6,607	-17.0	29	247	27.2
400	31	7,483	-23.2	29	249	30.7
350	31	8,446	-30.5	30	250	35.7
300	31	9,522	-39.0	29	253	42.2
250	31	10,747	-48.8		252	49.9
200	30	12,176	-58.9		254	59.6
175	29	13,007	-62.6		255	56.9
150	29	13,956	-62.7		258	48.0
125	29	15,075	-64.9		259	37.9
100	28	16,431	-66.3		257	26.0
80	28	17,782	-66.1		251	10.5
70	28	18,593	-64.9		209	5.4
60	28	19,540	-61.7		98	3.5
50	28	20,683	-56.8		97	8.4
40	28	22,105	-54.3		82	9.1
30	27	23,965	-50.8		90	10.1
25	26	25,154	-48.8		96	8.4
20	25	26,629	-45.8		84	7.0
15	20	28,569	-41.4		92	5.1
10	6	31,344	-38.6			
7	5	33,796	-36.8			

GLASGOW, MONT.
931 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	696	6.8	67	35	2.3
1000	31	99				
950	31	525				
900	31	972	8.7	52	334	4.1
850	31	1,444	6.3	51	316	10.7
800	31	1,938	3.2	53	309	11.8
750	31	2,456	- .2	57	308	12.0
700	31	3,007	- 3.7	60	300	12.6
650	31	3,585	- 7.0	57	290	14.8
600	31	4,210	-10.4	57	274	16.7
550	31	4,867	-14.5	52	273	18.5
500	31	5,590	-19.2	48	269	20.6
450	31	6,358	-24.6	45	269	22.7
400	31	7,213	-30.5	42	263	25.3
350	31	8,147	-37.8	41	256	26.6
300	31	9,191	-45.8		249	29.7
250	31	10,383	-53.7		247	32.1
200	30	11,800	-56.5		258	30.9
175	29	12,647	-54.5		256	27.0
150	29	13,636	-53.5		258	22.7
125	29	14,806	-54.7		252	20.6
100	29	16,231	-55.1		255	16.5
80	29	17,653	-55.4		255	10.3
70	29	18,503	-55.5		256	5.2
60	29	19,485	-54.9		223	1.4
50	29	20,654	-53.3		77	1.7
40	29	22,093	-52.0		46	2.3
30	28	23,964	-50.4		73	5.4
25	26	25,157	-49.3		73	7.2
20	25	26,626	-47.9		94	7.2
15	15	28,511	-46.4		91	4.1
10	8	31,257	-42.3			
7						

* GRAND JUNCTION, COLO.
849 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,474	11.4	51	135	4.3
1000	31	77				
950	31	514				
900	31	979				
850	31	1,461			133	5.4
800	31	1,967	9.8	43	165	6.6
750	31	2,495	6.0	47	206	6.4
700	31	3,060	1.6	51	226	9.1
650	31	3,650	- 3.0	56	229	12.2
600	31	4,281	- 7.8	60	228	14.8
550	31	4,946	-12.6	58	225	16.9
500	31	5,673	-17.8	51	228	19.6
450	31	6,443	-23.6	45	235	20.0
400	31	7,303	-29.9	42	232	22.9
350	31	8,241	-36.8	37	232	27.6
300	31	9,290	-44.4		233	30.1
250	31	10,491	-51.0		234	31.1
200	31	11,926	-55.6		239	28.7
175	31	12,773	-56.7		237	26.0
150	31	13,749	-57.2		234	25.4
125	31	14,898	-58.0		234	22.7
100	31	16,301	-59.1		228	16.3
80	31	17,695	-60.1		227	10.9
70	31	18,527	-60.1		232	4.9
60	29	19,495	-58.1		203	2.5
50	29	20,648	-56.2		115	3.3
40	29	22,073	-54.0		94	5.2
30	29	23,930	-51.8		87	7.2
25	29	25,116	-50.2		83	10.1
20	29	26,579	-48.1		89	9.3
15	28	28,491	-45.0		93	9.3
10	23	31,237	-39.4		102	5.4
7	10	33,656	-36.0			

* GREAT FALLS, MONT.
885 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,123	6.3	70	243	6.6
1000	31	110				
950	31	539				
900	31	995				
850	31	1,459	6.8	48	264	11.1
800	31	1,954	3.2	55	291	9.9
750	31	2,474	- .5	57	290	10.7
700	31	3,022	- 4.4	61	282	10.9
650	31	3,601	- 8.1	60	277	12.8
600	31	4,220	-11.6	54	273	13.4
550	31	4,881	-15.9	52	266	15.5
500	31	5,594	-20.5	44	264	16.3
450	31	6,365	-25.4	45	253	20.8
400	31	7,213	-31.2	48	244	22.3
350	31	8,145	-38.3	49	248	23.3
300	31	9,188	-46.2		244	23.7
250	31	10,379	-53.2		243	25.3
200	31	11,804	-55.5		244	24.7
175	31	12,658	-54.4		241	24.3
150	31	13,647	-53.7		246	19.8
125	31	14,817	-54.0		241	16.5
100	31	16,244	-55.1		241	15.0
80	31	17,672	-55.0		247	9.1
70	31	18,524	-55.1		242	5.2
60	31	19,507	-54.7		252	3.5
50	31	20,677	-53.4		299	2.1
40	31	22,119	-51.8		92	2.7
30	30	23,993	-50.1		72	6.0
25	30	25,186	-49.3		80	8.0
20	29	26,658	-47.6		81	8.9
15	29	28,569	-45.1		76	9.5
10	24	31,296	-39.7		89	9.1
7						

GREEN BAY, WIS.
989 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	29	210	10.8	78	175	1.0
1000	29	116				
950	29	546	12.1	64	228	8.5
900	29	997	10.8	65	249	14.2
850	29	1,473	8.9	65	253	15.7
800	29	1,973	6.3	60	253	16.9
750	29	2,498	3.5	56	257	19.6
700	29	3,057	.4	48	256	22.7
650	29	3,645	- 3.1	44	258	25.6
600	29	4,277	- 6.8	42	259	28.6
550	29	4,948	-11.1	39	261	29.5
500	29	5,676	-15.8	37	263	30.9
450	29	6,459	-21.2	34	268	33.2
400	29	7,321	-27.1	R31	271	37.1
350	29	8,269	-34.3	R33	270	40.2
300	29	9,329	-42.3	32	271	41.4
250	28	10,543	-50.1		273	44.5
200	28	11,976	-57.6		276	45.6
175	28	12,815	-58.7		273	42.0
150	28	13,785	-57.8		272	36.3
125	28	14,935	-57.7		276	25.6
100	28	16,343	-57.9		276	18.5
80	28	17,749	-58.1		289	12.4
70	28	18,589	-58.1		312	7.2
60	28	19,565	-56.4		360	4.7
50	28	20,728	-54.2		52	7.2
40	28	22,165	-52.1		74	8.7
30	28	24,039	-49.6		82	10.1
25	27	25,241	-48.0		84	9.3
20	27	26,719	-45.9		79	8.9
15	19	28,636	-43.0		82	8.7
10	7	31,376	-40.5			
7						

GREENSBORO, N. C.
987 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	273	17.1	84	292	.4
1000	31	159				
950	31	602	18.5	62	313	5.6
900	31	1,062	16.7	51	322	8.4
850	31	1,546	13.4	54	311	7.2
800	31	2,054	10.1	56	288	7.2
750	31	2,588	6.4	55	277	7.4
700	31	3,152	3.2	50	278	9.5
650	31	3,746	- .1	47	283	12.0
600	31	4,387	- 4.0	43	285	14.0
550	31	5,065	- 8.1	41	283	15.9
500	31	5,804	-12.7	35	284	17.5
450	31	6,597	-18.1	29	280	18.8
400	31	7,472	-24.4	30	284	21.0
350	31	8,431	-31.8	29	283	22.5
300	31	9,502	-40.2	31	285	24.1
250	31	10,720	-49.9		289	26.6
200	31	12,145	-60.0		299	31.9
175	31	12,971	-63.5		295	30.9
150	31	13,915	-64.1		295	30.3
125	31	15,034	-63.2		302	24.1
100	31	16,405	-63.7		305	18.3
80	31	17,775	-63.0		325	12.8
70	31	18,599	-61.5		348	8.7
60	31	19,560	-58.8		22	5.4
50	31	20,712	-55.8		62	6.8
40	31	22,140	-53.1		75	6.8
30	28	24,008	-50.3		87	9.5
25	28	25,202	-48.4		84	9.1
20	26	26,676	-45.9		80	10.7
15	9	28,607	-43.5			
10						
7						

GUAM, MARIANA IS.
999 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	111	25.6	85	94	8.2
1000	31	104				
950	31	554	22.4	88	90	19.8
900	31	1,024	19.7	81	95	21.0
850	31	1,516	17.5	68	95	18.1
800	31	2,033	15.0	58	93	15.3
750	31	2,575	12.3	48	92	13.4
700	31	3,153	9.3	40	91	13.4
650	31	3,762	6.0	32	85	12.6
600	31	4,414	2.4	32	85	14.0
550	31	5,111	- 1.4	28	86	13.4
500	31	5,866	- 6.1	27	82	13.6
450	31	6,680	-11.1	22	67	10.5
400	31	7,578	-16.8	18	45	9.5
350	31	8,567	-23.6	16	24	8.5
300	31	9,675	-32.2	19	336	7.6
250	31	10,935	-42.1		300	8.9
200	31	12,407	-54.0		268	10.7
175	31	13,251	-60.7		275	12.6
150	31	14,194	-67.9		286	9.5
125	31	15,271	-74.7		327	8.2
100	31	16,551	-79.5		45	8.5
80	31	17,816	-78.3		70	12.8
70	31	18,585	-73.9		75	13.4
60	31	19,503	-66.7		89	12.2
50	31	20,617	-62.9		88	12.2
40	31	22,007	-58.2		87	22.3
30	31	23,835	-54.0		87	38.5
25	30	25,013	-51.1		87	47.2
20	27	26,478	-47.4		88	51.9
15	22	28,392	-43.6		88	57.7
10	5	31,082	-41.4			
7						

HILO, HAWAII
1015 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	11	21.0	88	227	5.4
1000	31	138	21.8	80	206	5.6
950	31	582	18.7	85	147	7.6
900	31	1,045	15.5	86	138	8.2
850	31	1,529	13.0	86	130	6.8
800	31	2,037	11.5	68	94	6.8
750	31	2,579	9.3	49	90	5.6
700	31	3,145	6.7	44	87	2.3
650	31	3,750	3.7	45	187	1.7
600	31	4,397	.4	42	229	4.5
550	31	5,085	- 3.9	41	229	6.4
500	31	5,836	- 8.7	37	236	9.7
450	31	6,640	-14.3	39	241	13.4
400	31	7,527	-20.7	39	247	17.9
350	30	8,503	-27.9	38	250	23.3
300	30	9,591	-36.4	34	252	31.5
250	30	10,830	-46.2		255	40.2
200	30	12,276	-57.4		261	51.1
175	30	13,108	-62.9		266	53.8
150	30	14,046	-67.9		268	50.3
125	30	15,128	-72.7		263	39.4
100	29	16,431	-72.8		260	24.9
80	28	17,752	-69.9		242	3.3
70	28	18,553	-66.2		108	6.4
60	28	19,491	-63.9		99	11.3
50	27	20,620	-60.4		94	14.4
40	26	22,026	-56.5		94	19.2
30	26	23,870	-52.4		90	26.8
25	26	25,055	-50.1		90	30.7
20	25	26,525	-47.1		89	35.0
15	17	28,457	-43.5		88	39.8
10						
7						

HUNTINGTON, W. VA.
989 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	246	14.6	89	177	2.1
1000	31	152				
950	31	587	17.8	62	251	8.5
900	31	1,051	15.7	60	270	12.6
850	31	1,534	12.5	60	272	14.2
800	31	2,041	9.4	56	270	15.0
750	31	2,568	6.0	53	271	14.4
700	31	3,136	2.2	53	270	14.4
650	31	3,725	- 1.0	50	272	15.0
600	31	4,366	- 4.8	48	276	16.7
550	31	5,036	- 8.8	42	277	20.8
500	31	5,779	-13.4	35	277	24.1
450	31	6,568	-18.7	31	276	23.5
400	31	7,443	-24.9	R30	277	25.4
350	31	8,400	-32.0	R27	275	27.6
300	31	9,471	-40.1	R26	279	31.9
250	30	10,686	-49.5		282	33.6
200	30	12,115	-59.3		287	35.2
175	30	12,944	-62.7		289	34.2
150	30	13,894	-62.3		288	31.3
125	30	15,022	-61.7		290	24.1
100	30	16,402	-62.2		294	18.6
80	30	17,779	-62.3		313	12.8
70	30	18,605	-61.0		329	9.1
60	30	19,570	-58.6		7	6.0
50	30	20,722	-55.8		58	5.8
40	29	22,153	-53.1		88	7.2
30	28	24,016	-50.1		79	6.4
25	25	25,211	-48.5		79	6.0
20	19	26,691	-46.5		88	11.7
15						
10						
7						

* INTERNAT. FALLS, MINN.
968 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	360	5.8	72	156	1.7
1000	31	96				
950	31	517	7.3	68	171	4.3
900	31	963	6.7	66	224	9.9
850	31	1,431	5.1	60	241	12.8
800	31	1,925	3.0	53	254	13.6
750	31	2,442	.5	51	254	17.1
700	31	2,997	- 2.6	54	261	19.0
650	31	3,576	- 6.1	54	264	21.0
600	31	4,204	- 9.7	50	269	23.9
550	31	4,863	-13.8	49	269	28.0
500	31	5,589	-18.3	42	267	31.7
450	31	6,357	-23.7	40	267	34.8
400	31	7,219	-29.5	40	267	40.0
350	31	8,159	-36.4	39	263	42.5
300	31	9,210	-43.9		259	45.6
250	31	10,414	-51.5		260	49.5
200	31	11,843	-56.4		264	44.1
175	31	12,691	-55.8		265	37.9
150	31	13,674	-55.0		269	32.2
125	31	14,937	-55.5		270	25.4
100	31	16,260	-55.8		273	19.0
80	30	17,677	-56.5		284	12.2
70	30	18,523	-56.5		297	8.7
60	30	19,505	-55.1		303	5.4
50	29	20,673	-53.6		3	3.5
40	29	22,112	-52.3		48	5.1
30	28	23,980	-50.8		63	5.1
25	28	25,171	-49.6		60	6.2
20	28	26,638	-47.8		51	5.8
15	28	28,549	-45.0		77	5.6
10	21	31,318	-40.1		87	5.6
7	7	33,642	-37.4			

JACKSON, MISS.
1006 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	94	18.3	92	170	3.3
1000	31	149	18.9	88	170	5.1
950	31	589	18.7	75	191	10.5
900	31	1,055	16.3	67	187	10.7
850	31	1,540	13.8	57	183	9.3
800	31	2,049	11.4	48	189	8.2
750	31	2,581	8.6	40	208	8.5
700	31	3,154	5.3	37	224	9.1
650	31	3,747	1.8	38	243	11.1
600	31	4,397	- 2.3	38	248	13.6
550	31	5,072	- 6.9	44	251	15.3
500	31	5,821	-11.7	47	262	16.7
450	31	6,610	-17.0	45	265	20.4
400	31	7,495	-23.1	38	268	21.4
350	31	8,460	-30.0	R35	270	25.1
300	31	9,539	-38.3	37	270	29.3
250	31	10,765	-48.4		275	37.5
200	31	12,197	-59.2		279	47.0
175	31	13,024	-63.5		283	43.9
150	31	13,967	-64.6		280	39.8
125	31	15,077	-65.6		279	34.8
100	31	16,429	-67.3		283	19.8
80	31	17,773	-66.8		290	8.0
70	31	18,581	-65.8		318	4.7
60	31	19,524	-62.7		33	5.8
50	31	20,659	-58.1		72	10.1
40	30	22,077	-54.5		86	10.1
30	30	23,931	-51.5		91	10.5
25	27	25,111	-49.4		84	9.5
20	22	26,593	-46.4		98	7.2
15	7	28,570	-41.1			
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JACKSONVILLE, FLA.
1020 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	5	19.0	88	293	2.7
1000	31	173	20.1	76	254	3.5
950	31	613	19.1	62	209	3.9
900	31	1,079	16.4	56	46	2.1
850	31	1,563	13.1	56	37	4.7
800	31	2,070	10.5	44	59	4.5
750	31	2,600	8.1	36	42	2.5
700	31	3,172	5.1	31	350	1.7
650	31	3,768	1.4	29	329	3.5
600	31	4,411	- 2.4	28	322	6.6
550	31	5,089	- 6.7	R24	320	9.5
500	31	5,834	-11.3	R25	312	12.8
450	31	6,625	-17.1	R27	308	15.3
400	31	7,505	-23.5	R26	304	17.3
350	31	8,467	-30.4	R25	303	19.0
300	31	9,545	-38.4	R25	305	24.3
250	31	10,773	-47.8		310	29.9
200	31	12,210	-58.2		311	36.7
175	31	13,041	-62.7		311	38.9
150	31	13,984	-65.2		304	35.4
125	30	15,094	-65.8		308	32.6
100	30	16,443	-67.6		309	22.3
80	30	17,786	-66.9		320	14.4
70	30	18,594	-65.0		345	10.5
60	30	19,541	-61.4		24	8.7
50	30	20,682	-57.5		73	11.1
40	30	22,104	-53.6		95	13.6
30	29	23,971	-50.3		97	15.2
25	29	25,167	-48.0		100	13.0
20	28	26,647	-44.8		100	11.7
15	27	28,590	-40.7		87	8.0
10	18	31,385	-35.1		85	12.0
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JOHN F. KENNEDY INT. ARPT.NY
1018 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	5	14.6	72	312	3.7
1000	31	150	14.3	67	318	4.3
950	31	583	13.6	58	314	8.0
900	31	1,037	11.5	56	308	11.1
850	31	1,513	9.3	53	298	14.0
800	31	2,014	6.9	50	294	17.7
750	31	2,544	4.5	45	295	20.2
700	31	3,102	1.3	45	296	22.3
650	31	3,692	- 2.0	45	295	23.3
600	31	4,327	- 5.6	41	297	27.4
550	31	4,998	- 9.7	39	296	28.6
500	31	5,734	-14.3	35	293	29.3
450	31	6,523	-19.8	32	293	31.1
400	31	7,390	-26.1	32	294	31.9
350	31	8,342	-33.5	31	297	36.1
300	31	9,405	-42.0	26	298	38.9
250	31	10,615	-51.5		298	44.9
200	31	12,032	-60.2		300	41.4
175	30	12,864	-61.8		300	38.5
150	30	13,819	-60.5		302	30.5
125	30	14,955	-60.4		300	24.3
100	30	16,346	-60.7		312	18.5
80	30	17,737	-59.4		323	11.1
70	30	18,576	-57.5		336	7.6
60	30	19,555	-55.4		354	4.3
50	29	20,720	-53.4		42	2.9
40	29	22,161	-51.5		83	4.7
30	29	24,037	-49.5		93	7.6
25	28	25,233	-47.8		94	7.8
20	25	26,707	-45.9		84	7.0
15	18	28,635	-42.3		87	7.4
10	13	31,401	-38.3			
7	9	33,827	-35.7			

JOHNSTON IS., PACIFIC AREA
1014 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	3	25.3	77	88	9.5
1000	31	121	24.2	78	83	10.5
950	31	571	20.1	86	82	12.0
900	31	1,034	17.3	79	90	10.7
850	31	1,520	14.6	75	97	8.5
800	31	2,031	12.1	66	106	6.0
750	31	2,569	9.9	53	113	2.1
700	31	3,141	6.9	41	251	2.1
650	31	3,742	4.3	31	271	3.3
600	31	4,395	.9	28	281	5.1
550	31	5,083	- 2.9	25	284	7.4
500	31	5,839	- 7.8	25	288	11.3
450	31	6,643	-13.1	23	279	14.0
400	31	7,538	-19.4	21	280	18.5
350	31	8,516	-26.7	24	278	22.3
300	30	9,608	-35.2	27	268	30.3
250	30	10,855	-44.4		268	43.5
200	30	12,312	-56.0		267	53.8
175	30	13,149	-62.3		268	57.5
150	30	14,086	-68.8		268	58.7
125	29	15,161	-74.9		271	46.4
100	27	16,449	-76.3		279	26.2
80	26	17,747	-71.6		294	7.2
70	26	18,541	-68.0		35	1.9
60	26	19,474	-64.4		87	10.1
50	26	20,598	-61.1		93	15.3
40	26	21,997	-57.1		90	20.6
30	26	23,932	-54.0		90	30.7
25	25	25,008	-51.6		89	39.0
20	22	26,474	-47.9		88	46.6
15	12	28,409	-43.9			
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KING SALMON, ALASKA
1009 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	15	.2	88	117	2.5
1000	30	82			102	1.9
950	30	492	- 1.1	78	125	6.6
900	30	923	- 3.6	80	145	6.6
850	30	1,373	- 5.7	80	162	6.8
800	30	1,846	- 7.9	77	165	7.6
750	30	2,348	-10.3	68	181	7.6
700	30	2,875	-12.9	65	196	8.0
650	30	3,440	-15.7	63	206	8.0
600	30	4,037	-18.9	63	216	7.8
550	30	4,683	-22.5	59	232	8.2
500	30	5,375	-27.0	57	239	7.8
450	30	6,125	-32.3	56	247	8.7
400	30	6,948	-37.8	57	241	8.5
350	30	7,957	-43.6	61	258	10.1
300	30	8,882	-48.4		256	12.2
250	30	10,074	-50.7		255	14.4
200	30	11,532	-49.2		257	14.6
175	30	12,409	-48.5		259	12.4
150	30	13,423	-48.8		253	11.3
125	30	14,619	-49.4		237	8.5
100	30	16,079	-50.1		239	8.0
80	30	17,534	-50.5		219	6.8
70	30	18,404	-50.4		208	5.1
60	30	19,409	-50.5		205	2.9
50	30	20,597	-50.4		157	1.7
40	29	22,048	-49.9		98	2.1
30	29	23,931	-49.0		77	4.3
25	29	25,130	-48.2		87	6.4
20	26	26,595	-47.0		85	9.1
15	18	28,518	-44.8		89	11.5
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See reference note at end of table

RAWINSONDE DATA

Average monthly values

KOROR, CAROLINE IS. + 1006 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	30	27.7	83	92	4.9
1000	31	87	26.8	80	92	6.0
950	31	537	22.9	79	89	9.9
900	31	1,009	20.3	73	90	9.9
850	31	1,501	17.7	64	92	9.3
800	31	2,018	15.2	59	98	8.2
750	31	2,559	12.5	53	97	7.4
700	31	3,139	9.5	50	104	6.6
650	31	3,748	6.0	52	100	5.8
600	31	4,403	2.3	53	98	5.8
550	31	5,096	- 1.5	51	103	6.0
500	31	5,855	- 5.4	45	104	5.6
450	31	6,673	- 9.9	40	91	8.0
400	31	7,575	-15.6	35	90	7.4
350	31	8,569	-22.5	29	105	4.7
300	31	9,582	-30.9	26	125	1.9
250	31	10,948	-41.1	35	58	.6
200	31	12,423	-53.8		45	2.7
175	30	13,268	-60.8		44	7.4
150	30	14,210	-68.2		41	9.9
125	30	15,284	-75.4		44	12.4
100	30	16,558	-80.3		51	13.4
80	30	17,825	-77.3		56	8.0
70	30	18,599	-72.3		350	1.4
60	30	19,517	-67.2		271	4.1
50	29	20,626	-63.4		110	4.7
40	29	22,009	-59.8		91	21.8
30	26	23,818	-56.0		89	48.4
25	23	24,988	-52.4		89	56.1
20	20	26,447	-48.0		93	61.2
15	12	28,372	-43.6			
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KOTZEBUE, ALASKA 1011 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	5	- 6.1	85	152	3.5
1000	31	90	- 3.5	83	133	5.2
950	31	493	- 5.1	80	159	6.6
900	31	919	- 6.8	83	169	6.8
850	31	1,364	- 8.6	82	176	6.8
800	31	1,833	-10.4	76	181	7.8
750	31	2,329	-12.6	71	181	8.9
700	31	2,852	-15.5	67	184	8.9
650	31	3,409	-18.6	64	187	9.7
600	31	4,002	-22.4	57	186	10.1
550	31	4,633	-26.3	55	187	10.3
500	31	5,320	-30.6	54	196	10.3
450	31	6,056	-35.5	52	204	9.7
400	31	6,871	-40.9	56	213	12.2
350	31	7,769	-46.0		215	13.6
300	31	8,786	-49.3		225	16.9
250	31	9,979	-49.2		234	14.0
200	31	11,449	-47.4		252	8.5
175	31	12,333	-46.9		251	7.0
150	31	13,354	-47.2		242	6.4
125	31	14,559	-47.9		226	4.7
100	31	16,028	-48.5		214	3.7
80	30	17,492	-48.3		177	1.9
70	30	18,371	-48.1		162	2.3
60	30	19,388	-47.8		131	2.5
50	30	20,593	-47.5		91	4.3
40	30	22,069	-47.0		[illegible]	6.6
30	29	23,976	-46.2		90	8.2
25	29	25,189	-45.6		81	11.5
20	28	26,676	-44.4		82	13.6
15	26	28,618	-42.2		78	15.7
10	16	31,353	-38.4			
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KWAJALEIN, MARSHALL IS. 1011 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	4	26.9	77	61	14.2
1000	31	100	26.2	77	63	15.5
950	31	551	22.6	86	68	18.8
900	31	1,022	19.7	83	77	19.4
850	31	1,513	17.3	79	83	15.7
800	31	2,031	15.2	68	85	13.0
750	31	2,576	12.8	63	85	9.5
700	31	3,154	10.0	59	90	6.6
650	31	3,766	6.5	57	85	5.6
600	31	4,419	2.6	54	75	4.9
550	31	5,118	- 1.2	56	78	4.7
500	31	5,872	- 5.7	47	86	3.7
450	31	6,690	-11.2	51	185	1.9
400	31	7,584	-17.0	52	245	5.4
350	31	8,577	-22.4	41	262	10.9
300	31	9,689	-31.1	47	251	14.6
250	31	10,954	-41.4	39	242	19.2
200	31	12,428	-53.8	34	250	24.9
175	31	13,272	-61.1	34	257	27.0
150	31	14,211	-68.7	34	269	28.9
125	31	15,283	-75.8		273	26.6
100	27	16,560	-79.3		281	17.9
80	25	17,832	-77.0		292	11.3
70	24	18,606	-72.7		288	8.7
60	24	19,523	-67.5		268	6.4
50	23	20,631	-64.6		50	1.9
40	23	22,008	-60.3		83	18.6
30	22	23,815	-56.2		90	40.0
25	22	24,979	-53.8		89	51.1
20	21	26,426	-49.3		89	58.5
15	21	28,331	-44.8		87	66.8
10	21	31,073	-39.3		89	73.4
7	13	33,557	-33.5		91	71.9
5	7	35,952	-28.7			

LAKE CHARLES, LA. 1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	5	19.3	96	112	4.1
1000	31	139	21.5	84	139	8.9
950	31	585	19.0	80	162	15.0
900	31	1,048	16.3	76	173	15.5
850	31	1,533	14.7	57	179	14.6
800	31	2,045	13.0	46	187	12.8
750	31	2,584	10.5	42	203	11.8
700	31	3,158	7.2	41	222	10.3
650	31	3,763	3.6	41	242	10.3
600	31	4,410	- .7	41	249	12.4
550	31	5,096	- 5.2	42	251	14.4
500	31	5,843	-10.1	41	257	16.3
450	31	6,645	-15.5	37	263	19.8
400	31	7,528	-21.9	35	269	22.3
350	31	8,498	-28.8	34	272	27.8
300	31	9,583	-37.1	34	274	32.1
250	31	10,817	-46.9		274	42.7
200	31	12,260	-57.7		275	56.1
175	31	13,093	-62.3		276	56.3
150	31	14,039	-64.3		277	47.8
125	31	15,151	-66.4		272	37.1
100	31	16,495	-68.2		270	22.7
80	31	17,831	-68.3		275	8.4
70	31	18,636	-66.2		334	2.5
60	31	19,577	-63.7		60	6.8
50	31	20,711	-58.2		84	11.3
40	31	22,130	-54.3		90	13.2
30	31	23,990	-50.8		86	13.6
25	31	25,184	-48.5		84	12.8
20	30	26,667	-44.6		91	10.9
15	23	28,608	-41.5		89	8.7
10	8	31,371	-38.3			
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5						

LANDER, WYO. 826 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,696	5.4	68	265	3.1
1000	31	107				
950	31	535				
900	31	988				
850	31	1,464				
800	31	1,962	6.4	50	293	3.5
750	31	2,484	3.1	51	311	5.8
700	31	3,043	- 1.0	54	299	7.6
650	31	3,624	- 4.9	53	273	10.1
600	31	4,257	- 9.0	48	256	14.8
550	31	4,917	-13.5	48	247	18.3
500	31	5,644	-18.4	43	246	22.9
450	31	6,417	-24.0	41	239	23.3
400	31	7,272	-30.3	36	238	24.7
350	31	8,208	-37.3	34	235	29.9
300	31	9,256	-45.0		233	34.6
250	31	10,454	-52.2		234	36.5
200	31	11,883	-55.7		238	35.2
175	31	12,733	-55.6		242	31.7
150	31	13,717	-55.3		242	27.0
125	31	14,879	-56.0		245	23.1
100	31	16,295	-57.0		245	16.7
80	31	17,707	-57.9		238	8.4
70	31	18,547	-57.9		234	4.7
60	31	19,524	-56.1		188	1.9
50	31	20,687	-54.5		75	3.9
40	31	22,122	-52.6		71	8.2
30	30	23,986	-50.7		79	12.0
25	30	25,177	-49.2		84	12.6
20	30	26,647	-47.3		81	16.5
15	20	28,606	-43.8		81	14.2
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LAS VEGAS, NEV. 934 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	660	16.1	36	208	3.9
1000	31	72				
950	31	515				
900	31	976	16.5	32	266	4.3
850	31	1,460	13.4	34	299	5.8
800	31	1,967	9.7	37	295	5.8
750	31	2,495	5.6	40	281	7.2
700	31	3,058	1.4	43	270	8.0
650	31	3,643	- 3.0	43	251	8.4
600	31	4,279	- 7.7	42	256	11.3
550	31	4,943	-12.3	36	262	13.6
500	31	5,672	-17.6	32	259	15.9
450	31	6,448	-22.9	R26	260	19.6
400	31	7,307	-29.2	R27	260	25.3
350	31	8,247	-36.1	R27	262	30.9
300	31	9,300	-43.4	R28	263	33.0
250	31	10,508	-50.1		260	33.4
200	31	11,950	-54.5		262	34.8
175	31	12,802	-55.8		260	32.6
150	31	13,782	-56.5		256	26.8
125	31	14,934	-58.0		252	22.5
100	30	16,337	-58.4		247	15.9
80	30	17,735	-59.2		228	8.0
70	30	18,571	-59.0		215	4.1
60	30	19,540	-58.0		82	2.3
50	30	20,694	-56.0		101	4.5
40	30	22,120	-53.5		79	6.6
30	29	23,986	-50.3		88	8.7
25	26	25,180	-48.2		83	10.3
20	24	26,665	-45.3		84	10.1
15	21	28,610	-41.1		71	10.1
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* LIHUE, HAWAII 1012 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	36	21.9	89	30	1.7
1000	31	139	22.3	86	56	3.3
950	31	582	19.3	87	85	7.6
900	31	1,049	16.4	84	100	7.6
850	31	1,534	13.9	81	108	6.8
800	31	2,044	11.4	71	118	5.8
750	31	2,580	8.8	55	124	4.5
700	31	3,151	5.8	50	150	3.7
650	31	3,751	2.8	40	199	4.1
600	31	4,398	- .9	37	219	6.8
550	31	5,081	- 5.2	33	233	9.3
500	31	5,831	- 9.9	36	235	12.8
450	31	6,630	-15.1	36	231	14.2
400	31	7,516	-21.5	36	235	16.9
350	31	8,486	-28.7	32	236	19.2
300	30	9,573	-37.3	32	241	22.7
250	30	10,807	-47.2		251	29.7
200	30	12,247	-58.0		257	40.6
175	30	13,078	-63.0		260	47.8
150	30	14,016	-67.3		261	48.0
125	29	15,107	-70.0		261	35.5
100	27	16,428	-71.1		259	20.8
80	27	17,757	-67.9		261	5.1
70	25	18,562	-65.6		86	4.7
60	24	19,509	-63.6		99	10.7
50	23	20,639	-60.7		90	14.4
40	23	22,038	-57.3		86	20.2
30	21	23,878	-52.8		86	25.8
25	20	25,063	-50.7		86	29.1
20	19	26,526	-48.6		88	32.4
15	19	28,435	-44.7		83	37.5
10	13	31,175	-40.4		87	43.5

LITTLE ROCK, ARK. 1007 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	79	17.5	92	152	.6
1000	31	139	18.2	85	195	3.5
950	31	581	18.6	70	215	11.7
900	31	1,043	16.2	66	214	14.6
850	31	1,527	13.3	66	214	15.0
800	31	2,036	10.9	56	217	14.6
750	31	2,571	8.0	52	225	13.6
700	31	3,139	4.6	48	227	15.5
650	31	3,730	.8	49	233	15.7
600	31	4,379	- 3.1	48	240	17.1
550	31	5,053	- 7.1	41	248	17.3
500	31	5,801	-12.1	38	252	18.1
450	31	6,595	-17.4	R34	254	20.2
400	31	7,473	-23.7	R34	258	24.1
350	31	8,436	-30.8	R31	263	27.8
300	31	9,512	-39.0	R28	264	33.2
250	31	10,738	-48.6		266	37.5
200	31	12,170	-59.1		270	43.3
175	31	13,000	-62.5		268	46.6
150	31	13,949	-63.0		267	42.2
125	31	15,070	-63.2		269	31.5
100	31	16,436	-64.8		273	21.4
80	31	17,798	-64.4		282	10.1
70	31	18,615	-63.3		302	5.4
60	31	19,568	-61.0		16	2.9
50	31	20,711	-57.0		76	4.9
40	30	22,137	-53.5		79	7.2
30	28	24,006	-50.3		83	8.5
25	28	25,201	-48.4		85	10.9
20	21	26,690	-45.9		82	11.5
15	6	28,625	-41.9			
10						

MCGRATH, ALASKA 999 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	103	1.7	76	309	2.5
1000	30	91			291	2.5
950	30	505	.5	66	249	1.4
900	30	936	- 2.2	70	182	4.5
850	30	1,388	- 5.3	74	180	6.8
800	30	1,862	- 8.1	79	182	8.5
750	30	2,358	-11.0	74	185	10.7
700	30	2,888	-13.5	66	189	9.1
650	30	3,446	-16.7	61	188	11.1
600	30	4,047	-20.1	57	179	10.7
550	30	4,682	-24.4	59	170	8.4
500	30	5,376	-28.7	57	171	8.4
450	30	6,118	-33.6	53	160	8.0
400	30	6,941	-39.1	54	172	6.4
350	30	7,845	-44.9		177	3.7
300	30	8,864	-49.4		274	3.7
250	30	10,055	-50.3		284	6.6
200	30	11,516	-48.8		264	6.0
175	30	12,396	-47.6		271	4.9
150	30	13,415	-47.6		248	4.3
125	30	14,617	-48.2		252	3.7
100	30	16,085	-48.9		178	3.3
80	30	17,548	-49.3		166	2.7
70	30	18,423	-49.2		153	2.1
60	30	19,433	-49.0		116	1.9
50	29	20,635	-48.5		98	2.9
40	29	22,103	-48.2		78	4.5
30	29	23,998	-47.7		77	7.6
25	29	25,204	-46.7		80	9.7
20	29	26,687	-45.1		81	11.5
15	28	28,621	-42.5		77	15.9
10	18	31,427	-37.8		69	18.6

MAJURO, MARSHALL IS. + 1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	3	28.3	80	75	12.8
1000	31	90	26.8	73	74	13.8
950	31	537	22.6	74	73	17.1
900	31	1,012	20.2	68	81	17.1
850	31	1,504	17.9	65	89	15.7
800	31	2,021	15.4	61	91	15.0
750	31	2,565	13.1	54	96	11.7
700	30	3,145	10.1	51	102	9.5
650	30	3,757	6.6	50	102	7.6
600	30	4,412	2.7	50	94	5.8
550	30	5,108	- .9	47	83	6.2
500	30	5,868	- 5.0	39	78	4.3
450	30	6,685	- 9.7	36	125	2.1
400	30	7,592	-15.3	32	227	3.1
350	30	8,587	-22.1	29	251	6.8
300	30	9,702	-30.5	28	238	10.7
250	30	10,972	-40.7	29	231	15.2
200	30	12,451	-53.1		245	20.6
175	30	13,297	-60.3		253	23.5
150	30	14,241	-68.0		266	26.0
125	30	15,315	-75.5		265	26.0
100	30	16,591	-79.4		277	19.2
80	30	17,863	-76.2		276	14.0
70	29	18,643	-71.0		273	13.0
60	29	19,568	-65.3		262	8.7
50	28	20,689	-62.2		118	1.2
40	27	22,080	-58.7		92	23.5
30	23	23,902	-54.5		90	46.2
25	22	25,081	-51.0		92	56.9
20	9	26,539	-48.4			
15	7	28,476	-43.1			
10						

MARCUS IS., N. PACIFIC + 1017 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	9	26.6	69	109	9.7
1000	31	154	23.5	68	106	12.0
950	31	595	19.3	69	110	13.2
900	31	1,064	16.5	65	115	12.8
850	31	1,549	14.8	52	114	11.5
800	31	2,061	14.2	31	109	10.7
750	31	2,598	12.2	26	103	8.7
700	31	3,179	9.2	22	113	8.5
650	31	3,785	6.0	22	119	7.2
600	31	4,440	2.5	22	118	6.0
550	30	5,131	- 1.8	22	114	5.4
500	30	5,889	- 6.6	22	107	5.4
450	30	6,699	-11.6	21	105	3.7
400	30	7,598	-18.0	22	122	3.9
350	30	8,582	-25.4	21	118	3.9
300	30	9,681	-34.1	22	55	5.1
250	30	10,932	-44.0		32	7.8
200	30	12,392	-55.4		25	12.6
175	30	13,232	-60.9		13	12.4
150	30	14,179	-66.0		360	9.9
125	30	15,272	-70.8		344	9.5
100	30	16,583	-74.4		349	6.2
80	30	17,883	-73.3		35	7.2
70	30	18,669	-70.1		63	9.7
60	30	19,599	-64.4		78	13.0
50	30	20,727	-59.8		89	16.7
40	30	22,137	-55.1		96	19.0
30	29	24,000	-50.0		95	23.1
25	29	25,198	-47.5		102	23.3
20	26	26,581	-44.1		98	23.9
15	25	28,623	-40.9		93	27.4
10	16	31,405	-37.5		92	38.3
7						

* 2/ MEDFORD, OREG. 972 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	401	6.5	81	301	1.4
1000	31	167				
950	31	593	8.5	66	299	2.7
900	31	1,038	6.8	63	312	3.5
850	31	1,506	4.4	63	339	3.9
800	31	1,997	2.0	54	344	5.6
750	31	2,515	- .5	49	322	6.8
700	31	3,065	- 3.7	46	306	9.1
650	30	3,642	- 7.3	37	309	12.2
600	30	4,265	-10.6	32	311	14.4
550	30	4,926	-14.6	29	308	18.3
500	30	5,646	-19.2	R28	305	22.0
450	30	6,415	-24.6	R31	306	24.7
400	30	7,270	-30.3	R31	311	30.3
350	30	8,207	-37.1	R31	313	31.9
300	30	9,255	-45.0		306	30.3
250	29	10,460	-52.8		305	31.1
200	28	11,891	-57.6		311	28.0
175	28	12,733	-57.7		306	23.5
150	27	13,712	-56.6		302	18.1
125	27	14,867	-57.5		294	15.9
100	27	16,276	-57.3		280	10.7
80	27	17,686	-57.1		256	6.6
70	27	18,530	-56.6		263	3.7
60	27	19,508	-56.2		242	1.0
50	27	20,669	-55.0		54	1.0
40	27	22,100	-53.0		86	5.6
30	26	23,961	-51.1		87	7.6
25	26	25,148	-49.9		94	8.4
20	26	26,612	-47.9		88	7.0
15	25	28,519	-44.6		84	8.2
10	19	31,249	-38.7		57	6.6
7	9	33,700	-35.3			

MERIDA, MEXICO 1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	18	11	21.9	90	100	7.4
1000	18	137	22.5	86	104	12.8
950	18	584	20.9	81	116	20.0
900	18	1,052	18.8	69	115	16.7
850	18	1,541	16.5	65	96	10.3
800	18	2,055	13.7	63	26	4.9
750	18	2,594	11.1	51	24	3.7
700	18	3,171	9.0	37	16	3.5
650	18	3,775	5.8	28	354	4.9
600	18	4,432	2.9	R22	351	8.2
550	18	5,117	- 1.5	R21	349	11.1
500	18	5,884	- 6.3	R24	335	12.6
450	18	6,694	-11.9	R24	333	12.6
400	18	7,592	-18.2	R21	314	14.8
350	18	8,575	-25.2	R20	305	19.0
300	18	9,676	-33.6	R22	298	23.9
250	18	10,929	-43.3		298	32.2
200	17	12,390	-55.1		290	43.7
175	17	13,231	-61.3		287	44.3
150	17	14,173	-67.3		288	39.2
125	17	15,259	-71.5		288	32.6
100	17	16,566	-75.6		293	19.8
80	17	17,851	-75.4		348	6.8
70	17	18,630	-71.6		30	7.8
60	17	19,554	-66.2		78	8.7
50	17	20,677	-59.8		76	13.0
40	17	22,084	-55.8		74	17.5
30	17	23,933	-51.4		95	26.0
25	17	25,124	-48.4		86	25.3
20	17	26,603	-45.5		87	28.2
15	15	28,522	-41.9		89	35.7
10						
7						

* MIAMI, FLA. 1018 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	4	23.0	75	86	3.7
1000	31	155	22.8	70	86	7.2
950	31	597	19.1	74	103	11.7
900	31	1,063	15.8	68	97	10.5
850	31	1,547	13.2	58	89	9.9
800	31	2,055	11.1	41	79	10.3
750	31	2,592	9.8	28	74	10.3
700	31	3,162	6.4	26	69	8.5
650	31	3,765	3.0	24	52	8.2
600	31	4,410	- .2	19	25	7.2
550	31	5,095	- 4.3	18	345	7.2
500	31	5,846	- 9.3	18	333	9.7
450	31	6,645	-14.9	20	324	12.4
400	31	7,534	-21.4	24	312	17.5
350	31	8,504	-28.7	28	313	22.0
300	31	9,589	-37.2	26	311	27.4
250	31	10,823	-47.1		310	32.2
200	31	12,264	-58.0		312	37.3
175	31	13,095	-63.0		308	37.7
150	31	14,036	-66.1		305	38.7
125	31	15,137	-68.0		305	34.4
100	30	16,470	-70.5		311	22.1
80	30	17,793	-69.8		334	11.7
70	30	18,592	-66.7		4	8.5
60	30	19,535	-62.6		43	10.3
50	29	20,668	-59.2		69	12.6
40	29	22,079	-55.5		87	18.6
30	29	23,932	-51.0		89	19.8
25	29	25,123	-49.1		89	21.2
20	29	26,597	-46.1		90	23.5
15	27	28,527	-42.4		87	24.3
10	20	31,292	-37.3		84	24.3
7	6	33,759	-33.4			

* MIDLAND, TEXAS 913 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	874	16.7	82	163	5.6
1000	31	88				
950	31	531				
900	31	996	17.1	73	167	8.4
850	31	1,484	16.5	63	190	13.0
800	31	1,999	14.5	52	210	11.8
750	31	2,536	11.7	42	217	9.7
700	31	3,115	8.0	39	233	11.1
650	31	3,716	3.5	34	236	13.4
600	31	4,366	- 1.4	37	235	17.9
550	31	5,045	- 6.7	38	236	23.9
500	31	5,790	-11.6	35	239	29.7
450	31	6,581	-17.4	32	239	33.8
400	31	7,461	-23.9	34	240	37.7
350	31	8,421	-31.3	30	243	43.3
300	31	9,496	-39.4	32	243	51.1
250	31	10,719	-48.7		244	57.9
200	31	12,154	-58.0		247	62.4
175	30	12,988	-61.4		251	61.2
150	30	13,940	-63.1		250	53.8
125	30	15,057	-64.6		246	44.7
100	29	16,416	-66.2		245	28.7
80	28	17,762	-66.4		242	12.2
70	28	18,573	-64.8		246	1.6
60	27	19,517	-62.0		102	4.5
50	27	20,657	-57.7		84	7.2
40	26	22,076	-55.1		82	11.1
30	26	23,926	-51.9		83	10.9
25	26	25,113	-49.6		85	10.3
20	26	26,583	-46.7		82	9.1
15	26	28,506	-43.0		94	6.4
10	23	31,269	-38.3		[illegible]	2.5
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

MAY 1965

MONTGOMERY, ALA.
1012 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	61	17.2	92	110	.8
1000	31	163	19.1	79	265	1.0
950	31	606	20.3	52	246	3.3
900	31	1,071	17.1	56	192	4.3
850	31	1,556	13.5	60	179	5.4
800	31	2,064	11.0	48	194	6.6
750	31	2,599	8.6	37	206	6.8
700	31	3,168	5.6	30	217	7.6
650	31	3,768	2.3	29	243	7.2
600	31	4,412	- 1.9	28	257	10.3
550	31	5,095	- 6.4	25	265	11.7
500	31	5,837	-11.3	28	272	14.4
450	31	6,635	-16.8	33	279	16.5
400	31	7,510	-23.3	36	278	20.0
350	31	8,475	-29.9	30	283	23.7
300	31	9,554	-38.4	26	287	27.8
250	31	10,782	-48.1		291	33.6
200	31	12,217	-58.6		291	39.6
175	31	13,046	-63.1		289	37.9
150	31	13,990	-64.5		288	36.9
125	31	15,103	-65.1		289	29.5
100	31	16,456	-66.8		290	19.8
80	31	17,803	-66.7		311	11.3
70	31	18,612	-65.1		344	7.6
60	31	19,561	-61.6		34	8.5
50	31	20,703	-57.1		70	9.9
40	31	22,127	-53.5		87	10.7
30	31	23,990	-50.5		93	10.1
25	31	25,184	-48.6		83	8.2
20	31	26,662	-45.5		71	5.6
15	27	28,596	-41.8		72	2.5
10	7	31,361	-37.0			
7	5	33,820	-33.8			

NANTUCKET, MASS.
1015 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	14	10.8	81	287	1.9
1000	31	137	11.1	74	263	3.3
950	31	564	12.3	58	297	8.2
900	31	1,020	10.8	54	301	11.7
850	31	1,495	8.2	52	299	13.4
800	31	1,993	5.3	48	293	15.3
750	31	2,514	2.8	43	293	18.6
700	31	3,074	.2	37	297	20.6
650	31	3,659	- 3.0	R33	296	23.7
600	31	4,295	- 6.8	33	297	26.4
550	31	4,964	-10.7	R34	295	27.2
500	31	5,697	-15.4	R32	296	29.1
450	31	6,475	-20.7	R31	295	32.2
400	31	7,346	-26.9	R33	295	35.2
350	31	8,295	-34.1	R32	294	37.9
300	31	9,357	-42.1	32	297	40.8
250	31	10,567	-51.2		299	44.7
200	31	11,988	-59.8		302	45.3
175	31	12,820	-60.9		301	41.4
150	31	13,780	-60.3		297	32.1
125	31	14,918	-59.8		301	23.1
100	31	16,312	-59.9		304	18.1
80	31	17,708	-58.6		315	12.2
70	31	18,549	-57.1		320	7.6
60	31	19,528	-55.1		321	3.9
50	31	20,697	-53.3		353	1.9
40	30	22,138	-51.2		68	4.5
30	29	24,015	-49.3		103	6.6
25	28	25,216	-47.5		88	6.8
20	26	26,691	-45.3		90	7.2
15	23	28,606	-43.1		58	3.3
10	16	31,354	-37.0		272	8.0
7	7	33,763	-34.7			

* NASHVILLE, TENN.
998 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	177	16.5	90	141	1.6
1000	31	159				
950	31	599	18.9	60	238	9.7
900	31	1,061	16.0	61	240	12.8
850	31	1,545	12.8	61	242	14.0
800	31	2,052	9.7	60	245	13.6
750	31	2,586	6.7	53	251	13.8
700	31	3,149	3.5	48	252	16.3
650	31	3,742	.0	44	256	17.5
600	31	4,383	- 3.9	42	253	19.8
550	31	5,058	- 8.0	45	257	19.0
500	31	5,800	-13.1	43	262	20.6
450	31	6,590	-18.3	35	263	22.3
400	31	7,465	-24.4	33	270	24.1
350	31	8,423	-31.7	32	271	29.5
300	31	9,495	-40.0	36	270	31.7
250	31	10,714	-49.6		276	37.9
200	31	12,141	-59.6		279	41.6
175	31	12,969	-62.9		280	38.7
150	31	13,916	-63.2		281	37.1
125	31	15,039	-62.9		284	29.3
100	31	16,408	-64.3		289	19.6
80	31	17,774	-64.0		309	10.3
70	31	18,593	-63.0		343	6.4
60	31	19,547	-60.5		33	7.2
50	31	20,690	-57.2		68	8.7
40	31	22,113	-53.8		86	8.9
30	31	23,973	-51.2		84	9.1
25	31	25,163	-49.6		86	9.1
20	30	26,630	-46.9		87	9.5
15	30	28,552	-43.2		86	9.3
10	25	31,325	-38.1		92	7.6
7	11	33,774	-33.3			

NOME, ALASKA
1010 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	7	- 3.7	84	71	3.5
1000	31	85			85	3.7
950	31	492	- 4.3	76	153	4.9
900	31	915	- 6.1	76	156	4.3
850	31	1,361	- 7.9	74	166	4.3
800	31	1,831	- 9.9	72	186	4.7
750	31	2,325	-12.1	66	188	5.2
700	31	2,852	-14.8	64	208	4.9
650	31	3,409	-18.1	62	224	4.7
600	31	4,004	-21.5	57	230	7.2
550	31	4,635	-25.1	51	243	7.6
500	31	5,327	-29.5	50	252	8.4
450	31	6,066	-34.3	48	254	8.9
400	31	6,887	-39.7	50	254	11.3
350	31	7,789	-45.0		260	12.8
300	31	8,809	-48.8		233	14.0
250	30	9,995	-49.4		238	13.8
200	30	11,461	-47.9		228	9.7
175	30	12,344	-47.2		232	7.6
150	30	13,363	-47.5		225	5.8
125	30	14,566	-48.1		211	5.6
100	30	16,033	-49.1		199	6.0
80	30	17,497	-48.7		186	3.1
70	30	18,375	-48.5		162	2.9
60	30	19,389	-48.4		129	3.3
50	30	20,588	-48.3		111	4.1
40	29	22,053	-47.9		94	5.6
30	29	23,953	-47.2		84	8.9
25	29	25,161	-46.3		77	10.7
20	28	26,651	-45.1		84	13.0
15	21	28,610	-42.2		79	15.7
10	9	31,360	-38.4			
7						

NORFOLK, VA.
1017 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	9	17.4	86	192	1.2
1000	31	151	18.0	73	250	2.5
950	31	590	17.9	61	314	7.2
900	31	1,054	15.9	57	306	8.7
850	31	1,537	13.0	56	294	10.1
800	31	2,045	9.7	56	292	11.3
750	31	2,574	6.7	52	290	13.4
700	31	3,140	2.9	48	293	14.0
650	31	3,734	- .7	45	293	16.3
600	31	4,372	- 4.3	43	293	17.5
550	31	5,043	- 8.2	37	294	19.8
500	31	5,787	-12.9	32	292	20.6
450	31	6,575	-18.5	R31	294	23.5
400	31	7,451	-24.7	30	293	23.1
350	31	8,409	-31.9	R27	289	23.3
300	31	9,479	-40.4	R25	291	26.4
250	31	10,695	-50.4		300	29.7
200	31	12,116	-60.2		299	33.8
175	31	12,940	-64.0		298	30.9
150	31	13,883	-64.2		297	27.4
125	31	15,001	-62.7		302	23.5
100	31	16,377	-62.7		312	19.4
80	31	17,755	-61.4		329	12.2
70	31	18,583	-60.3		344	8.9
60	31	19,551	-57.6		32	6.2
50	31	20,710	-54.8		72	7.2
40	31	22,146	-52.2		89	9.3
30	30	24,015	-49.6		90	9.1
25	28	25,213	-47.7		100	9.1
20	22	26,689	-44.4		101	8.5
15	11	28,619	-41.5		173	4.9
10						
7						

* NORTH PLATTE, NEBR.
913 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	848	9.2	82	21	2.7
1000	31	79				
950	31	515				
900	31	962	11.5	70	321	1.4
850	31	1,441	11.4	61	249	6.4
800	31	1,947	9.6	51	252	10.3
750	31	2,478	6.8	51	251	15.3
700	31	3,044	3.0	49	252	18.1
650	31	3,639	- 1.2	46	249	19.8
600	31	4,274	- 5.7	50	245	21.4
550	31	4,946	-10.8	49	246	22.7
500	31	5,675	-16.2	47	245	23.3
450	31	6,457	-21.5	39	243	23.3
400	31	7,318	-27.6	36	244	24.7
350	31	8,264	-35.0	36	245	24.7
300	31	9,322	-43.1	45	243	25.4
250	31	10,528	-51.2		248	31.1
200	31	11,955	-57.8		246	36.9
175	31	12,794	-59.1		247	38.1
150	31	13,763	-57.9		252	33.6
125	31	14,912	-58.3		252	25.1
100	30	16,312	-59.5		253	17.9
80	29	17,706	-59.9		252	9.3
70	29	18,539	-59.8		240	4.3
60	29	19,506	-58.2		143	.8
50	29	20,662	-55.5		85	3.3
40	29	22,090	-53.5		76	6.4
30	28	23,955	-51.0		77	8.7
25	28	25,145	-49.6		92	9.9
20	27	26,610	-48.0		89	10.3
15	25	28,526	-44.4		105	7.4
10	22	31,267	-40.6		209	1.4
7	13	33,692	-35.9			

* OAKLAND, CALIF.
1015 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	6	11.5	78	281	3.7
1000	31	128	10.3	78	280	4.5
950	31	560	11.3	59	310	6.4
900	31	1,009	12.7	40	332	8.9
850	31	1,486	10.2	35	329	9.1
800	31	1,988	7.0	35	322	8.2
750	31	2,510	3.7	33	316	8.7
700	31	3,072	.0	31	320	12.4
650	31	3,655	- 3.5	32	319	15.7
600	31	4,290	- 7.2	31	320	21.0
550	31	4,955	-11.7	32	318	21.8
500	31	5,687	-16.7	30	317	23.3
450	31	6,461	-22.5	33	317	24.9
400	31	7,324	-28.9	36	319	27.8
350	31	8,265	-36.3	34	318	33.2
300	31	9,317	-44.2		319	35.2
250	31	10,518	-52.5		317	38.5
200	31	11,938	-58.5		310	36.7
175	31	12,777	-58.4		303	32.4
150	31	13,748	-58.2		296	26.4
125	31	14,893	-59.2		288	21.4
100	31	16,289	-59.7		287	14.0
80	31	17,686	-59.4		272	5.4
70	31	18,523	-58.3		269	2.5
60	31	19,496	-57.6		55	.6
50	30	20,647	-56.3		82	4.3
40	30	22,070	-54.3		96	5.4
30	30	23,924	-52.2		82	5.8
25	28	25,104	-50.8		68	5.6
20	28	26,565	-48.2		59	5.2
15	26	28,466	-44.7		38	3.3
10	22	31,204	-39.3		64	2.7
7	8	33,686	-34.7			

OKLAHOMA CITY, OKLA.
968 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	392	17.3	84	156	8.4
1000	31	110				
950	31	550	17.7	78	171	13.0
900	31	1,012	16.0	73	198	20.0
850	31	1,497	14.2	66	212	18.3
800	31	2,008	12.0	54	218	15.7
750	31	2,543	9.3	44	223	15.0
700	31	3,115	5.5	43	228	15.0
650	31	3,713	1.4	42	238	15.0
600	31	4,356	- 3.1	41	244	17.9
550	31	5,033	- 7.8	38	246	19.0
500	31	5,774	-12.7	34	242	22.0
450	31	6,564	-18.4	36	243	26.8
400	31	7,437	-24.8	35	238	29.3
350	30	8,396	-32.1	34	243	33.8
300	30	9,466	-40.3	35	244	42.2
250	30	10,684	-49.6		246	49.9
200	30	12,112	-58.9		247	57.7
175	30	12,943	-61.7		250	56.9
150	30	13,897	-61.4		259	48.4
125	30	15,024	-62.4		256	35.7
100	30	16,396	-64.2		253	24.1
80	29	17,761	-64.1		248	10.5
70	29	18,580	-62.8		216	4.1
60	27	19,529	-60.4		118	3.3
50	27	20,675	-56.5		90	5.8
40	27	22,100	-53.8		85	8.0
30	27	23,958	-51.1		85	9.7
25	24	25,151	-49.0		94	10.1
20	21	26,628	-45.9		86	9.7
15	9	28,559	-42.0			
10						
7						

OMAHA, NEBR.
964 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	403	13.3	81	157	3.5
1000	31	91				
950	31	523	14.4	74	188	6.2
900	31	983	14.1	60	228	14.8
850	31	1,465	12.4	54	236	18.1
800	31	1,971	10.2	46	241	21.2
750	31	2,502	6.8	44	247	21.8
700	31	3,068	3.2	41	250	23.3
650	31	3,659	- 1.0	44	250	24.9
600	31	4,299	- 5.3	42	251	25.1
550	31	4,968	- 9.9	38	248	27.8
500	31	5,705	-14.8	37	244	31.7
450	31	6,489	-20.3	35	239	32.2
400	31	7,357	-26.5	33	242	33.6
350	31	8,307	-33.8	30	241	35.0
300	31	9,369	-42.2	36	244	35.5
250	31	10,578	-51.0		245	42.7
200	31	12,005	-57.6		243	45.8
175	31	12,843	-59.5		249	42.9
150	31	13,809	-58.4		255	34.6
125	31	14,954	-58.7		256	24.7
100	31	16,352	-59.3		251	18.5
80	30	17,747	-60.0		261	9.7
70	29	18,580	-59.8		266	5.8
60	29	19,546	-57.7		347	1.0
50	28	20,708	-54.7		60	4.5
40	28	22,143	-52.3		73	6.0
30	28	24,013	-50.2		86	8.5
25	28	25,206	-49.1		86	11.1
20	26	26,669	-46.9		90	7.2
15	18	28,573	-43.9		95	8.7
10						
7						

* PEORIA, ILL.
991 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	200	14.5	83	198	3.3
1000	31	126				
950	31	562	16.5	59	239	13.8
900	31	1,021	14.5	57	252	18.3
850	31	1,502	11.9	56	256	19.4
800	31	2,008	9.0	51	253	18.3
750	31	2,540	5.9	49	249	19.8
700	31	3,101	2.5	49	252	20.4
650	31	3,698	- 1.1	41	254	20.6
600	31	4,331	- 5.0	40	258	20.4
550	31	5,006	- 9.7	36	260	23.1
500	31	5,739	-14.7	34	258	26.0
450	31	6,523	-20.2	31	259	26.2
400	31	7,390	-26.2	30	265	28.7
350	31	8,342	-33.5	31	266	33.4
300	31	9,405	-41.8	36	264	35.4
250	31	10,616	-50.8		266	36.9
200	31	12,039	-59.0		270	41.2
175	31	12,871	-61.5		270	38.1
150	31	13,828	-60.4		273	32.6
125	30	14,963	-60.7		270	24.1
100	30	16,350	-61.0		277	16.9
80	30	17,735	-61.0		284	9.1
70	29	18,563	-60.4		301	5.1
60	29	19,528	-58.6		11	2.7
50	29	20,680	-55.9		69	6.6
40	29	22,110	-53.3		76	8.0
30	28	23,979	-50.6		83	10.1
25	27	25,177	-49.1		87	10.9
20	25	26,649	-47.4		90	11.3
15	24	28,569	-44.6		112	9.5
10	20	31,297	-40.6		191	1.4
7	8	33,728	-35.4			

* PITTSBURGH, PA.
976 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	353	13.7	77	232	1.9
1000	31	154				
950	31	588	15.2	63	252	6.8
900	31	1,045	13.2	59	275	13.2
850	31	1,524	10.3	61	279	16.9
800	31	2,026	7.3	63	277	20.2
750	31	2,552	4.3	54	278	21.4
700	31	3,113	1.2	52	275	22.5
650	31	3,701	- 2.2	48	275	22.0
600	31	4,338	- 6.0	46	275	23.9
550	31	5,002	-10.0	42	277	26.2
500	31	5,743	-14.6	41	277	26.0
450	31	6,528	-20.0	35	277	28.4
400	31	7,396	-26.4	30	277	29.3
350	31	8,347	-33.7	27	276	31.1
300	31	9,410	-41.9	21	276	32.2
250	31	10,621	-50.6		281	36.9
200	31	12,043	-59.8		289	39.4
175	31	12,872	-62.3		290	37.1
150	31	13,826	-61.0		291	31.5
125	31	14,959	-60.9		291	23.9
100	31	16,347	-61.3		298	18.5
80	31	17,731	-60.9		319	12.8
70	31	18,562	-59.7		342	8.2
60	31	19,529	-57.8		24	6.2
50	31	20,686	-55.1		50	5.4
40	29	22,112	-52.7		55	4.5
30	28	23,979	-50.6		74	5.8
25	26	25,173	-48.8		81	5.4
20	25	26,642	-47.0		83	6.2
15	24	28,562	-43.7		93	7.0
10	21	31,312	-39.0		163	1.7
7	12	33,731	-35.1			
5	5	35,930	-34.9			

PONAPE, CAROLINE IS.
+ 1005 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	39	28.3	79	73	8.2
1000	31	81	27.5	77	74	9.5
950	31	525	23.3	76	79	16.3
900	31	1,005	20.1	71	82	17.9
850	31	1,497	17.5	67	87	17.7
800	31	2,014	15.7	57	88	14.0
750	31	2,559	13.0	52	96	11.1
700	31	3,138	10.0	47	95	9.7
650	31	3,749	6.7	44	95	10.5
600	31	4,404	2.9	44	93	10.1
550	31	5,098	- 1.0	42	88	8.0
500	31	5,860	- 5.0	38	96	3.9
450	31	6,680	- 9.9	36	152	.8
400	31	7,582	-15.4	31	254	2.5
350	31	8,578	-22.1	28	254	4.7
300	30	9,691	-30.6	25	225	5.4
250	30	10,960	-40.8	24	210	10.9
200	30	12,437	-53.5		221	14.0
175	30	13,283	-60.5		242	15.2
150	30	14,226	-68.0		261	16.7
125	30	15,302	-75.0		273	13.2
100	30	16,581	-79.6		290	6.6
80	30	17,850	-76.6		291	5.2
70	29	18,629	-70.7		280	9.1
60	27	19,552	-65.7		284	5.4
50	27	20,669	-62.7		93	3.7
40	27	22,056	-59.1		84	20.4
30	24	23,885	-54.0		91	45.6
25	21	25,061	-51.4		90	55.9
20	14	26,517	-47.7		92	62.9
15	5	28,444	-43.0			
10						
7						
5						

PORTLAND, ME.
1015 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	20	10.7	72	339	1.9
1000	31	142	10.5	62	319	3.1
950	31	568	10.6	55	329	6.8
900	31	1,018	8.3	54	313	9.5
850	31	1,489	6.1	55	306	14.6
800	31	1,984	3.6	51	301	18.8
750	31	2,505	1.1	49	299	21.8
700	31	3,058	- 1.8	46	300	22.1
650	31	3,641	- 4.6	38	292	26.4
600	31	4,272	- 8.1	35	294	30.5
550	31	4,935	-12.2	34	294	33.6
500	31	5,665	-17.1	31	294	35.2
450	31	6,441	-22.4	R30	295	36.9
400	31	7,303	-28.4	R30	297	41.2
350	31	8,248	-35.1	R31	297	45.6
300	31	9,306	-42.9		297	49.7
250	31	10,513	-51.2		296	53.2
200	31	11,940	-57.6		297	50.1
175	31	12,782	-58.0		296	42.0
150	31	13,754	-57.2		297	31.9
125	31	14,906	-57.8		295	25.8
100	31	16,312	-58.1		302	18.8
80	31	17,720	-57.1		313	9.9
70	31	18,566	-56.0		324	6.4
60	30	19,548	-54.3		350	3.1
50	29	20,725	-52.1		50	2.5
40	29	22,173	-51.1		77	4.5
30	29	24,050	-49.3		91	6.8
25	21	25,232	-47.7		92	8.4
20	18	26,705	-45.9		73	10.1
15	12	28,622	-43.3		77	10.5
10	6	31,443	-40.2			
7						
5						

RAPID CITY, S. DAK.
900 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	29	966	8.5	74	317	5.4
1000	29	86				
950	29	515				
900	29	967			325	4.3
850	29	1,442	9.2	54	313	8.5
800	29	1,943	6.9	54	305	8.4
750	29	2,467	4.4	54	283	8.4
700	29	3,030	1.4	51	269	10.9
650	29	3,616	- 2.4	53	258	13.4
600	29	4,253	- 6.8	53	262	16.7
550	29	4,919	-11.7	52	260	20.4
500	29	5,649	-16.7	46	254	22.5
450	29	6,426	-22.3	39	251	26.6
400	29	7,287	-28.5	38	247	27.6
350	29	8,230	-35.7	35	245	29.3
300	29	9,284	-43.6		243	31.9
250	29	10,486	-52.3		239	35.4
200	29	11,907	-57.9		237	36.1
175	29	12,750	-57.2		243	32.8
150	29	13,730	-55.8		249	28.6
125	29	14,889	-56.2		246	20.6
100	29	16,302	-57.3		248	16.5
80	29	17,710	-57.8		242	9.9
70	29	18,550	-57.8		250	5.4
60	28	19,527	-55.7		326	.6
50	28	20,692	-54.3		85	3.1
40	28	22,129	-52.2		68	6.6
30	27	24,001	-50.2		78	10.5
25	26	25,193	-48.6		74	11.3
20	25	26,667	-46.8		82	13.6
15	14	28,607	-43.9		77	10.9
10						
7						
5						

ST. CLOUD, MINN.
974 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	316	10.1	82	160	1.2
1000	31	93				
950	31	524	10.8	74	157	2.5
900	31	973	10.3	65	220	6.0
850	31	1,448	9.0	57	245	9.9
800	31	1,948	6.5	56	251	11.5
750	31	2,475	3.7	54	252	15.2
700	31	3,033	.4	51	253	19.6
650	31	3,619	- 3.3	52	254	23.9
600	31	4,254	- 7.4	50	257	25.6
550	31	4,921	-11.3	45	259	27.8
500	31	5,652	-16.2	45	260	31.9
450	31	6,430	-21.6	44	254	34.2
400	31	7,296	-27.6	40	254	37.5
350	31	8,242	-34.8	38	254	38.3
300	31	9,300	-43.1	R31	252	39.8
250	31	10,504	-51.7		251	42.5
200	31	11,931	-57.2		258	47.0
175	31	12,773	-57.9		259	38.9
150	31	13,746	-56.7		262	30.9
125	31	14,901	-57.1		265	23.3
100	31	16,311	-57.4		271	15.7
80	31	17,720	-57.9		274	10.1
70	31	18,561	-57.8		286	5.6
60	31	19,537	-56.5		302	2.9
50	31	20,698	-54.5		29	2.9
40	31	22,136	-52.1		56	5.2
30	30	24,004	-50.4		77	6.4
25	30	25,197	-49.1		79	7.6
20	28	26,665	-47.7		84	7.6
15	19	28,565	-45.2		62	8.2
10	6	31,220	-42.8			
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See reference note at end of table

RAWINSONDE DATA

Average monthly values

ST. PAUL IS., ALASKA
1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	10	- .2	91	297	3.3
1000	31	89			292	5.4
950	31	495	- 2.8	88	277	5.2
900	31	924	- 5.0	87	269	5.4
850	31	1,373	- 6.4	75	275	5.6
800	31	1,846	- 8.3	71	276	6.8
750	31	2,346	-10.2	62	277	8.0
700	31	2,875	-12.2	58	281	9.1
650	31	3,437	-15.0	53	284	10.7
600	31	4,041	-18.4	51	282	12.4
550	31	4,681	-22.3	50	280	13.8
500	31	5,381	-26.7	49	281	16.1
450	31	6,132	-31.6	50	281	17.9
400	31	6,960	-37.1	45	278	21.4
350	31	7,871	-43.0	48	274	23.5
300	31	8,896	-49.2		278	24.3
250	31	10,084	-51.3		272	22.5
200	31	11,536	-50.1		274	18.5
175	31	12,409	-49.5		275	15.7
150	31	13,418	-49.6		265	13.2
125	31	14,610	-50.0		260	9.3
100	31	16,066	-50.6		245	6.8
80	31	17,521	-50.3		229	3.9
70	31	18,392	-50.0		235	2.9
60	31	19,400	-49.9		205	2.1
50	31	20,592	-49.9		144	3.1
40	31	22,051	-49.7		117	3.1
30	31	23,936	-49.0		95	4.1
25	31	25,134	-48.5		87	5.8
20	30	26,610	-46.9		82	8.7
15	28	28,535	-44.0		82	11.3
10	12	31,285	-40.2		91	14.8
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SALEM, OREG.
1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	61	6.3	92	233	2.3
1000	31	171	7.6	78	266	2.7
950	31	588	6.4	71	309	3.5
900	31	1,036	4.7	67	295	4.7
850	31	1,500	2.5	65	290	7.0
800	31	1,989	.3	56	294	8.9
750	31	2,500	- 2.2	45	296	10.1
700	31	3,050	- 5.2	39	288	10.9
650	31	3,622	- 8.7	34	289	12.6
600	31	4,245	-11.9	31	292	16.3
550	31	4,899	-16.1	33	295	17.7
500	31	5,618	-20.8	33	296	22.9
450	31	6,382	-25.8	R32	304	25.8
400	31	7,233	-31.4	R33	305	29.7
350	31	8,166	-38.0	R35	304	32.8
300	31	9,210	-45.4		304	33.6
250	31	10,406	-52.3		304	34.6
200	31	11,833	-56.6		301	31.1
175	31	12,680	-56.1		293	26.6
150	31	13,659	-56.1		289	23.3
125	31	14,817	-56.5		287	18.5
100	30	16,232	-56.3		273	11.7
80	29	17,648	-55.9		262	7.0
70	29	18,497	-55.9		251	3.5
60	29	19,480	-55.5		206	1.2
50	29	20,645	-54.2		98	1.7
40	29	22,082	-52.4		90	3.9
30	28	23,947	-51.0		88	8.4
25	28	25,137	-49.5		89	9.3
20	28	26,605	-47.5		93	9.7
15	26	28,521	-43.7		89	8.9
10	11	31,301	-36.9			
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SALT LAKE CITY, UTAH
868 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,288	7.1	71	176	2.9
1000	31	102				
950	31	532				
900	31	988				
850	31	1,460	9.6	52	164	3.9
800	31	1,962	7.2	49	200	2.3
750	31	2,486	3.5	51	264	2.7
700	31	3,045	- .6	56	277	3.9
650	31	3,628	- 5.0	58	256	5.4
600	31	4,257	- 9.8	59	248	9.3
550	31	4,919	-14.7	57	241	11.8
500	31	5,636	-19.8	53	235	16.1
450	31	6,406	-25.1	50	235	19.2
400	31	7,255	-31.3	46	234	20.6
350	31	8,187	-38.4	43	234	21.8
300	31	9,230	-45.9		232	22.7
250	31	10,427	-51.4		239	21.8
200	31	11,961	-55.1		242	26.8
175	31	12,713	-55.7		245	23.1
150	31	13,694	-55.9		243	20.6
125	31	14,951	-57.1		243	17.9
100	31	16,261	-57.6		229	14.2
80	31	17,666	-58.5		227	9.3
70	31	18,504	-58.6		220	4.7
60	31	19,474	-58.0		175	.4
50	31	20,629	-55.7		81	3.5
40	30	22,052	-54.2		84	7.4
30	28	23,904	-52.1		80	8.7
25	27	25,090	-50.3		86	9.1
20	25	26,561	-48.1		82	9.3
15	14	28,512	-44.3			
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SAN ANTONIO, TEXAS
985 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	243	20.4	91	132	4.1
1000	31	112				
950	31	555	19.6	85	148	12.8
900	31	1,022	17.2	81	161	19.4
850	31	1,509	15.0	78	173	18.6
800	31	2,022	13.2	67	190	16.5
750	31	2,565	11.5	54	202	15.2
700	31	3,138	8.4	45	217	13.2
650	30	3,743	4.7	43	241	14.8
600	30	4,395	.0	40	249	16.3
550	30	5,078	- 5.0	40	251	19.4
500	30	5,830	-10.3	39	252	23.9
450	30	6,628	-15.7	34	251	26.2
400	30	7,514	-22.0	R29	254	28.9
350	30	8,483	-29.0	R28	253	35.2
300	30	9,567	-37.2	R27	254	41.0
250	30	10,802	-47.0		255	51.3
200	30	12,244	-57.7		256	60.6
175	30	13,077	-62.5		258	63.5
150	30	14,019	-66.0		259	57.5
125	30	15,122	-67.0		258	42.9
100	30	16,460	-69.5		250	26.0
80	30	17,789	-68.8		241	11.1
70	29	18,590	-66.8		216	4.3
60	28	19,530	-63.4		95	5.4
50	28	20,663	-58.6		85	9.5
40	27	22,078	-55.0		80	11.3
30	27	23,931	-51.1		76	14.4
25	25	25,119	-48.4		85	12.4
20	22	26,589	-45.3		97	7.8
15	15	28,513	-41.9		90	5.4
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SAN DIEGO, CALIF.
999 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	124	13.1	84	183	2.3
1000	31	119			160	2.5
950	31	546	11.7	77	221	2.3
900	31	1,002	12.3	55	296	4.3
850	31	1,481	11.2	45	309	7.8
800	31	1,985	9.3	36	293	8.7
750	31	2,512	6.2	31	299	8.5
700	31	3,077	2.2	R26	291	10.1
650	31	3,666	- 1.1	R23	281	12.6
600	31	4,307	- 4.8	R19	284	16.9
550	31	4,976	- 9.4	R18	278	19.0
500	31	5,716	-14.7	R19	282	21.0
450	31	6,499	-20.4	R20	277	26.2
400	31	7,368	-26.9	R21	274	28.9
350	31	8,317	-34.4	R23	274	33.4
300	31	9,376	-42.5	R27	272	37.9
250	31	10,587	-50.3		268	40.2
200	31	12,020	-57.4		268	42.0
175	31	12,860	-58.8		264	43.1
150	31	13,825	-59.9		262	40.8
125	31	14,962	-60.5		259	31.9
100	31	16,347	-62.1		256	17.7
80	31	17,726	-61.4		241	10.3
70	31	18,554	-61.1		223	5.4
60	31	19,513	-59.7		101	2.9
50	30	20,659	-57.3		89	6.4
40	30	22,077	-54.5		81	9.1
30	27	23,929	-51.5		85	11.7
25	27	25,118	-49.1		81	10.1
20	24	26,584	-46.1		84	8.4
15	21	28,518	-42.0		94	5.6
10	15	31,278	-37.4		266	8.2
7	11	33,759	-32.1			

* SAN JUAN, P. R.
1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	6	24.9	85	121	2.7
1000	31	141	23.9	82	101	9.3
950	31	584	21.1	76	100	15.5
900	31	1,056	18.2	72	107	14.0
850	31	1,544	15.5	68	107	11.8
800	31	2,057	13.0	62	105	10.1
750	31	2,590	10.0	55	117	7.4
700	31	3,169	6.6	55	136	5.8
650	31	3,769	3.2	48	167	4.3
600	31	4,419	- .6	49	216	7.8
550	31	5,104	- 4.4	44	237	13.0
500	31	5,855	- 8.7	38	250	14.4
450	31	6,657	-13.8	38	256	17.1
400	31	7,551	-19.7	35	260	22.0
350	31	8,528	-26.7	30	260	28.6
300	31	9,622	-35.1	25	258	34.4
250	31	10,867	-44.8		260	43.3
200	30	12,321	-55.8		262	61.4
175	30	13,160	-61.9		264	67.0
150	30	14,100	-67.9		267	64.3
125	30	15,181	-72.4		270	49.7
100	30	16,485	-74.6		272	29.5
80	30	17,789	-71.8		288	10.5
70	30	18,582	-68.2		17	5.1
60	30	19,517	-63.6		71	12.0
50	30	20,646	-60.0		82	18.6
40	30	22,050	-56.4		93	25.4
30	30	23,893	-52.2		94	29.7
25	29	25,078	-49.6		90	34.0
20	25	26,549	-46.8		88	40.0
15	23	28,478	-42.3		97	45.6
10	14	31,232	-37.2		92	55.8
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SANTA MONICA, CALIF.
1009 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	38	13.7	80	70	1.7
1000	31	113	13.2	81	95	1.9
950	31	546	11.6	76	77	3.1
900	31	998	12.7	49	4	5.2
850	31	1,477	11.3	38	328	7.2
800	31	1,980	8.5	34	312	9.5
750	31	2,505	5.2	32	306	9.5
700	31	3,071	1.6	30	302	9.7
650	31	3,661	- 1.7	27	295	12.6
600	31	4,297	- 5.5	26	290	16.5
550	31	4,968	-10.2	24	290	19.8
500	31	5,702	-15.3	25	291	22.9
450	31	6,480	-21.1	25	290	24.5
400	31	7,349	-27.8	26	288	27.4
350	31	8,294	-35.5	30	285	29.1
300	31	9,349	-43.5		284	34.0
250	31	10,554	-51.2		281	35.9
200	31	11,982	-57.3		278	36.9
175	31	12,823	-58.8		271	36.5
150	31	13,790	-59.3		270	33.0
125	31	14,928	-60.3		267	29.3
100	30	16,312	-61.4		262	22.9
80	30	17,697	-61.1		241	10.7
70	30	18,526	-60.7		232	5.2
60	30	19,487	-59.6		123	1.6
50	30	20,634	-57.0		84	6.8
40	30	22,053	-54.7		86	8.0
30	30	23,905	-51.9		87	10.1
25	30	25,092	-49.8		84	8.5
20	30	26,560	-47.1		82	7.8
15	29	28,485	-43.2		63	6.4
10	18	31,251	-38.5		30	5.4
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* SAULT STE. MARIE, MICH.
988 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	221	6.9	84	67	1.7
1000	31	124				
950	31	546	8.8	67	210	4.7
900	31	996	8.6	58	253	9.1
850	31	1,467	6.5	54	266	14.0
800	31	1,963	4.4	51	270	16.5
750	31	2,484	1.8	47	266	18.8
700	31	3,040	- 1.3	46	268	22.3
650	31	3,624	- 4.7	46	269	25.3
600	31	4,253	- 8.4	44	269	29.7
550	31	4,919	-12.2	41	272	30.5
500	31	5,646	-16.6	35	268	32.2
450	31	6,424	-21.9	R31	268	31.9
400	31	7,287	-27.8	R30	270	36.5
350	31	8,232	-34.8	R29	272	39.2
300	31	9,290	-42.8	R29	275	41.8
250	31	10,497	-50.8		284	48.4
200	31	11,927	-57.1		284	49.1
175	31	12,769	-58.2		284	44.5
150	31	13,744	-56.3		285	34.4
125	30	14,903	-56.3		284	27.4
100	30	16,319	-56.9		289	20.0
80	30	17,732	-56.8		302	13.2
70	30	18,578	-56.4		313	9.3
60	30	19,560	-55.1		339	6.2
50	30	20,728	-53.2		24	4.7
40	30	22,172	-51.4		60	5.8
30	29	24,051	-49.3		76	7.4
25	29	25,251	-47.8		85	9.1
20	28	26,728	-45.9		83	8.0
15	28	28,655	-43.0		77	9.5
10	19	31,417	-37.0		177	1.0
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SHEMYA, ALASKA
1005 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	38	3.2	89	209	5.6
1000	31	73			182	5.8
950	31	486	.8	81	209	9.5
900	31	921	- .7	75	219	9.5
850	31	1,376	- 2.9	70	221	7.8
800	31	1,855	- 4.9	63	229	7.2
750	31	2,357	- 7.1	61	235	7.0
700	31	2,897	- 9.7	59	240	8.9
650	31	3,461	-12.6	55	247	11.3
600	31	4,074	-16.1	55	249	11.1
550	31	4,719	-20.0	53	249	11.1
500	31	5,425	-24.8	49	256	12.0
450	31	6,177	-30.2	47	269	11.7
400	31	7,012	-36.1	47	271	13.0
350	31	7,927	-42.0	46	276	15.9
300	31	8,957	-47.8		281	19.4
250	31	10,149	-51.2		281	26.2
200	31	11,598	-51.4		275	27.0
175	31	12,465	-51.0		278	27.0
150	30	13,460	-50.9		269	24.1
125	30	14,646	-51.2		272	19.6
100	30	16,094	-51.9		273	13.6
80	30	17,539	-51.7		274	9.3
70	30	18,404	-51.6		267	6.2
60	30	19,405	-51.3		270	3.5
50	29	20,593	-50.8		230	1.2
40	29	22,046	-50.5		103	3.1
30	28	23,925	-49.8		100	5.1
25	28	25,119	-49.0		101	6.2
20	28	26,587	-47.6		96	7.2
15	22	28,490	-45.7		83	8.9
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* SHREVEPORT, LA.
1007 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	79	19.0	97	144	4.1
1000	31	136	19.2	93	155	4.9
950	31	580	18.3	82	190	12.2
900	31	1,041	16.3	71	201	13.8
850	31	1,526	14.3	59	200	13.6
800	31	2,036	11.9	54	203	12.8
750	31	2,573	8.8	52	214	12.0
700	31	3,142	5.3	52	222	12.6
650	31	3,744	1.9	49	232	13.6
600	31	4,385	- 2.1	43	240	17.1
550	31	5,065	- 6.7	40	247	18.3
500	31	5,808	-11.5	34	249	20.2
450	31	6,603	-16.9	33	253	24.1
400	31	7,482	-23.0	30	261	27.4
350	31	8,446	-30.2	29	264	30.5
300	31	9,524	-38.6	30	267	37.7
250	31	10,751	-48.3		265	46.0
200	31	12,184	-58.7		265	57.5
175	31	13,014	-62.7		269	57.3
150	31	13,961	-63.8		271	50.9
125	31	15,076	-65.2		269	35.2
100	30	16,429	-67.0		271	23.3
80	29	17,775	-66.4		267	11.1
70	29	18,585	-65.4		268	2.5
60	29	19,528	-62.7		38	3.3
50	29	20,662	-58.4		69	8.0
40	28	22,077	-54.7		87	10.7
30	28	23,930	-51.6		90	11.5
25	27	25,114	-49.7		84	9.5
20	27	26,582	-46.7		82	7.0
15	26	28,508	-42.5		86	4.5
10	25	31,271	-38.7		294	3.5
7	6	33,778	-33.4			

SPOKANE, WASH.
931 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	722	5.9	73	183	5.1
1000	31	130				
950	31	558				
900	31	1,001	8.7	55	214	7.4
850	31	1,472	6.4	50	241	9.1
800	31	1,967	2.7	52	253	9.1
750	31	2,480	- 1.4	57	259	8.7
700	31	3,031	- 5.4	57	262	9.3
650	31	3,604	- 9.1	54	264	10.1
600	31	4,224	-13.0	46	261	12.0
550	31	4,879	-17.3	40	262	14.4
500	31	5,590	-21.8	37	260	17.5
450	31	6,353	-26.7	36	265	19.2
400	31	7,199	-32.4	37	258	20.2
350	31	8,128	-38.9	36	256	23.1
300	31	9,169	-46.1		262	23.7
250	31	10,365	-52.1		267	25.3
200	31	11,799	-54.0		269	23.7
175	31	12,656	-53.6		265	18.6
150	31	13,649	-53.1		261	16.5
125	31	14,820	-54.4		260	14.0
100	31	16,248	-54.6		253	13.0
80	31	17,678	-54.3		243	7.8
70	31	18,532	-54.5		256	6.0
60	31	19,519	-53.8		226	2.5
50	31	20,692	-52.8		91	1.6
40	31	22,135	-51.5		74	4.3
30	31	24,008	-49.9		85	6.6
25	29	25,199	-48.9		81	8.4
20	26	26,685	-46.9		83	9.7
15	9	28,641	-43.4			
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SWAN ISLAND, W. I.
1011 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	10	25.9	84	88	8.4
1000	31	107	25.3	84	84	10.5
950	31	554	22.1	82	95	14.4
900	31	1,026	19.0	79	100	14.6
850	31	1,516	16.3	75	100	14.0
800	31	2,031	13.7	67	100	11.5
750	31	2,573	10.8	60	99	8.2
700	31	3,145	8.0	52	95	7.4
650	31	3,750	5.1	40	82	6.0
600	31	4,403	1.9	31	64	5.6
550	31	5,094	- 1.4	R27	29	7.0
500	31	5,853	- 6.0	R26	4	8.9
450	31	6,665	-11.5	R24	352	9.7
400	31	7,563	-17.6	R24	339	12.2
350	31	8,548	-24.8	R24	320	17.1
300	31	9,650	-33.4	R24	304	17.7
250	31	10,903	-43.4		300	23.3
200	31	12,266	-55.3		294	30.1
175	31	13,205	-61.9		291	32.4
150	31	14,142	-68.5		289	31.7
125	30	15,219	-73.4		297	28.0
100	30	16,510	-77.4		315	19.4
80	30	17,790	-75.4		12	8.9
70	30	18,572	-71.3		57	7.4
60	30	19,494	-66.2		74	9.1
50	30	20,615	-60.5		89	15.0
40	30	22,018	-56.5		85	21.0
30	29	23,861	-52.7		91	31.3
25	29	25,044	-50.0		94	34.4
20	26	26,513	-46.6		94	41.8
15	18	28,437	-42.5		94	49.5
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TAMPA, FLA.
1018 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	8	20.3	88	78	2.9
1000	31	164	21.0	76	101	6.4
950	31	602	19.2	68	120	6.8
900	31	1,071	16.5	62	91	6.0
850	31	1,555	13.4	60	65	7.8
800	31	2,063	11.2	44	74	7.8
750	31	2,596	9.1	36	78	7.4
700	31	3,169	6.1	29	81	6.4
650	31	3,768	2.4	29	76	4.7
600	31	4,415	- .9	R23	19	3.9
550	31	5,097	- 4.9	R20	328	5.8
500	31	5,848	- 9.7	R20	315	8.0
450	31	6,646	-15.3	R24	323	12.4
400	31	7,532	-22.1	29	312	16.5
350	31	8,500	-29.1	R30	312	19.6
300	31	9,584	-37.2	R26	309	24.3
250	31	10,817	-47.0		308	33.0
200	31	12,258	-57.6		307	37.3
175	31	13,091	-62.5		307	37.7
150	31	14,034	-65.6		303	35.7
125	31	15,139	-66.9		304	32.1
100	31	16,479	-69.1		306	21.6
80	31	17,810	-68.8		322	13.4
70	31	18,613	-66.2		351	9.9
60	31	19,555	-62.6		35	10.3
50	31	20,690	-58.4		73	13.0
40	31	22,108	-54.3		98	16.9
30	31	23,968	-50.4		95	17.5
25	30	25,167	-47.5		90	16.1
20	28	26,655	-44.6		87	15.9
15	19	28,599	-40.6		82	14.2
10	12	31,421	-35.7		90	11.3
7	11	33,905	-32.7		80	7.8
5	7	36,296	-29.1			

* TATOOSH IS., WASH
1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	31	8.2	88	228	6.2
1000	31	159	6.9	86	244	5.6
950	31	575	4.3	79	271	7.0
900	31	1,018	3.5	60	265	6.4
850	31	1,481	1.3	57	264	7.2
800	31	1,966	- 1.4	51	263	7.6
750	31	2,472	- 4.4	46	271	8.5
700	31	3,019	- 7.3	45	276	8.7
650	30	3,587	-10.3	46	286	10.9
600	30	4,206	-14.0	46	291	12.2
550	30	4,856	-18.1	42	293	15.5
500	30	5,568	-22.8	38	292	18.5
450	30	6,328	-28.0	38	290	21.6
400	30	7,170	-33.6	42	287	25.3
350	30	8,095	-39.8	47	282	27.0
300	30	9,133	-46.4		277	31.7
250	30	10,326	-52.6		278	33.6
200	30	11,755	-55.6		278	30.3
175	30	12,607	-54.8		278	28.0
150	30	13,594	-54.4		274	25.1
125	30	14,761	-54.8		272	22.3
100	30	16,187	-55.3		269	19.0
80	30	17,611	-54.9		261	13.0
70	30	18,464	-54.7		255	10.5
60	30	19,452	-54.3		254	6.4
50	30	20,622	-53.5		250	2.9
40	29	22,061	-52.7		330	1.2
30	29	23,924	-51.1		84	3.5
25	28	25,120	-49.9		67	6.2
20	27	26,579	-48.5		80	8.7
15	27	28,483	-45.7		74	6.6
10	21	31,216	-40.6		85	7.2
7	9	33,683	-34.8			
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TOPEKA, KANS.
981 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	269	15.9	82	193	4.5
1000	31	106				
950	31	544	17.0	67	211	13.8
900	31	1,005	15.7	59	223	19.8
850	31	1,489	13.6	56	227	20.6
800	31	1,998	11.1	49	232	19.4
750	31	2,526	7.9	48	236	17.9
700	31	3,099	3.8	47	243	17.1
650	31	3,689	- .3	47	255	19.0
600	31	4,333	- 4.5	40	246	21.4
550	31	5,003	- 9.4	39	242	23.3
500	31	5,743	-14.1	37	240	25.4
450	31	6,525	-19.7	32	243	26.6
400	31	7,399	-26.0	29	246	28.6
350	31	8,352	-33.2	31	250	33.4
300	31	9,416	-41.4	35	249	37.9
250	31	10,630	-50.3		249	43.3
200	31	12,058	-58.5		251	49.0
175	31	12,892	-60.9		255	43.1
150	31	13,849	-60.3		258	37.3
125	31	14,986	-60.8		258	28.4
100	31	16,371	-61.5		256	21.2
80	31	17,754	-61.6		257	9.5
70	31	18,582	-61.2		264	5.2
60	31	19,544	-58.6		123	.8
50	31	20,698	-55.7		78	5.6
40	31	22,129	-52.9		75	7.0
30	31	23,993	-50.7		80	9.1
25	29	25,182	-49.2		86	10.9
20	24	26,644	-46.7		84	7.4
15	15	28,572	-42.8		233	4.7
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See reference note at end of table

RAWINSONDE DATA

Average monthly values

+ TRUK, CAROLINE IS.
1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	2	28.4	77	39	9.9
1000	31	87	27.5	73	53	11.3
950	31	534	23.7	73	83	14.6
900	31	1,012	20.9	67	86	16.7
850	31	1,506	18.1	64	90	14.6
800	31	2,024	15.6	58	92	12.6
750	31	2,571	13.4	47	92	11.3
700	31	3,148	10.4	44	95	11.5
650	31	3,760	6.9	42	94	10.3
600	31	4,416	3.0	43	103	9.9
550	31	5,112	- .8	40	102	6.0
500	31	5,873	- 4.9	36	113	2.3
450	31	6,691	- 9.9	34	191	2.5
400	31	7,596	-15.3	32	232	4.5
350	31	8,592	-22.0	26	255	5.8
300	31	9,708	-30.2	23	234	9.5
250	31	10,979	-40.4	24	229	13.8
200	31	12,461	-52.9		240	15.0
175	31	13,309	-59.9		251	16.1
150	31	14,255	-67.1		261	17.3
125	31	15,337	-73.8		275	13.8
100	31	16,622	-78.9		307	5.8
80	31	17,894	-75.8		12	4.3
70	31	18,675	-70.6		293	3.3
60	30	19,603	-65.5		285	4.9
50	30	20,720	-62.4		108	2.7
40	30	22,111	-58.4		90	22.1
30	28	23,935	-54.5		96	44.9
25	25	25,111	-51.8		96	52.1
20	18	26,555	-48.1		97	59.6
15	6	28,449	-43.8			
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TUCSON, ARIZ.
921 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	789	13.8	31	156	6.8
1000	31	85				
950	31	520				
900	31	987	18.3	27	175	5.8
850	31	1,474	15.9	27	209	3.5
800	31	1,985	12.2	28	221	4.7
750	31	2,517	8.2	28	222	8.9
700	31	3,086	4.1	27	218	14.0
650	31	3,679	.1	24	220	17.5
600	31	4,320	- 4.4	R23	228	21.2
550	31	4,995	- 8.6	R21	239	25.4
500	31	5,732	-13.9	R21	242	29.5
450	31	6,514	-19.5	R23	245	33.8
400	31	7,388	-26.1	R24	246	37.1
350	31	8,340	-33.3	R25	248	40.8
300	31	9,404	-41.2	R25	248	45.6
250	31	10,618	-49.6		249	51.5
200	30	12,050	-56.3		250	57.1
175	30	12,894	-58.2		250	55.0
150	30	13,861	-59.5		249	47.2
125	30	14,997	-61.3		245	40.6
100	30	16,374	-63.2		243	29.5
80	30	17,746	-63.4		235	13.8
70	30	18,566	-62.8		218	6.8
60	30	19,520	-60.5		136	2.7
50	30	20,666	-56.9		81	6.0
40	30	22,087	-54.4		80	8.4
30	30	23,945	-50.8		81	11.5
25	27	25,131	-48.9		83	10.5
20	27	26,607	-45.4		83	9.3
15	27	28,545	-41.0		83	4.7
10	20	31,323	-36.6		57	1.4
7	5	33,783	-31.7			
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* VANDENBERG AFB, CALIF.
1002 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	113	10.1	93	312	6.2
1000	31	129	9.9	93	320	6.8
950	31	561	10.9	68	341	12.0
900	31	1,007	12.2	39	353	13.6
850	31	1,485	11.1	30	353	13.2
800	31	1,988	8.2	30	342	12.0
750	31	2,511	4.8	29	326	12.2
700	31	3,077	1.4	26	319	13.0
650	31	3,665	- 1.7	24	313	16.1
600	31	4,303	- 5.7	26	311	17.7
550	31	4,970	-10.4	28	309	22.0
500	31	5,706	-15.3	28	304	24.5
450	31	6,485	-21.3	29	302	24.7
400	31	7,351	-27.8	30	298	27.0
350	31	8,295	-35.4	30	300	30.3
300	31	9,350	-43.4		300	32.4
250	31	10,555	-51.4		291	33.2
200	31	11,980	-58.0		287	36.3
175	31	12,820	-58.9		282	35.2
150	31	13,785	-59.4		276	30.5
125	31	14,925	-60.0		276	25.1
100	31	16,314	-61.3		275	18.6
80	31	17,698	-60.7		263	9.3
70	31	18,529	-60.0		238	4.7
60	31	19,493	-59.0		145	1.9
50	31	20,640	-57.4		94	4.7
40	30	22,054	-55.2		74	6.6
30	30	23,900	-52.5		78	9.1
25	30	25,083	-50.3		80	7.8
20	30	26,546	-48.0		72	8.4
15	27	28,454	-44.6		71	4.7
10	26	31,199	-39.1		338	1.9
7	14	33,647	-34.3		64	1.0
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* WAKE IS., PACIFIC AREA
1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	5	24.8	78	62	15.2
1000	31	144	23.6	77	68	18.5
950	31	589	19.7	82	76	21.6
900	31	1,056	16.5	82	79	19.6
850	31	1,542	13.9	76	79	16.9
800	31	2,053	12.7	48	78	15.3
750	31	2,594	11.3	32	79	15.3
700	31	3,169	9.2	25	77	16.5
650	31	3,778	6.1	21	77	14.8
600	31	4,431	2.7	19	73	13.8
550	31	5,127	- 1.5	19	76	13.2
500	31	5,884	- 6.5	20	72	12.2
450	31	6,693	-12.5	22	71	10.7
400	31	7,588	-19.1	25	62	11.8
350	31	8,566	-26.6	27	56	9.9
300	31	9,660	-35.3	25	54	4.9
250	31	10,903	-45.1		306	2.3
200	31	12,358	-55.6		281	11.3
175	31	13,198	-61.0		272	20.0
150	30	14,140	-66.9		274	20.6
125	27	15,224	-72.7		293	15.5
100	25	16,519	-77.0		347	10.7
80	23	17,806	-74.7		36	8.5
70	23	18,588	-70.9		54	9.1
60	21	19,512	-65.7		72	10.1
50	21	20,632	-60.9		85	15.0
40	20	22,033	-57.4		87	19.0
30	20	23,868	-53.2		87	28.2
25	18	25,048	-50.8		87	34.6
20	17	26,512	-48.3		88	37.5
15	16	28,423	-44.4		87	43.1
10	10	31,160	-39.1		88	48.8
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* WALLOPS IS. VA. NASA
1017 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	18	3	16.0	81	18	.8
1000	18	148	17.8	69	285	1.9
950	18	588	17.7	59	312	8.4
900	18	1,049	15.4	54	311	10.1
850	18	1,531	12.8	55	296	12.2
800	18	2,038	9.8	56	293	15.0
750	18	2,567	6.5	55	290	15.3
700	18	3,135	2.9	55	289	15.5
650	18	3,727	- .7	52	293	17.1
600	18	4,368	- 4.2	51	299	18.6
550	18	5,042	- 8.1	42	301	20.0
500	18	5,785	-12.7	40	300	21.2
450	18	6,575	-18.2	35	299	21.6
400	18	7,451	-24.2	35	301	23.9
350	18	8,411	-31.5	34	301	25.8
300	18	9,483	-40.0	32	303	29.7
250	18	10,704	-49.7		304	32.4
200	18	12,131	-59.6		311	34.6
175	18	12,958	-63.0		308	32.4
150	18	13,905	-62.9		304	26.6
125	18	15,028	-62.8		305	21.6
100	18	16,402	-62.8		315	18.5
80	18	17,778	-61.9		337	12.6
70	18	18,606	-60.1		344	9.9
60	18	19,571	-57.9		[illegible]	7.8
50	18	20,726	-55.4		42	6.0
40	18	22,157	-52.7		75	6.0
30	16	24,014	-50.9		73	6.4
25	16	25,203	-49.8		68	9.3
20	16	26,671	-47.2		85	10.7
15	15	28,595	-44.0		91	13.8
10	14	31,328	-39.5		99	12.0
7	13	33,802	-34.4		105	3.5
5	10	36,165	-28.9			

WASHINGTON, D. C.
1008 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	84	13.8	85	79	.2
1000	31	154	14.5	79	315	.8
950	31	592	15.5	62	301	7.0
900	31	1,047	13.9	58	299	11.7
850	31	1,528	11.4	56	297	14.8
800	31	2,032	8.5	56	291	15.9
750	31	2,561	5.4	54	284	17.5
700	31	3,124	2.3	50	281	18.5
650	31	3,715	- 1.3	52	279	19.0
600	31	4,353	- 4.8	47	282	20.8
550	31	5,026	- 8.9	45	282	22.3
500	31	5,765	-13.6	39	284	23.9
450	31	6,556	-19.2	36	285	23.5
400	31	7,424	-25.4	35	284	23.9
350	31	8,379	-32.7	32	286	27.8
300	31	9,446	-41.0	27	285	30.9
250	31	10,660	-50.5		286	33.6
200	31	12,082	-60.2		293	34.6
175	31	12,908	-62.8		295	32.4
150	31	13,859	-62.0		294	26.6
125	31	14,987	-61.7		295	22.3
100	31	16,370	-61.6		303	18.5
80	31	17,752	-61.0		331	11.1
70	31	18,583	-59.7		351	7.4
60	31	19,551	-57.9		7	6.0
50	31	20,708	-55.1		30	4.7
40	31	22,142	-52.4		71	5.1
30	30	24,011	-50.2		88	5.6
25	29	25,202	-48.6		86	6.2
20	28	26,675	-46.5		88	8.0
15	24	28,602	-42.8		92	11.1
10	18	31,379	-38.2		75	7.4
7	11	33,881	-34.3		99	6.2
5	7	36,243	-29.1			

WINNEMUCCA, NEV.
868 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,310	3.9	66	313	.8
1000	31	134				
950	31	563				
900	31	1,013				
850	31	1,479	8.1	45	340	2.3
800	31	1,977	5.4	45	347	6.2
750	31	2,501	1.7	49	336	6.6
700	31	3,054	- 2.4	52	330	6.8
650	31	3,636	- 6.8	53	316	7.6
600	31	4,258	-11.1	51	302	10.5
550	31	4,919	-15.0	43	291	10.5
500	31	5,636	-19.7	41	298	11.1
450	31	6,403	-25.2	36	304	11.1
400	31	7,256	-31.4	37	303	13.0
350	31	8,188	-38.2	R29	314	13.2
300	31	9,233	-44.9		311	17.3
250	31	10,435	-51.1		309	19.8
200	31	11,868	-55.8		293	20.0
175	31	12,717	-55.6		279	22.1
150	31	13,700	-55.6		271	18.1
125	31	14,858	-56.8		262	15.5
100	31	16,270	-57.0		255	13.0
80	31	17,682	-57.3		243	5.2
70	31	18,524	-57.4		218	2.7
60	31	19,498	-56.9		143	2.1
50	31	20,656	-55.6		116	3.1
40	30	22,088	-53.4		87	6.6
30	30	23,947	-51.7		88	8.7
25	27	25,138	-50.1		82	9.9
20	22	26,615	-47.8		76	11.1
15	10	28,528	-43.8			
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WINSLOW, ARIZ.
848 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,492	7.4	54	196	4.3
1000	31	110				
950	31	540				
900	31	998				
850	31	1,474				
800	31	1,979	10.5	35	229	8.9
750	31	2,512	6.8	36	236	10.7
700	31	3,076	2.5	37	230	14.0
650	31	3,665	- 1.8	36	229	17.3
600	31	4,302	- 6.3	32	228	20.8
550	31	4,969	-10.9	R30	235	22.9
500	31	5,703	-16.0	R26	238	27.4
450	31	6,479	-21.8	R27	244	29.5
400	31	7,345	-28.4	R28	241	32.4
350	31	8,288	-35.4	R24	245	36.5
300	31	9,344	-42.8	R22	247	40.4
250	31	10,554	-50.1		248	43.5
200	31	11,989	-56.4		250	44.5
175	31	12,833	-58.0		248	43.5
150	31	13,802	-58.8		247	39.6
125	31	14,943	-59.8		243	33.6
100	31	16,332	-61.3		241	21.8
80	31	17,715	-62.0		227	12.8
70	30	18,542	-61.8		223	8.0
60	30	19,497	-60.1		188	2.3
50	29	20,643	-56.9		78	5.1
40	29	22,063	-54.8		80	8.2
30	29	23,915	-51.7		82	10.3
25	27	25,101	-49.7		82	8.2
20	21	26,578	-46.4		83	9.5
15	14	28,511	-43.0		97	9.7
10						
7						
5						

YAKUTAT, ALASKA
1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	12	1.8	95	91	4.1
1000	31	119	2.9	86	101	4.5
950	31	532	1.0	81	135	9.7
900	31	967	- 1.7	81	143	11.5
850	31	1,420	- 4.1	74	149	8.7
800	31	1,896	- 6.5	68	161	8.0
750	31	2,396	- 9.2	62	169	7.4
700	31	2,930	-12.2	58	175	8.5
650	31	3,490	-15.7	58	182	9.5
600	31	4,093	-19.4	55	192	9.5
550	31	4,730	-23.4	54	200	8.7
500	31	5,427	-28.2	53	209	10.5
450	31	6,168	-33.4	49	215	12.2
400	31	6,994	-38.8	47	215	15.2
350	31	7,899	-44.8		220	15.3
300	31	8,919	-49.5		233	16.9
250	31	10,108	-50.7		253	16.7
200	31	11,565	-49.8		262	14.2
175	31	12,439	-49.1		256	13.4
150	31	13,451	-49.0		256	13.6
125	31	14,645	-49.7		255	10.1
100	31	16,103	-50.5		250	8.7
80	30	17,557	-50.5		279	5.4
70	30	18,426	-50.7		284	3.9
60	30	19,431	-50.6		273	2.3
50	30	20,620	-50.3		343	1.6
40	30	22,078	-49.6		38	2.9
30	30	23,966	-48.7		66	5.1
25	30	25,166	-47.9		66	6.2
20	29	26,645	-46.0		71	8.5
15	26	28,577	-42.9		79	9.5
10	10	31,321	-38.8			
7						
5						

+ YAP, CAROLINE IS.
1008 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	17	28.8	78	73	7.4
1000	31	86	27.7	74	76	9.1
950	31	538	23.3	77	86	14.2
900	31	1,010	20.2	69	90	15.0
850	31	1,503	17.9	60	93	14.0
800	31	2,020	15.3	54	92	12.8
750	31	2,569	12.7	48	93	12.4
700	31	3,142	9.5	46	95	12.2
650	31	3,753	6.2	45	101	10.3
600	31	4,406	2.8	43	99	9.9
550	31	5,103	- 1.1	40	98	8.4
500	31	5,861	- 5.2	35	94	8.0
450	31	6,683	-10.0	32	82	7.4
400	31	7,583	-15.5	27	74	6.4
350	31	8,576	-22.5	25	76	3.9
300	31	9,687	-30.8	23	309	2.9
250	31	10,953	-40.9	24	336	2.1
200	31	12,429	-53.1		4	4.5
175	31	13,274	-60.2		10	7.4
150	31	14,216	-67.7		14	8.5
125	31	15,292	-74.8		28	11.5
100	31	16,567	-80.3		56	12.2
80	31	17,830	-77.7		75	9.5
70	31	18,601	-73.6		71	6.2
60	29	19,513	-67.8		64	6.0
50	28	20,623	-63.2		91	11.5
40	28	22,008	-59.6		95	19.6
30	26	23,823	-55.5		89	40.6
25	25	24,991	-52.4		89	50.9
20	20	26,449	-47.6		92	56.1
15	10	28,334	-44.6			
10						
7						
5						

YUCCA FLAT, NEV.
877 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	29	1,196	9.0	47	307	2.9
1000	29	91				
950	29	521				
900	29	980				
850	29	1,459	11.6	35	323	4.7
800	29	1,963	8.3	36	313	2.9
750	29	2,489	4.7	39	314	4.9
700	29	3,051	.6	42	312	6.4
650	29	3,636	- 3.9	45	308	5.4
600	29	4,268	- 8.8	45	270	8.0
550	29	4,929	-13.4	40	269	15.5
500	29	5,655	-18.5	36	264	18.1
450	29	6,424	-24.1	R34	267	18.5
400	29	7,282	-30.5	R29	271	22.1
350	29	8,217	-37.3	R27	272	24.9
300	29	9,265	-44.5		272	28.9
250	29	10,469	-50.3		270	30.3
200	29	11,909	-54.6		267	31.3
175	29	12,760	-56.1		266	29.5
150	29	13,738	-56.9		257	23.7
125	29	14,888	-58.5		251	24.3
100	29	16,289	-59.4		244	16.3
80	29	17,687	-59.2		237	8.4
70	29	18,523	-59.4		233	4.5
60	29	19,489	-58.7		110	1.0
50	29	20,639	-56.8		93	2.3
40	28	22,058	-54.6		96	3.5
30	28	23,909	-52.2		83	6.8
25	28	25,093	-50.5		81	6.2
20	28	26,557	-47.9		77	6.8
15	28	28,467	-45.0		74	6.6
10	19	31,213	-40.4		314	1.9

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes "Number of observations" refers to those of dynamic height only Although the number of temperature observations at any given pressure surface is usually the same as fpr height, it is possible for temperature to be missing for one or more pressure surfaces of some observations Relative humidity averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind Relative humidity data are not published for standard pressure surfaces for which less than 5 observations are available

Relative humidity data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from lithium chloride hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature in degrees Celsius, relative humidity in percent, and resultant winds in degrees and knots

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. They were also equipped with carbon hygristors. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes

+ Observations for these stations are scheduled at 0000 G. C T

R More than half of the observations are from statistical values

1/ began May 29, 1965

2/ began May 16, 1965

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun.

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
ALBUQUERQUE, N. MEX.									
	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
May									
1-----	0.73	0.92	0.96	1.14	1.37	----	----	----	----
2-----	.84	.93	1.05	(1.19)	(1.38)	----	----	----	----
3-----	----	----	----	(1.18)	(1.38)	(.95)	----	----	----
4-----	----	----	----	----	----	----	(0.79)	(0.56)	----
5-----	.66	.76	.90	M	M	1.16	.95	.78	0.65
6-----	.78	.89	1.05	1.22	1.43	D(1.12)	D (.96)	D (.82)	D (.72)
7-----	.80	.92	1.08	----	1.38	----	----	----	----
8-----	.87	.95	1.10	1.24	1.43	1.25	1.06	.93	.81
9-----	.84	.95	1.09	1.26	1.42	----	----	----	----
10----	D (.48)	D (.59)	D (.78)	D (.98)	D(1.21)	(1.10)	(.90)	----	----
11----	.68	.80	.93	1.11	----	----	----	----	----
13----	----	.94	1.07	1.21	----	----	----	----	----
16----	.63	.76	.89	1.10	1.34	----	----	----	----
17----	.97	.88	1.02	1.21	1.45	1.17	----	.72	.59
18----	.84	.94	1.06	1.20	1.36	1.16	.85	----	----
19----	.46	.57	.74	.97	1.29	----	----	----	----
20----	(.47)	(.48)	(.87)	(.97)	1.31	1.13	.73	(.54)	.49
21----	.90	1.00	1.14	1.29	1.48	----	----	----	----
22----	----	----	----	(1.13)	----	----	----	----	----
23----	.64	.77	.99	----	----	(.38)	(.48)	(.32)	(.27)
24----	.63	.72	.87	1.05	----	----	D (.83)	D (.80)	D (.74)
25----	----	----	----	1.09	1.32	1.12	1.01	----	----
26----	----	----	----	1.20	----	1.22	1.06	----	----
27----	.88	.98	1.11	1.26	1.44	----	.88	.68	.57
28----	.72	.81	.94	1.09	1.40	1.14	.78	.58	.46
29----	.67	.77	.95	1.06	1.37	----	.67	.45	(.19)
30----	----	.44	.70	1.02	----	----	----	----	----
31----	.61	.75	.82	1.11	1.35	1.04	----	----	----
Averages	0.74	0.83	0.97	1.15	1.38	1.15	0.89	0.69	0.60
OMAHA, NEBR.									
	Air mass								
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
May									
2-----	HS0.70	HS0.81	HS0.92	HS1.08	----	----	----	----	----
9-----	HS .78	HS .86	HS1.02	HS1.20	HS1.39	HS1.15	----	----	----
10----	HS .78	HS .85	HS1.00	HS1.15	HS1.46	----	----	----	----
12----	HS .61	HS .76	HS .91	HS1.09	HS1.28	----	----	----	----
13----	----	----	HS .79	HS1.01	----	----	----	----	----
17----	HS .69	HS .78	HS .88	HS1.06	HS1.28	----	----	----	----
19----	.68	H .74	----	----	----	----	----	----	----
28----	HS .76	HS .85	HS1.00	HS1.18	HS1.40	HS1.18	HS0.93	HS0.78	HS0.64
30----	----	----	----	HM1.11	HM1.24	HM .89	HM .63	HM .50	----
Averages	0.71	0.81	0.93	1.11	1.34	1.07	0.78	0.64	0.64
GUAM, M. I.									
	Air mass								
	4.92	3.93	2.95	1.97	*	1.97	2.95	3.93	4.92
May									
18----	----	S 0.78	----	----	----	----	----	----	----

Date	Sun's zenith distance								
	A M				*	P M.			
	78.7°	75.7°	70.7°	60 0°		60 0°	70.7°	75 7°	78.7°
MADISON, WIS.									
	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
May									
10----	S 0.78	S 0.93	S 1.09	S 1.30	----	----	----	----	----
29----	----	S .84	S 1.00	S 1.24	----	----	----	----	----
Averages	0.78	0.89	1.05	1.27	----	----	----	----	----
BLUE HILL OBS., MASS.									
	Air mass								
	4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
May									
1-----	0.67	0.79	0.96	1.11	1.37	----	0.89	0.75	0.65
2-----	.70	.79	.94	1.08	1.28	1.01	.77	.62	.53
3-----	.58	.72	.89	----	----	----	----	----	----
5-----	----	----	.89	1.13	----	1.11	.87	.72	.60
6-----	.79	.89	1.01	1.18	1.35	1.11	.94	.82	.70
12----	----	----	.96	1.11	1.33	.96	.79	.62	.55
14----	----	----	.91	1.11	1.33	1.11	.91	.77	.65
15----	.75	.87	.96	1.13	1.35	.96	.79	.62	.55
21----	----	----	----	1.20	1.45	1.08	.89	.70	.60
24----	----	----	----	1.18	1.35	----	----	----	----
30----	----	----	----	1.08	1.35	----	----	----	----
31----	.62	.75	.89	1.05	----	----	----	----	----
Averages	0.69	0.80	0.93	1.12	1.35	1.05	0.86	0.70	0.60
TUCSON, ARIZ.									
	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
May									
3-----	0.83	0.96	----	----	----	----	----	----	----
6-----	.76	.87	.99	----	----	----	----	----	0.64
7-----	.79	.83	1.00	----	----	----	----	----	----
8-----	.81	.89	1.02	----	----	----	----	----	----
9-----	.79	.89	1.01	----	----	----	----	0.74	.63
10----	.74	.84	.97	----	----	----	----	----	----
12----				Recorder inoperative					
13----	.64	.74	----	----	----	----	----	----	----
14----	.67	.77	----	----	----	----	----	----	----
15----	.66	.77	.92	----	----	----	----	.69	----
16----	.47	.58	.75	----	----	----	----	----	----
17----				Recorder inoperative					
18----	.73	.82	.96	----	----	----	----	----	----
19----	.73	----	----	----	----	----	----	----	----
20----	.79	.89	----	----	----	----	----	.92	.83
23----	.80	.88	1.01	----	----	----	----	----	----
24----	.76	.87	----	----	----	----	----	----	----
25----	.53	.64	.80	----	----	----	----	----	----
26----	----	.96	1.06	----	----	----	----	----	----
27----	----	----	----	----	----	----	----	.82	.70
28----	.79	.89	1.01	----	----	----	----	----	----
30----	.70	.78	.92	----	----	----	----	----	.46
31----	.61	.77	.94	----	----	----	----	----	----
Averages	0.71	0.82	0.95	----	----	----	----	0.79	0.65

H	Haze	D	Dust
HS	Slight haze	M	Missing
HM	Moderate haze	S	Slight haze - indeterminable
( )	Clouds present	*	Values corresponding to true solar noon

Langley is the unit used to denote one gram calorie per square centimeter An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol 8, No 2, page 63, of this publication

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

MAY 1965

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
	Day of month																															
ALBUQUERQUE N.M.	697	702	721	---	737	733	718	765	758	718	557	435	468	600	706	696	734	723	698	649	721	487	726	643	751	674	782	720	694	419	731	672
AMES IOWA	481	560	317	320	243	328	288	282	597	516	501	598	519	281	226	129	599	552	604	367	361	105	374	429	380	249	318	614	264	432	512	398
ANNETTE ALASKA	380	74	---	437	561	135	---	---	73	630	139	474	374	400	139	251	579	718	700	673	504	521	655	491	428	741	348	382	688	710	222	444
APALACHICOLA FLORIDA	697	691	583	685	684	682	627	653	663	674	623	658	713	690	699	668	687	664	674	517	579	610	625	662	573	686	633	---	---	---	---	652
ARGONNE NAT. LAB.	603	644	565	368	339	314	548	469	506	669	528	656	688	622	501	165	565	412	642	676	582	671	549	514	338	206	598	493	457	633	518	518
ASTORIA OREGON	315	373	215	518	399	638	639	597	566	680	447	388	572	495	138	567	663	639	233	386	406	99	268	442	543	647	354	572	422	456	581	460
ATLANTA GEORGIA	723	733	720	697	648	626	598	576	565	616	553	648	755	735	605	620	548	482	680	422	402	543	531	579	499	601	441	720	759	769	725	617
BARROW ALASKA	528	540	413	481	549	592	469	489	478	558	569	665	647	653	548	622	436	414	575	425	488	609	461	584	477	445	713	420	450	352	433	519
BETHEL ALASKA	379	525	448	569	482	434	580	643	551	638	526	628	575	483	310	251	215	139	279	348	399	189	434	461	322	272	306	172	141	392	361	402
BISMARCK N.DAK.	595	84	440	602	221	627	651	216	103	681	648	667	648	111	642	568	474	714	647	580	702	353	61	221	259	247	240*	629	729	613	551	469*
BLUE HILL MASS.	703	685	547	447	713	707	314	585	594	466	394	712	452	740	719	567	164	104	144	579	778	505	532	747	631	600	552	517	185	720	687	542
BOISE IDAHO	365	497	705	416	555	440	291	650	657	714	717	709	620	710	617	589	754	666	449	654	409	166	137	583	740	762	749	734	533	744	506	575
BOSTON MASSACHUSETTS	672	673	532	396	675	688	339	547	572	445	406	677	421	718	682	559	195	71	131	514	744	454	551	711	620	594	556	521	213	653	661	522
BROWNSVILLE TEXAS	503	506	539	532	611	515	513	403	624	536	571	572	561	443	433	457	124	227	260	512	718	674	682	673	619	697	669	725	454	744	746	543
BURLINGTON VERMONT	178	264	391	462	244	580	488	416	281	487	540	188	219	233	224	108	17	142	535	688	735	259	518	725	584	560	338	689	311	494	459	399
CAPE HATTERAS N.C.	658	672	675	694	645	335	620	450	535	668	574	523	669	720	716	634	409	649	449	690	636	347	668	371	602	666	659	405	275	553	713	577
CARIBOU MAINE	562	712	409	676	612	544	548	368	192	675	57	550	128	717	708	341	69	99	157	317	726	---	747	626	282	666	85	579	317	478	314	442
CHARLESTON S.C.	691	697	711	689	642	638	568	620	677	659	549	695	722	679	615	701	676	658	581	636	397	596	523	560	349	564	511	562	498	413	583	602
CLEVELAND OHIO	352	589	621	452	354	330	604	584	599	346	528	495	711	636	623	418	86	684	625	642	537	599	206	370	407	439	560	524	158	557	656	493
COLUMBIA MISSOURI	675	673	476	524	442	540	485	490	472	690	426	698	668	505	478	349	648	494	495	634	577	642	561	445	631	160	694	714	620	733	644	557
DAVIS CALIFORNIA	654	643	647	638	658	663	659	622	668	660	657	650	644	659	647	656	661	618	340	477	481	657	705	702	698	671	670	679	605	678	584	634
DODGE CITY KANSAS	624	573	598	449	644	652	352	643	673	306	648	603	163	655	562	659	630	342	340	533	641	376	351	421	273	518	410	677	672	543	467	516
E. LANSING MICHIGAN	419	490	608	374	408	317	632	595	470	477	446	655	721	680	301	501	273	633	726	725	695	544	161	495	508	376	684	358	441	707	566	516
EL CENTRO CALIF. NPF	620	590*	590*	600	621	618	621	611	610	584	591	459	610	613	607	615	606	637	612	598*	598*	645	626	630*	630*	630*	630*	630*	630*	630*	630*	610*
EL PASO TEXAS	758	738	699	576	802	800	764	823	823	809	684	422	700	798	728	373	777	742	741	785	792	613	778	846	827	842	826	774	770	682	816	739
ELY NEVADA	680	663	608	696	489	482	701	418	564	357	700	465	580	524	762	717	694	622	505	653	508	551	335	206	452	618	793	764	583	678	688	583
EPPLEY,NEWPORT R.I.	641	630	311	514	634	653	300	541	506	479	321	674	493	689	665	635	226	314	432	537	713	254	515	714	638	509	574	500	181	707	660	521
FAIRBANKS ALASKA	276	362	362	359	412	446	538	545	343	567	485	505	468	504	626	528	656	520	582	678	596	605	423	659	253	689	699	608	656	460	235	505
FORT WORTH TEXAS	748	---	460	221	148	312	419	208	204	44*	469	96	546	214	573	75	522	225	585	604	738	472	406	391	544*	427	688	354	736	673	433	418*
FRESNO CALIFORNIA	733	600	712	678	738	653	723	699	699	700	683	716	695	693	699	705	725*	666	584	621	497	562	721	751	729	726	713	717	676	702	683	684*
GAINESVILLE FLORIDA	571	613	568	586	609	605	560	515	638	460	491	529	598	561	558	588	552	561	---	---	540	543	547	532	475	464	507	453	528	552	583	548
GLASGOW MONTANA	286	611	504	700	117	46	182	574	644	711	653	720	711	631	665	597	523	747	698	647	682	139	77	219	167	364	726	636	741	565	725	516
GRAND JUNCTION COLO.	605	655	633	465	337	602	622	378	677	444	747	533	---	316	---	743	742	729	592	---	703	721	650	341	222	467	710	788	774	664	599	588
GREAT FALLS MONTANA	192	518	630	383	362	105	297	484	656	619	628	609	563	312	506	616	580	570	502	522	490	139	86	256	327	441	450	585	503	668	671	460
GREENSBORO N.C.	700	668	670	649	607	545	494	421	548	612	575	490	697	716	653	633	421	595	648	542	402	641	532	566	374	519	401	683	595	553	511	570
GRIFFIN EXP.STA.GA.	811	803	794	796	708	642	668	686	559	690	632	686	803	790	631	638	693	624	721	431	488	657	595	629	569	720	552	626	785	839	814	680
INDIANAPOLIS INDIANA	729	747	737	702	441	300	664	624	360	384	730	731	731	705	458	552	743	425	721	610	712	682	661	570	419	475	783	522	707	613	786	614
INYOKERN CALIFORNIA	---	901	691	862	881	891	898	884	798	806	823	891	848	778	875	878	875	781	795	754	855	904	681	899	908	891	894	896	767	867	846	844
ITHACA NEW YORK	546	591	561	259	624	572	13	473	454	489	405	638	623	654	638	365	125	640	319	674	629	235	401	672	441	486	353	560	61	540	495	469
LAKE CHARLES LA.	694	446	457	631	628	667	609	552	476	527	358	550	370	621	329	457	298	525	169	54	515	308	442	498	653	549	650	321	573	639	610	490
LAKELAND FLORIDA	712	690	615	683	615	666	632	631	696	548	689	562	639	598	701	704	686	590	611	580	573	637	564	485	571	625	---	---	---	---	---	627
LANDER WYOMING	590	113	472	718	413	754	295	496	681	626	747	737	125	170	715	625	775	767	593	448	271	297	438	398	320	251	720	711	760	483	574	519
LARAMIE WYOMING	606	598	558	429	626	551	345	437	597	678	522	627	226	113	471	633	568	607	542	418	533	436	372	354	217	441	713	541	691	589	505	501
LAS VEGAS NEVADA	735	770	611	---	748	768	559	721	750	773	742	420	705	405	754	740	---	727	672	660	587	751	416	295	741	776	764	773	679	761	762	675
LITTLE ROCK ARKANSAS	722	725	587	510	588	402	644	569	338	243	461	684	580	933	559	447	222	455	264	586	576	560	489	602	504	394	714	373	713	732	631	542
LOS ANGELES CALIF.U	529	523	642	599	621	566	713	670	684	620	584	138	186	492	669	652	634	534	513	587	628	584	434	188	527	510	681	651	603	460	151	535
LOS ANGELES CALIF.	542	646	669	639	647	662	723	679	683	653	519	289	490	625	690	687	654	519	552	587	670	605	576	317	632	573	636	637	494	453	289	582
MANHATTAN KANSAS	601	579	224	479	371	580	173	221	607	588	536	619	349	414	536	643	615	198	389	514	223	437	470	201	444	386	556	653	576	337	318	446
MATANUSKA ALASKA	93	433	246	471	160	242	376	602	469	639	431	566	---	457	682	650	638	649	469	300	93	196	276	368	307	341	235	353	---	116	172	380
MAUNA LOA OB.HAWAII	331	488	216	181	346	199	356	313	298	381	513	569	686	722	---	597	730	823	828	832	626	664	780	629	540	660	754	692	771	635	---	557
MEDFORD OREGON	546	701	566	466	446	428	627	656	684	690	697	676	606	748	643	508	684	711	473	571	97	211	776	725	754	748	719	728	731	782	764	618
MIAMI FLORIDA	486	371	346	---	419	440	493*	477*	456*	389*	485*	393	364	462	459	470	448	457	465	551	523	489	352	427	335	564	412	415	432	364	263	434*
MIDLAND TEXAS	662	599	555	---	---	---	587	679	606	231	213	130	---	---	---	---	---	---	---	---	---	---	---	---	---	---	729	367	556	480	704	---
NASHVILLE TENNESSEE	754	760	751	487	666	550	644	642	622	370	170	752	778	756	587	223	277	509	592	387	546	507	530	707	628	710	418	463	826	732	672	581
NEW YORK N.Y.U	634	594	587	580	483	636	105	268	480	509	553	687	623	751	675	617	455	585	604	593	719	457	624	691	526	542	507	651	278	659	663	559

Note. --Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

MAY 1965

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
NORTH OMAHA NEBRASKA	684	683	450	404	408	582	490	356	771	623	493	746	628	440	443	657	737	473	637	---	281	81	584	279	470	615	687	825	701	776	620	554
OAK RIDGE TENNESSEE	573	585	583	561	445	541	514	496	498	446	234	523	591	576	---	466	206	217	397	343	461	336	288	579	492	486	215	431	583	591	600	462
OKLAHOMA CITY OKLA.	579	564	431	260	208	468	194	178	231	289	586	376	348	506	501	469	561	428	442	556	578	501	271	246	389	423	533	441	638	626	225	421
PAGE ARIZONA	544	555	529	356	534	544	363	553	550	---	506	175	175	342	551	556	544	540	521	500	496	583	557	128	325	500	583	588	579	585	579	481
PHOENIX ARIZONA	645	652	643	644	661	659	644	683	679	673	671	126	640	621	650	656	654	654	637	668	616	681	672	483	676	665	678	660	652	670	691	636
PORTLAND MAINE	680	681	588	478	705	695	569	557	427	385	391	682	331	710	709	447	175	144	104	539	740	574	470	712	587	552	399	577	311	578	499	516
PROSSER WASHINGTON	659	713	563	678	605	681	656	710	671	683	702	694	681	724	235	623	700	628	310	716	613	391	403	632	713	732	727	685	695	793	736	637
PULLMAN WASHINGTON	591	581	575	396	568	564	650	565	662	627	664	682	631	691	395	396	742	549	442	615	490	412	275	347	672	679	703	686	344	714	---	564
RAPID CITY S.DAK.	471	191	512	572	434	636	598	64	---	568	665	659	345	35	555	623	646	648	572	434	286	123	239	166	579	390	560	613	661	650	499	467
SAINT CLOUD MINN.	469	515	588	484	131	258	429	468	571	113*	693*	662*	677	187	243	325	343	725	701	201	620	352	113	337	713	355	241	568	657	475	351	438*
SALT LAKE CITY UTAH	662	747	748	205	112	814	283	352	614	782	774	768	332	512	776	778	739	719	562	570	413	681	628	421	561	709	819	809	806	659	600	644
SAN ANTONIO TEXAS	640	420	244	230	197	198	342	231	269	269	206	449	363	264	370	85	236	316	493	593	642	513	571	259	547	294	395	340	268	169	398	349
SANTA MARIA CALIF.	608	681	640	595	687	700	705	660	642	655	476	552	547	686	680	687	700	494	604	505	631	637	652	686	667	557	650	640	627	376	398	614
SAULT STE MARIE MICH	647	558	220	637	686	234	279	621	280	533	563	731	674	622	180	81	756	436	767	715	322	772	705	569	476	434	169	426	780	323	757	515
SEATTLE WASH. UNIV.	361	310	152	230	567	426	659	654	593	538	622	444	510	429	129	683	599	643	203	563	569	146	223	436	470	543	617	444	191	413	386	444
SEATTLE TACOMA WASH.	452	329	168	543	552	519	708	691	574	511	669	540	543	516	161	575	502	663	200	643	623	216	225	487	504*	529	650	457	491	575	384	490*
SPOKANE WASHINGTON	645	667	503	669	637	737	765	688	734	647	756	724	688	775	279	649	812	---	---	428	635	515	275	417	736	703	777	777	634	549	673	638
STATE COLLEGE PENN.	407	599	648	638	108	445	41	279	563	391	628	535	753	753	738	460	303	772	626	665	249	347	508	453	563	544	554	733	572	432	557	512
STERLING VIRGINA	426	480	625	614	335	383	90	220	410	508	508	383	672	689	669	523	530	704	651	489	194	566	580	325	470	544	601	569	551	639	681	504
STILLWATER OKLAHOMA	680	644	499	419	247	609	267	173	370	391	677	598	351	579	629	626	585	---	572	632	662	618	423	284	---	403	676	563	689	677	290	512
SWAN ISLAND W.I.	422	586	---	526	554	514	724	714	691	393	749	736	735	696	741	696	703	673	652	655	650	166	408	392	303	409	662	771	760	750	779	607
TAMPA FLORIDA	729	717	638	689	621	672	592	546	718	534	---	---	678	652	736	743	739	---	471	273	704	582	542	421	506	654	559	621	664	534	669	614
TUCSON ARIZONA	683	689	687	709	712	715	722	734	717	709	528	183	674	683	712	583	700	694	707	641	500	737	716	736	719	734	727	593	557	724	732	666
WAKE ISLAND,PACIFIC	532	370	516	535	483	576	550	494	532	493	412	533	507	561	534	500	559	560	497	388	449	556	568	324	549	530	584	552	567	462	562	511

Note. --Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (midnight to midnight) at Huntley, Mont.

MAY 1965

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	359	154	277	381	180	-44	34	115	302	362	367	370	340	283	393	306	362	376	394	189	62	101	69	51	252	198	207	294	395	328	303	250

The measurement is made with a Beckman and Whitley net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Huntley Exp. Station. The instrument with which they were measured has not been checked by the Weather Bureau.

TOTAL OZONE DATA

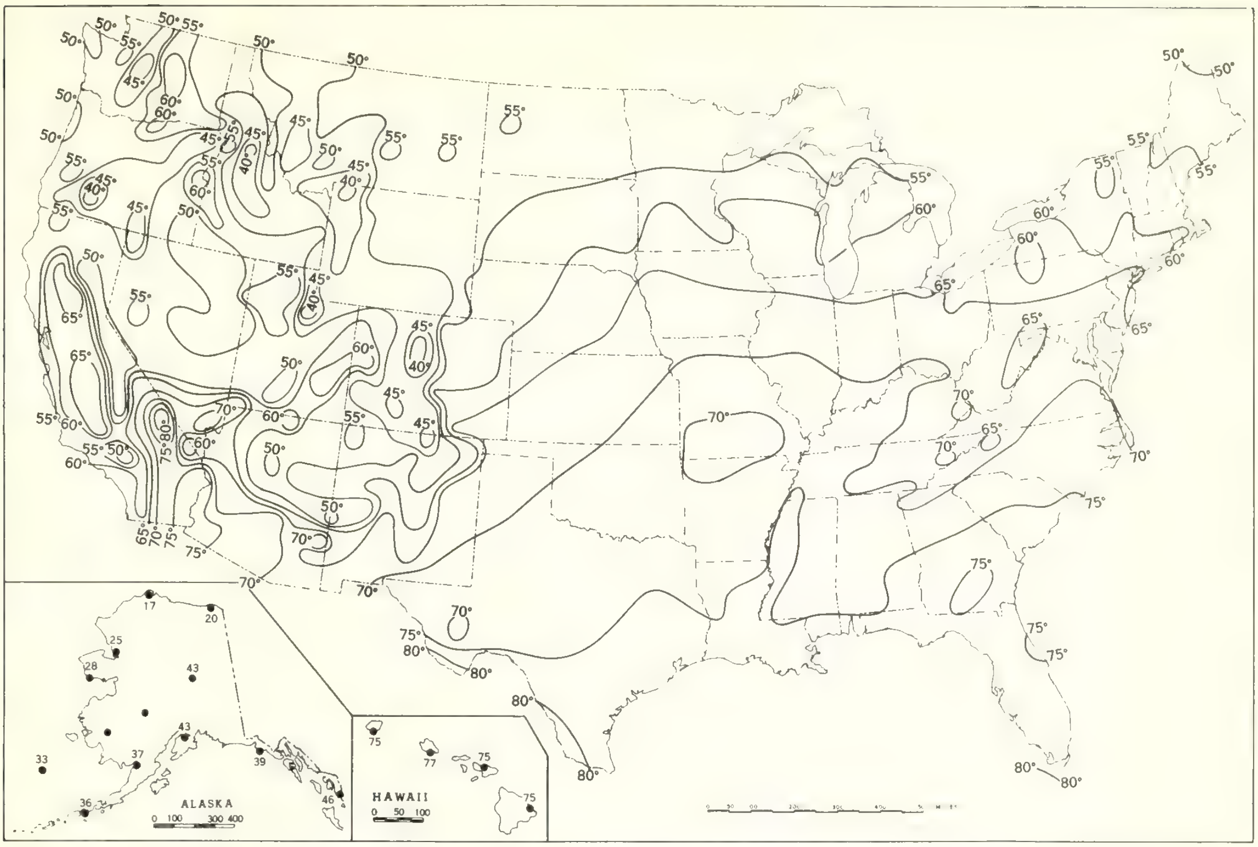
These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λ s Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

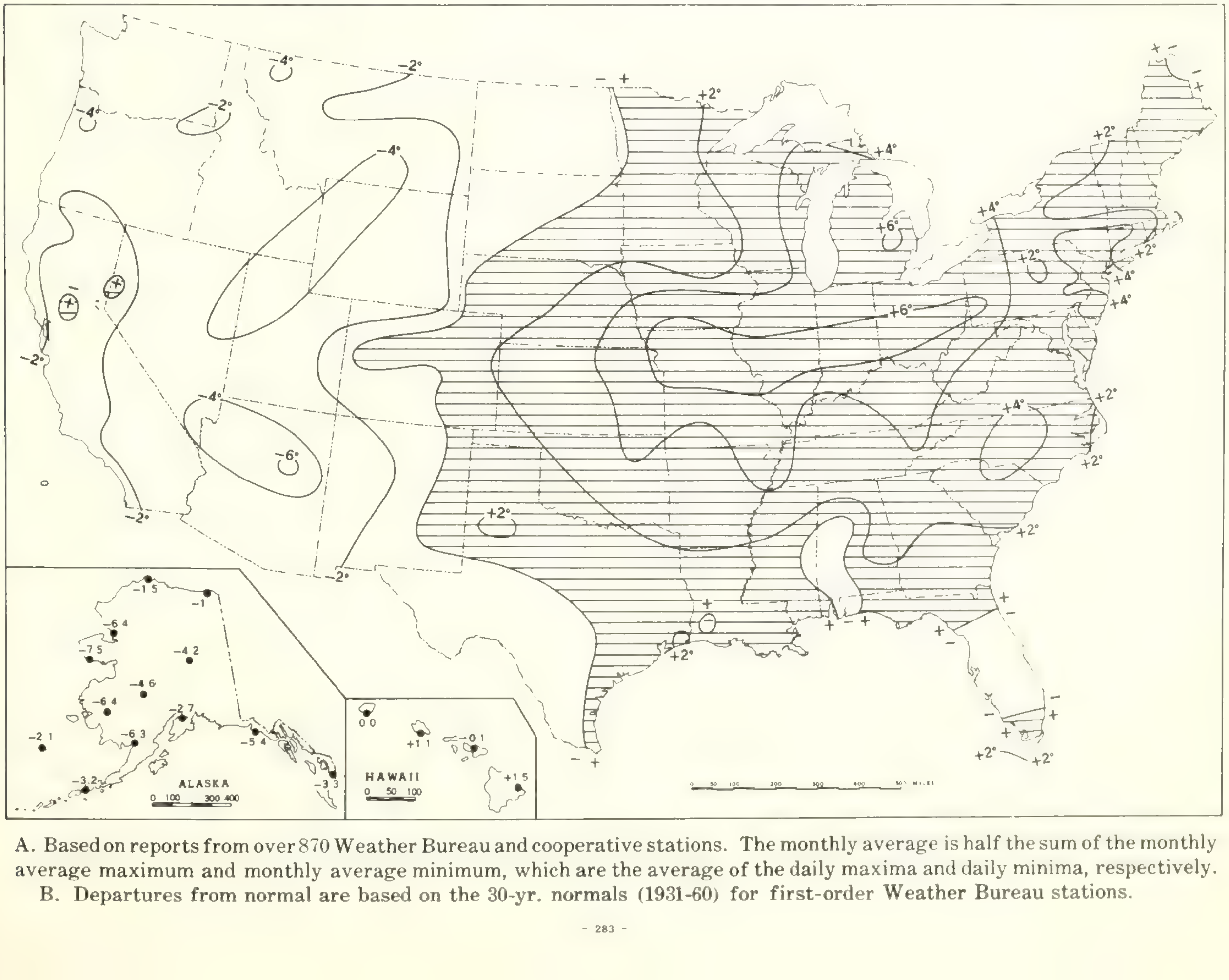
Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3
															Data will be delayed																	

The spectrophotometer measures the total amount of ozone in the atmosphere, i. e., the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e. g., 350 milli-atmo-cm ozone implies an ozone layer 0.350 centimeter thick. The code λ s designates the type of measurement made.

Chart I. A. Average Temperature (°F.) at Surface, May 1965.



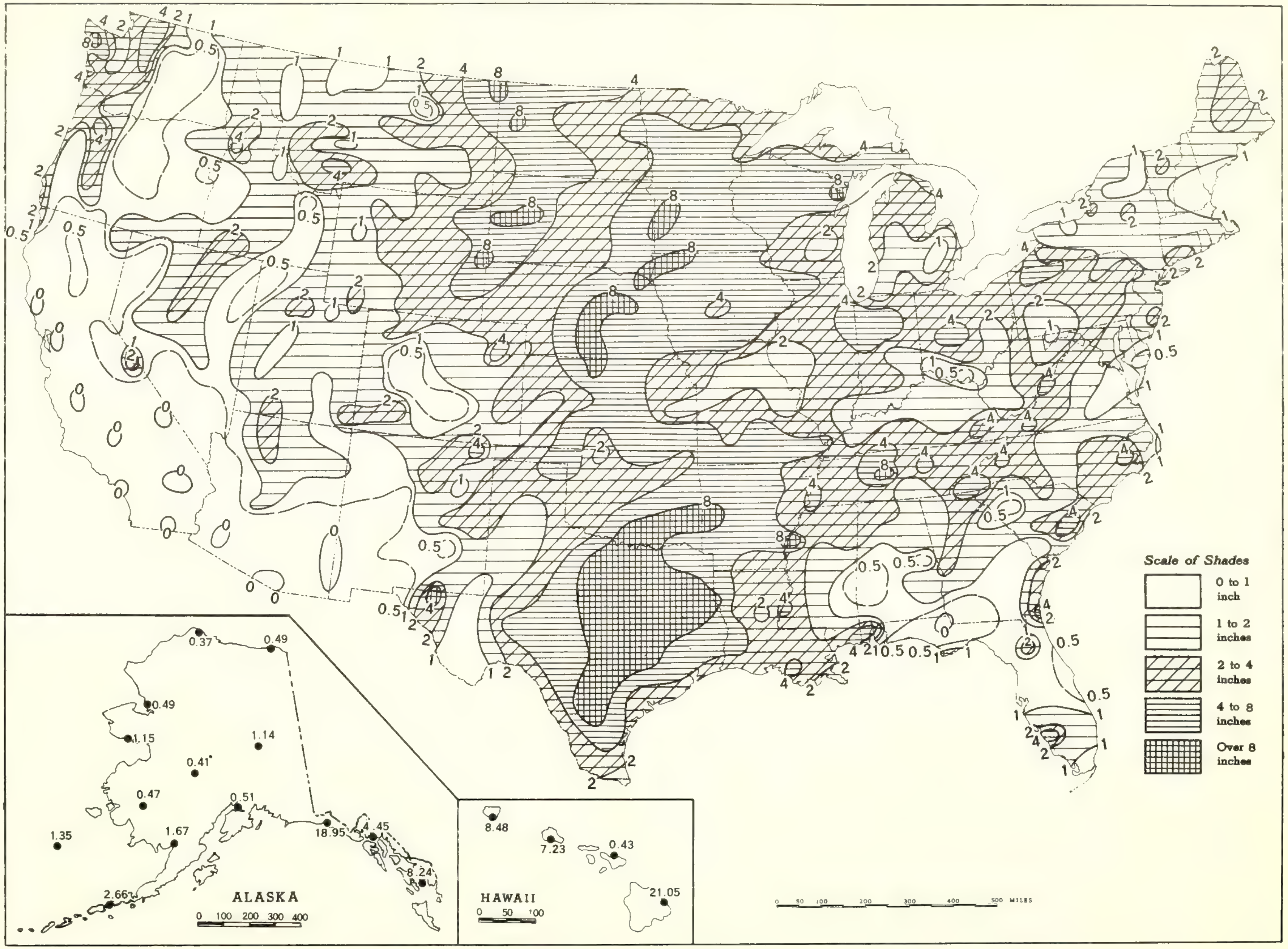
B. Departure of Average Temperature from Normal (°F.), May 1965.



A. Based on reports from over 870 Weather Bureau and cooperative stations. The monthly average is half the sum of the monthly average maximum and monthly average minimum, which are the average of the daily maxima and daily minima, respectively.

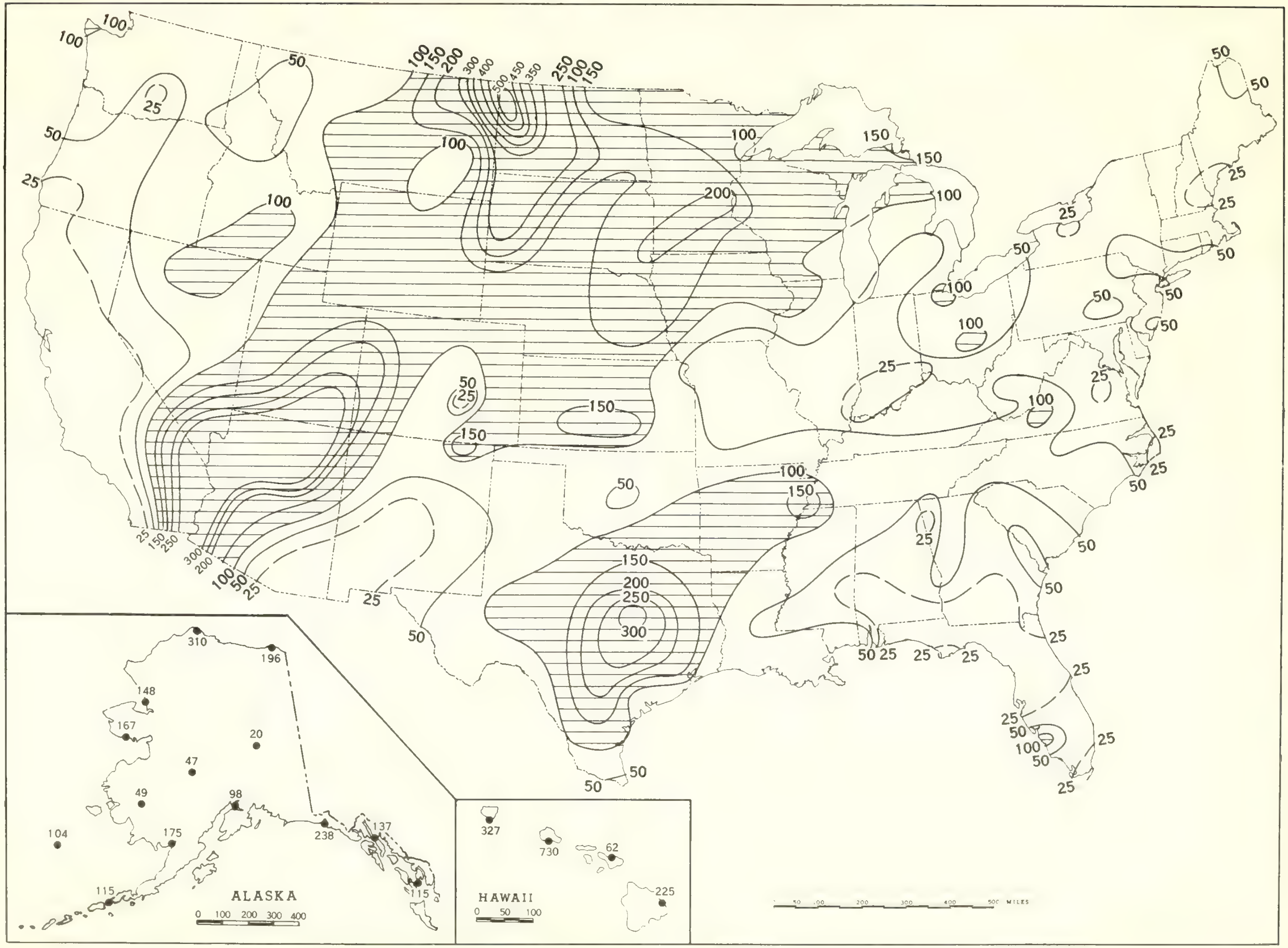
B. Departures from normal are based on the 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart II. Total Precipitation (Inches), May 1965.



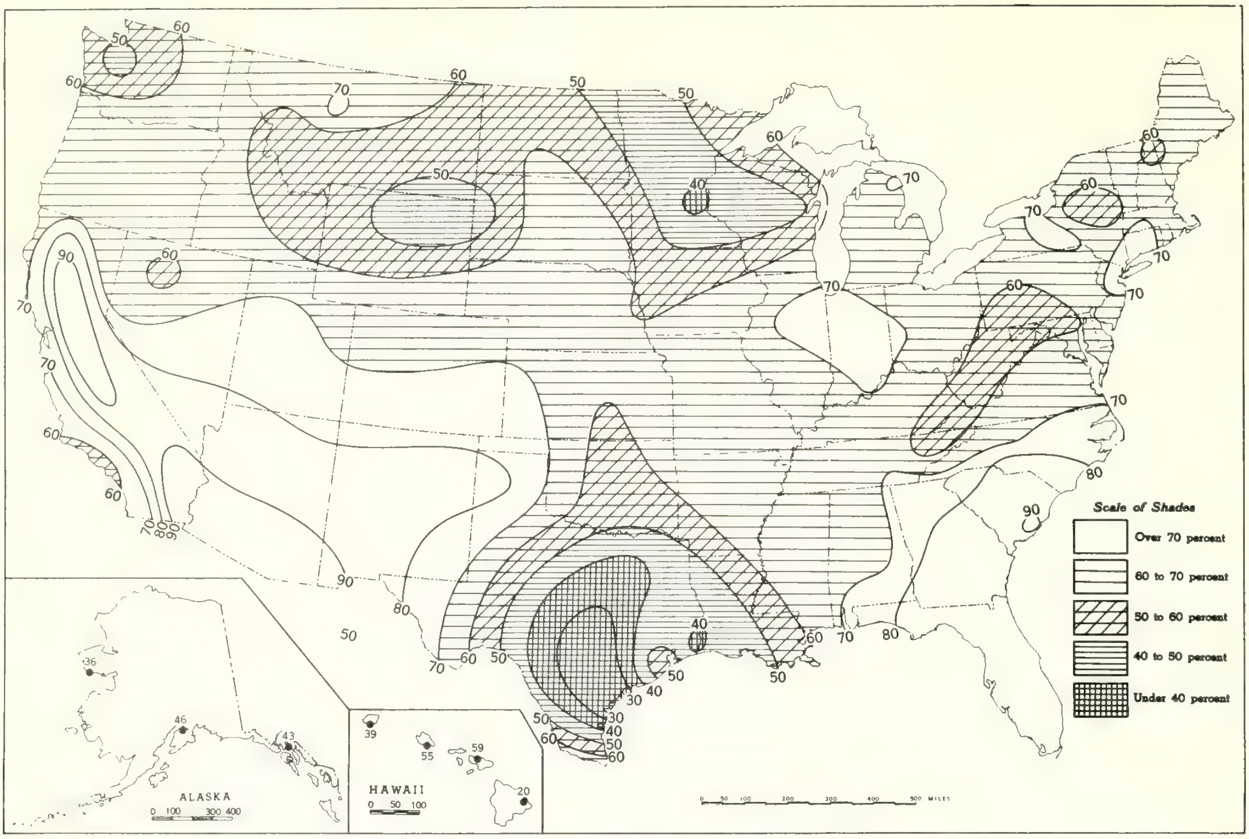
Based on daily precipitation records at about 870 Weather Bureau and cooperative stations.

Chart III. Percentage of Normal Precipitation, May 1965.

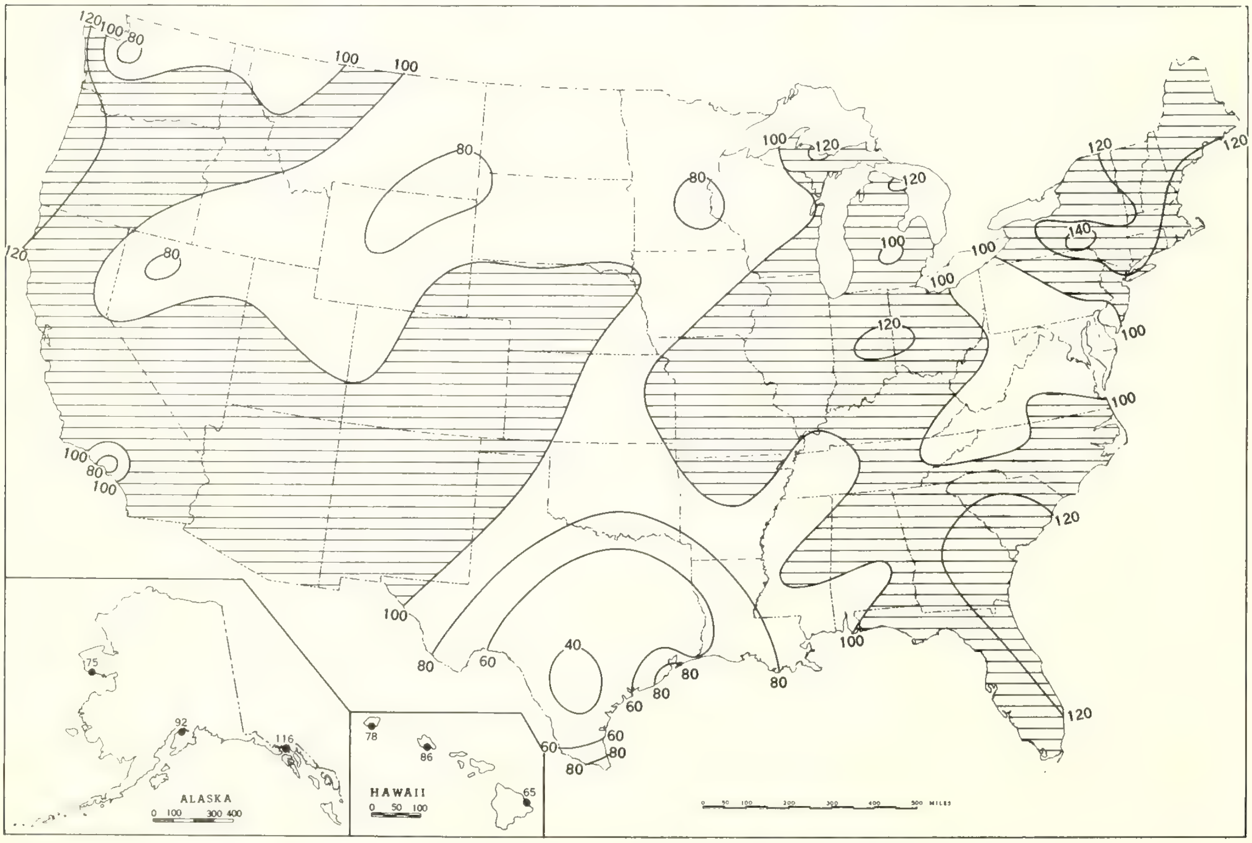


Normal monthly precipitation amounts are computed from 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart VI. A. Percentage of Possible Sunshine, May 1965.

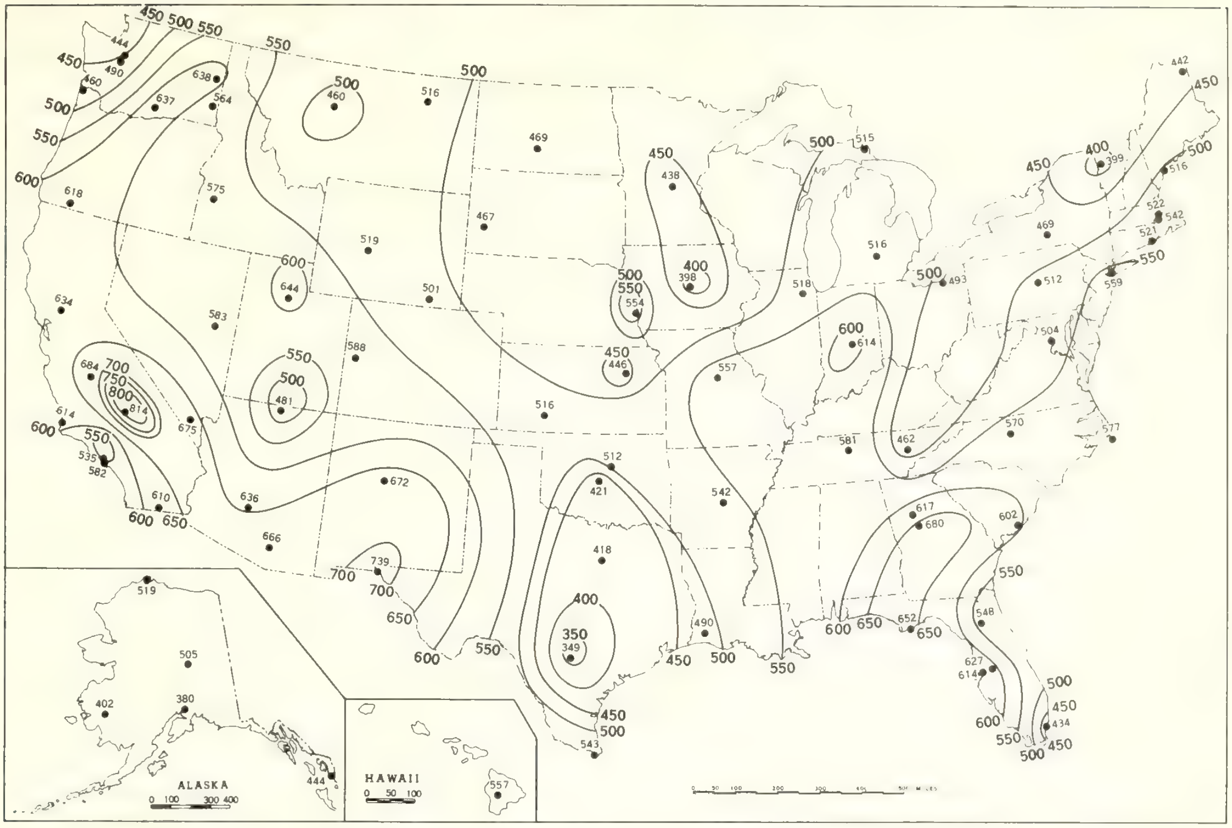


B. Percentage of Mean Monthly Sunshine, May 1965.

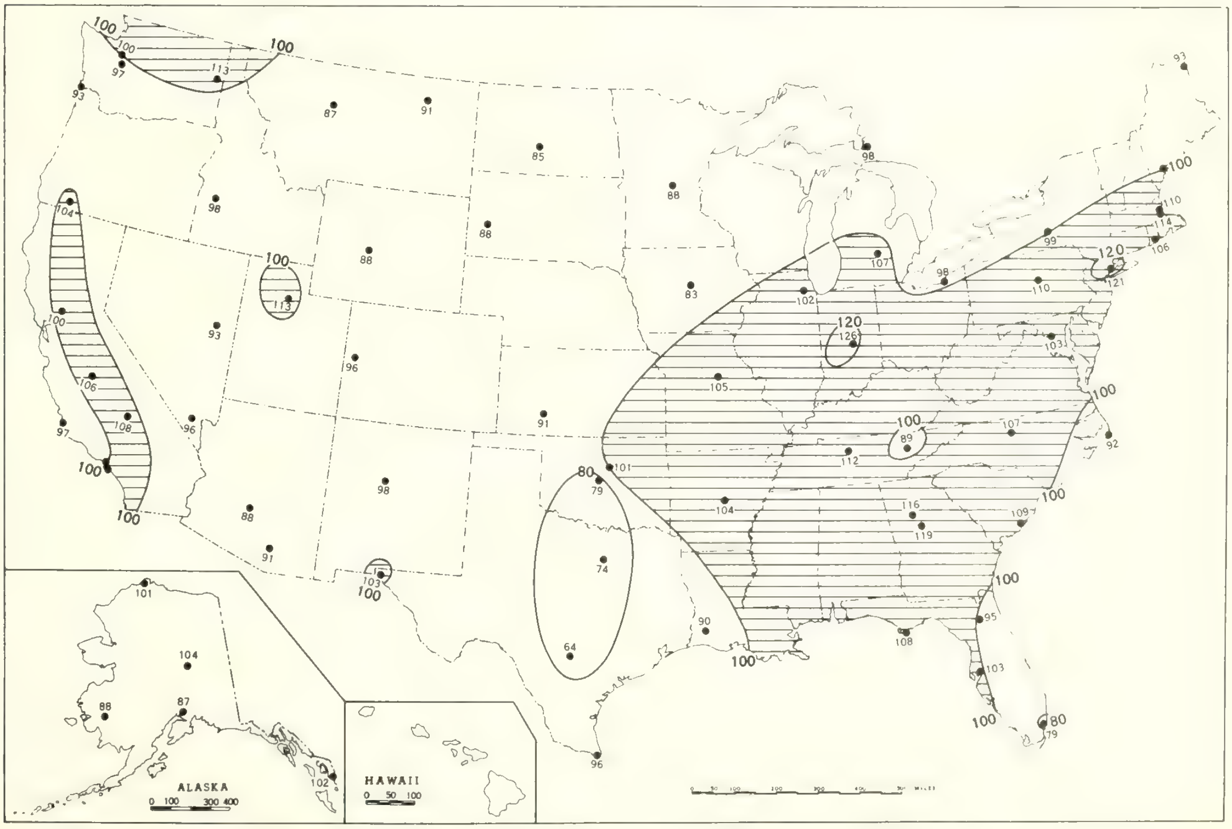


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, May 1965.

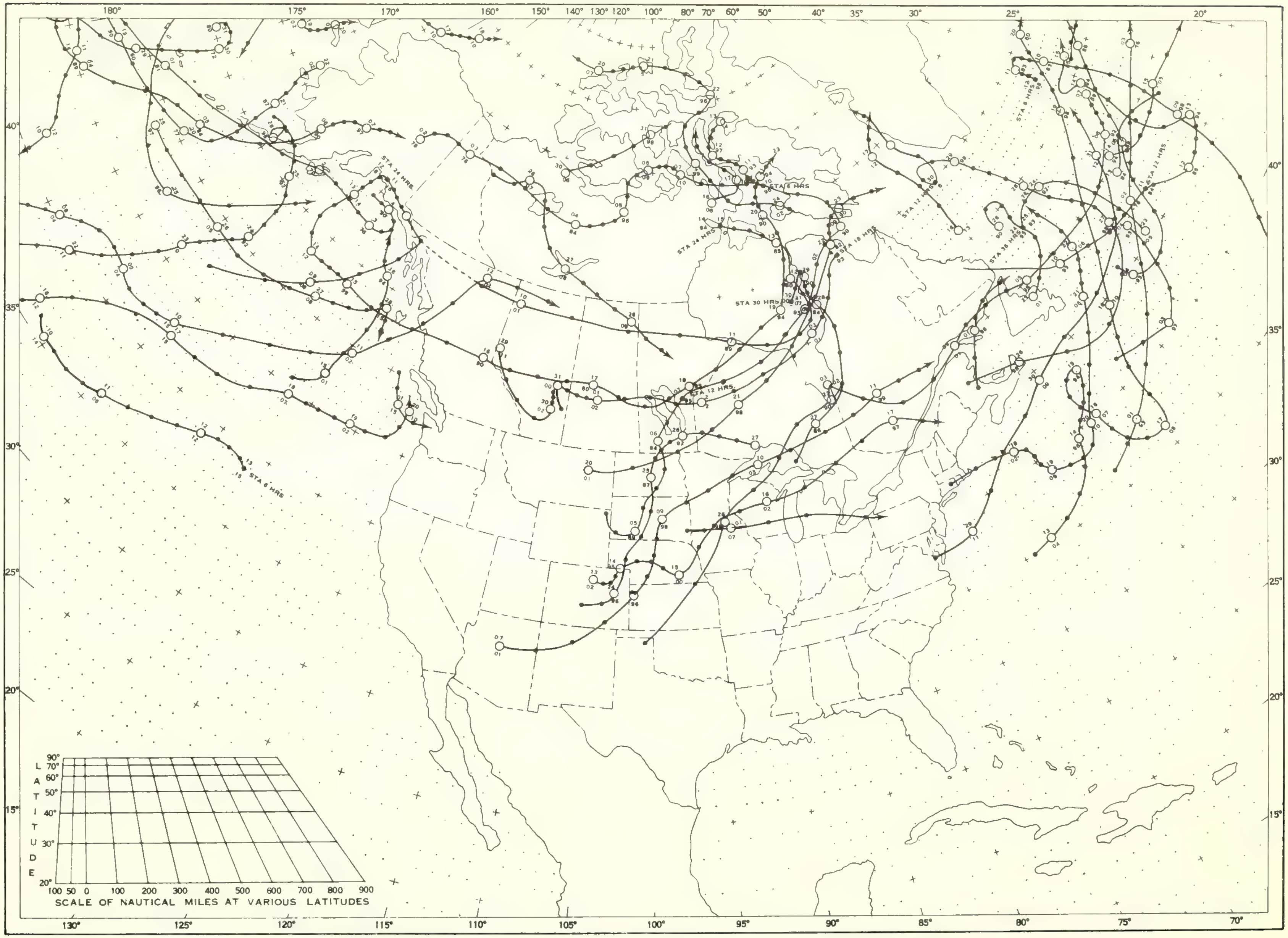


B. Percentage of Mean Daily Solar Radiation, May 1965.



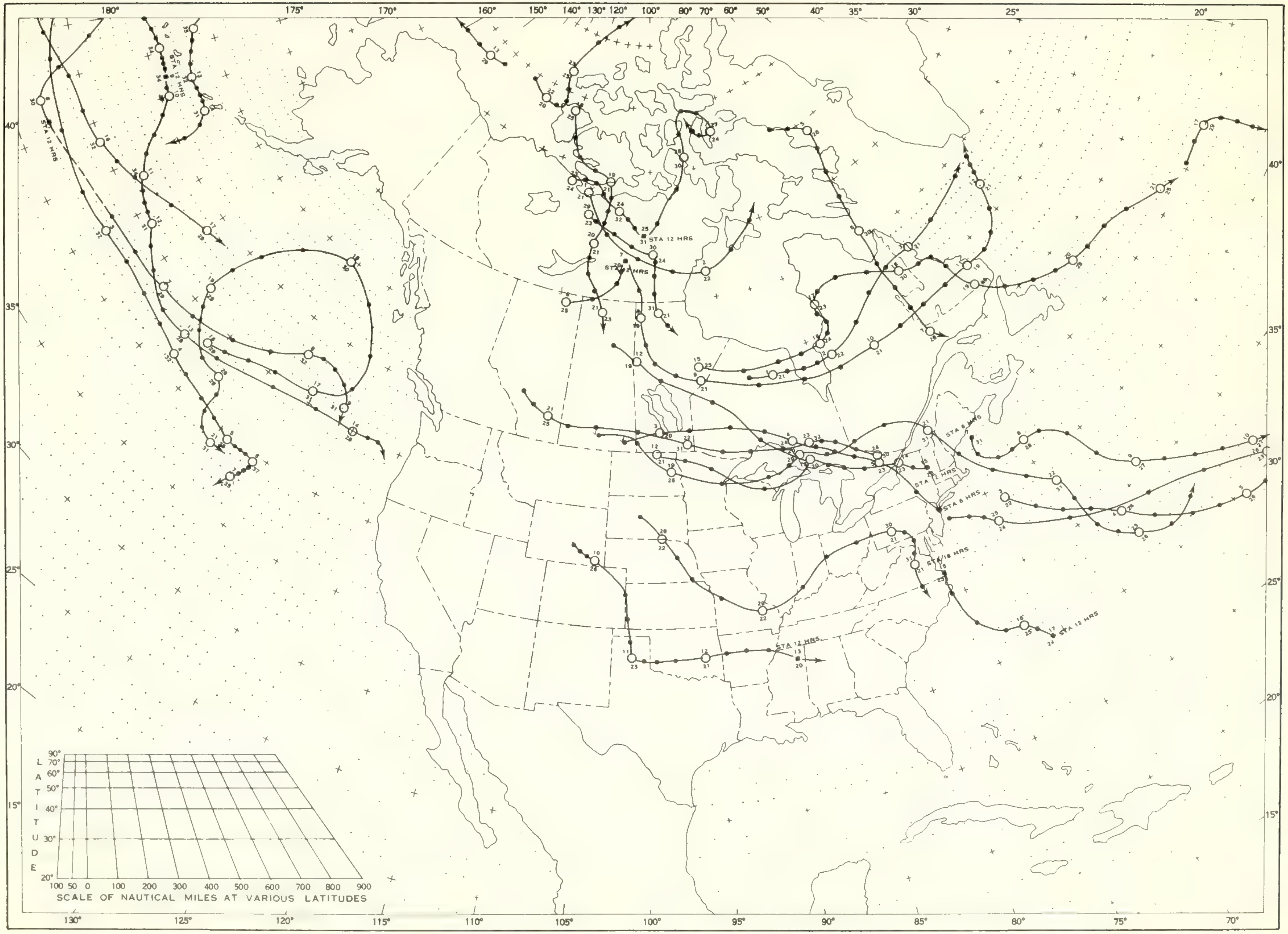
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm. $^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, May 1965.



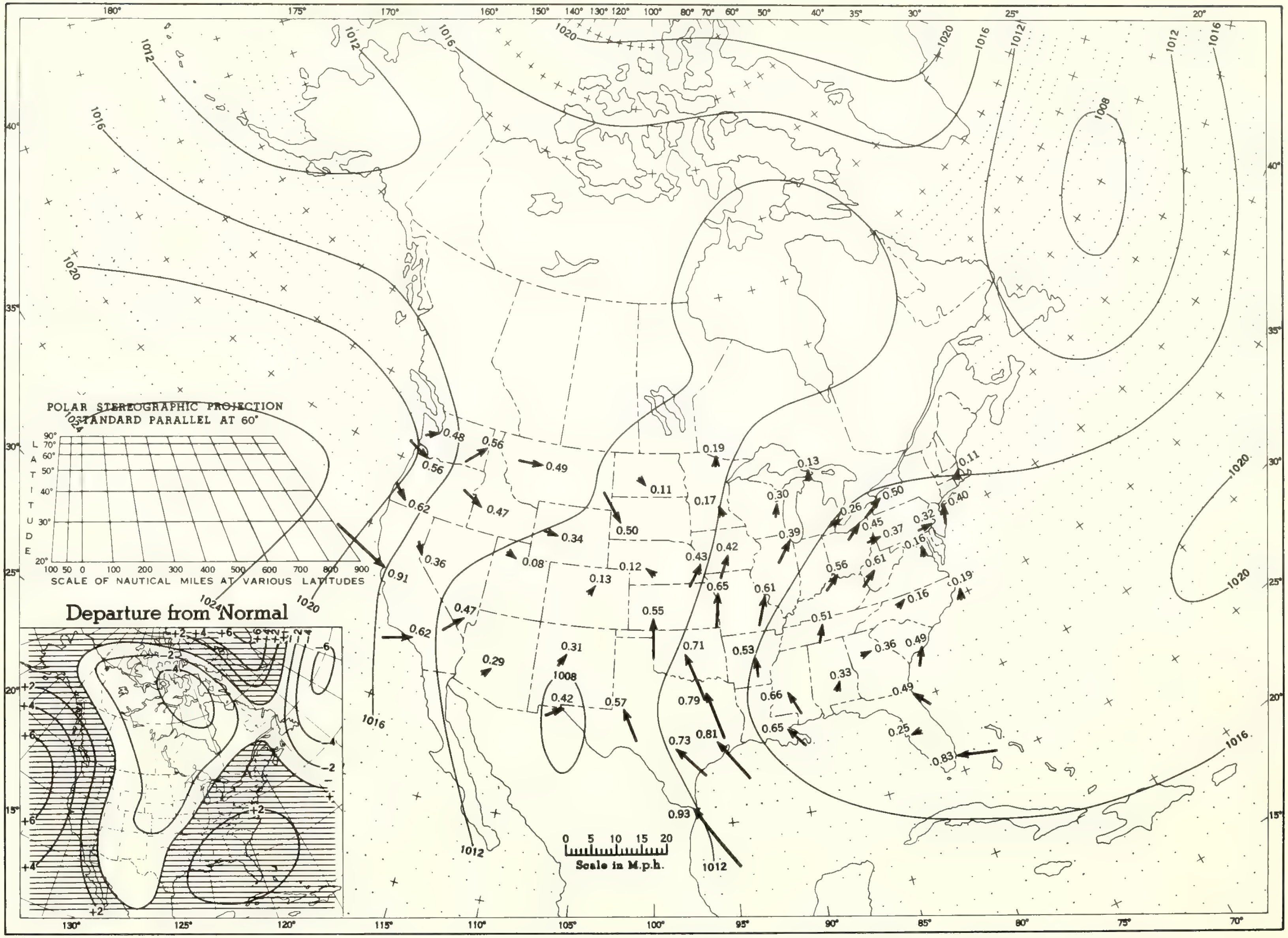
Circle indicates position of center at 7:00 a. m. E. S. T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, May 1965.



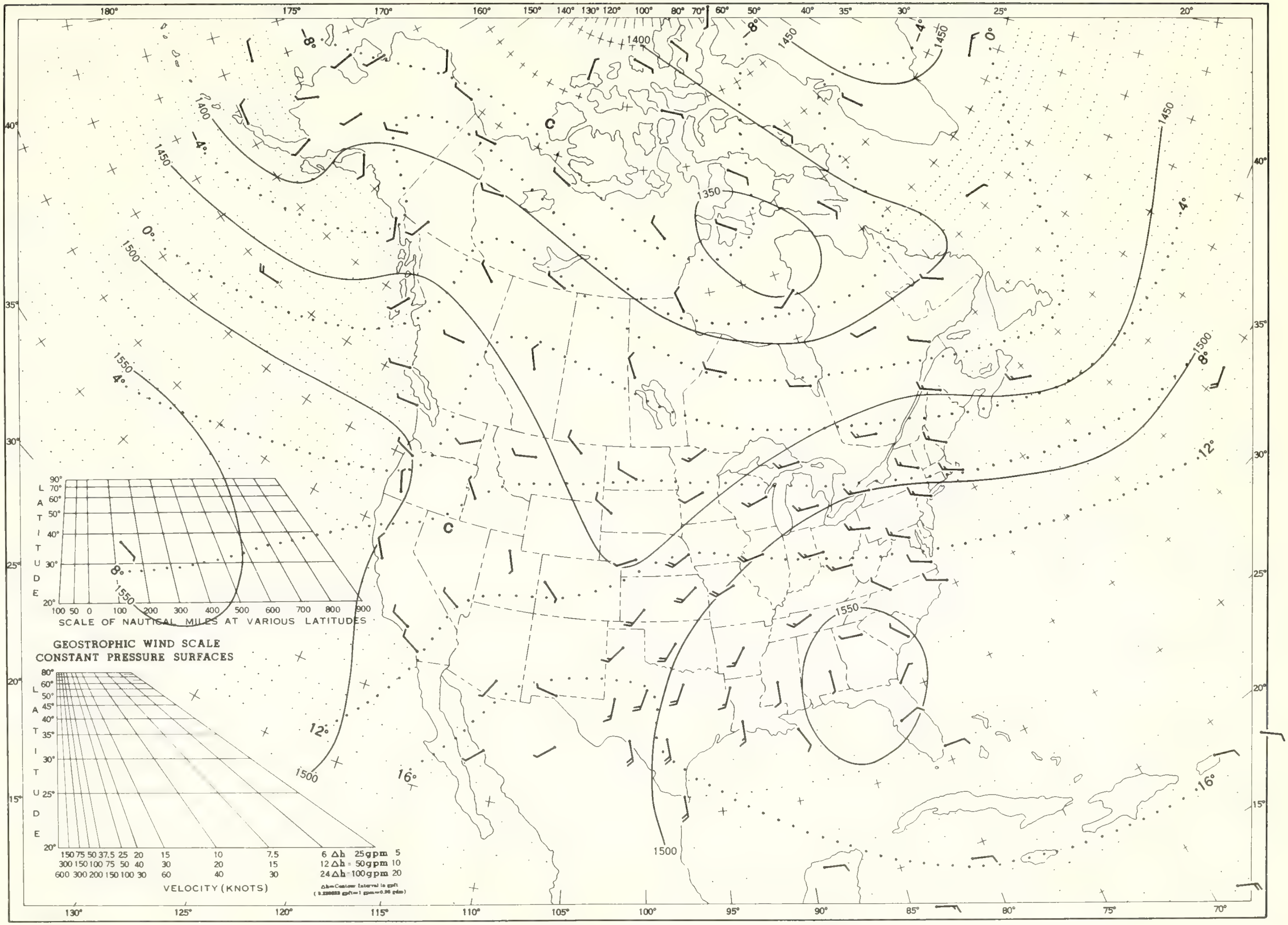
Circle indicates position of center at 7:00 a. m. E. S. T. See Chart VIII for explanation of symbols.

Chart X. Average Sea Level Pressure (mb.) and Resultant Surface Wind, May 1965. Inset: Departure of Average Pressure (mb.) from Normal, May 1965.



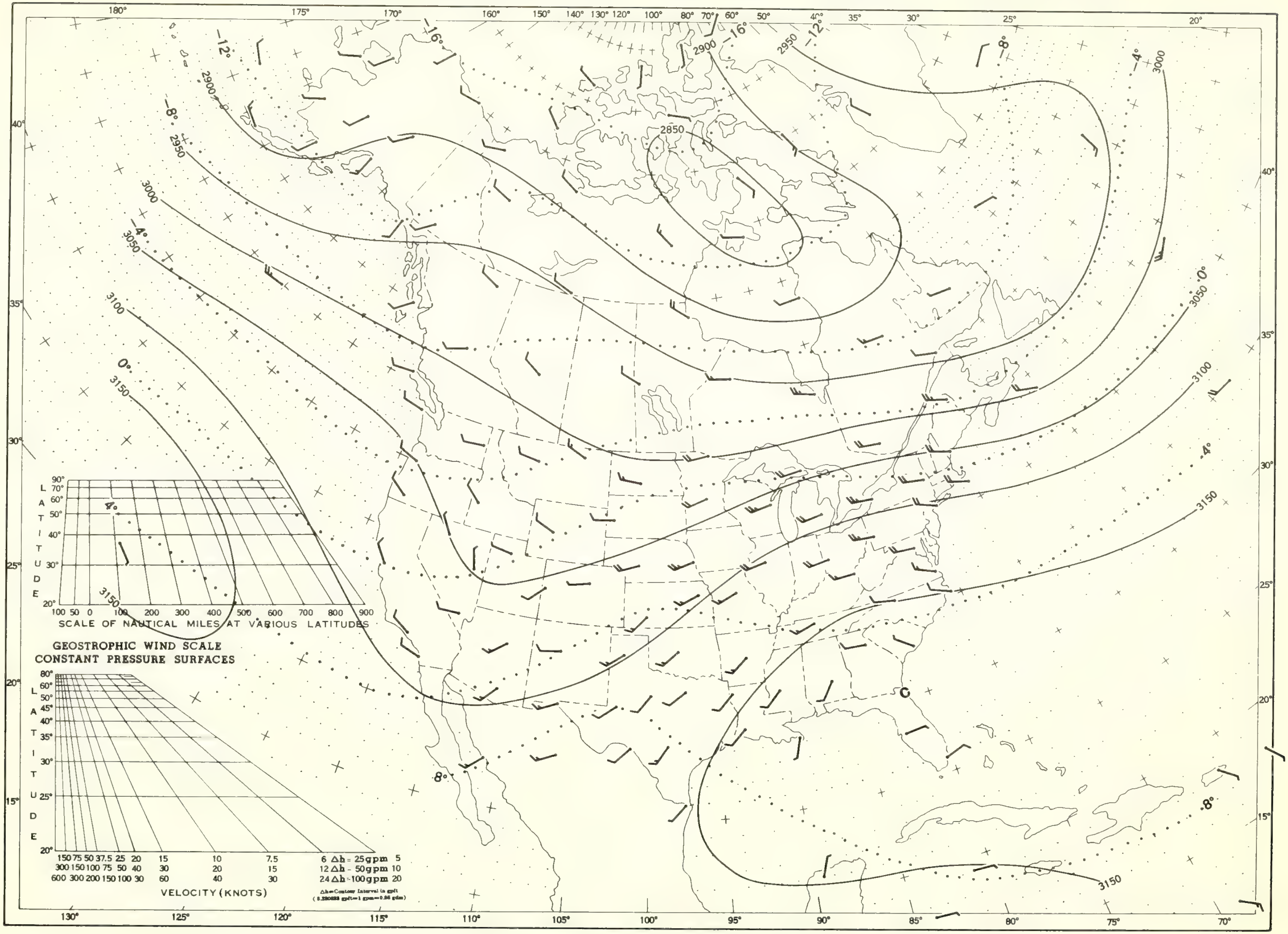
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb. Surface, 1200 GMT, May 1965. Average Height and Temperature, and Resultant Winds.



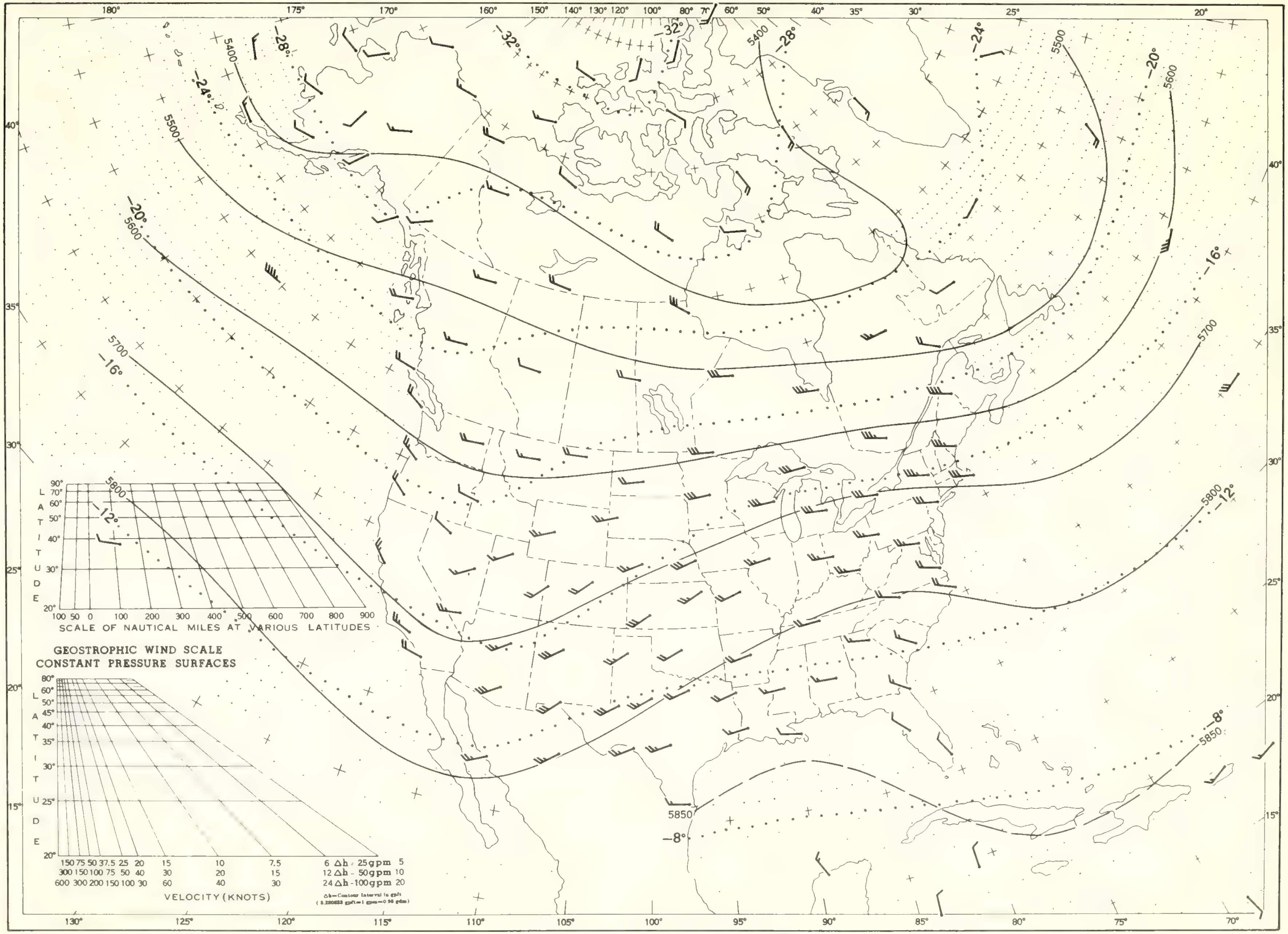
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in knots; flag represents 50 knots, full feather 10 knots, and half feather 5 knots. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, May 1965. Average Height and Temperature, and Resultant Winds.



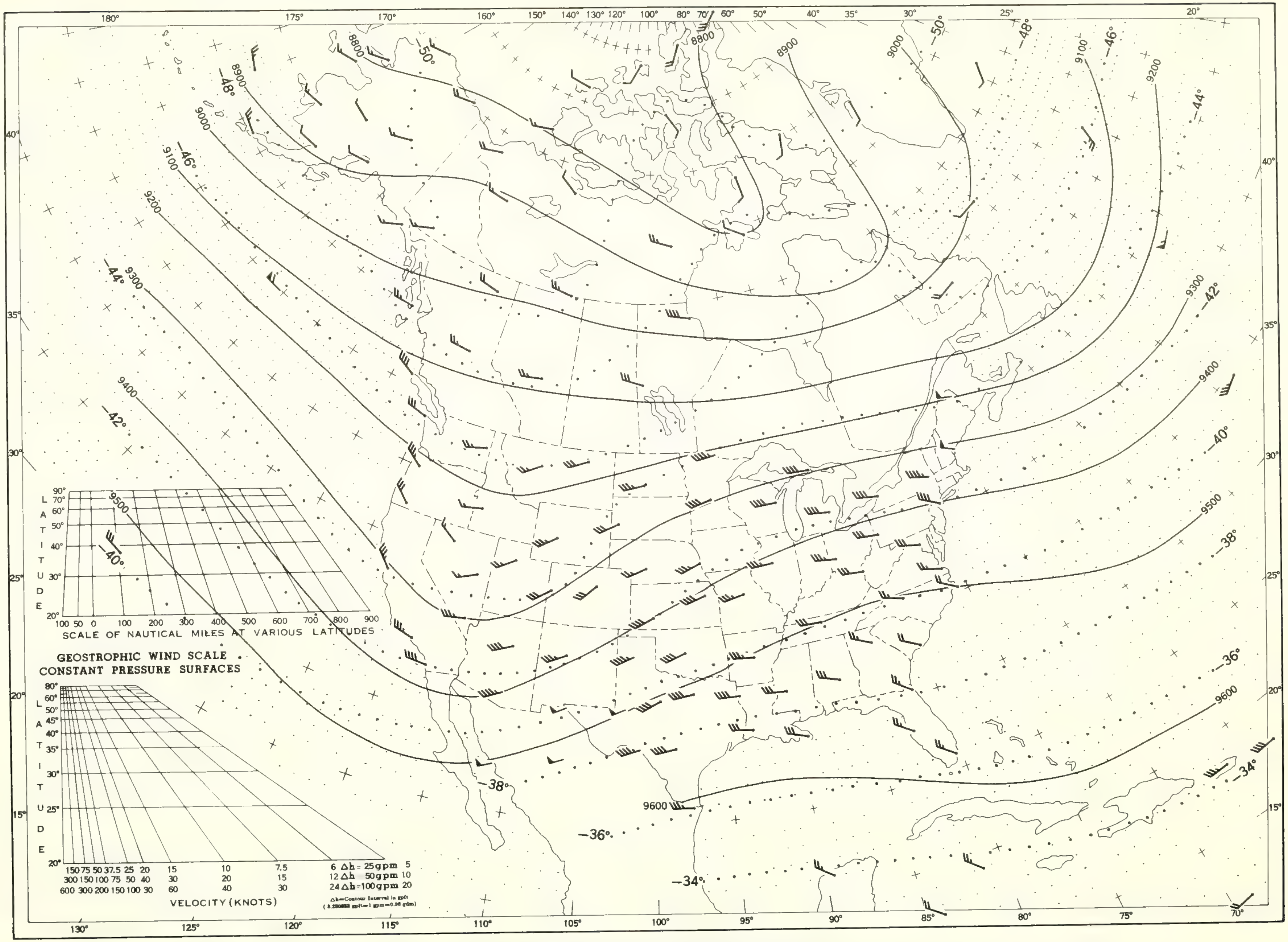
See Chart XI for explanation of map.

Chart XIII. 500-mb. Surface, 1200 GMT, May 1965. Average Height and Temperature, and Resultant Winds.



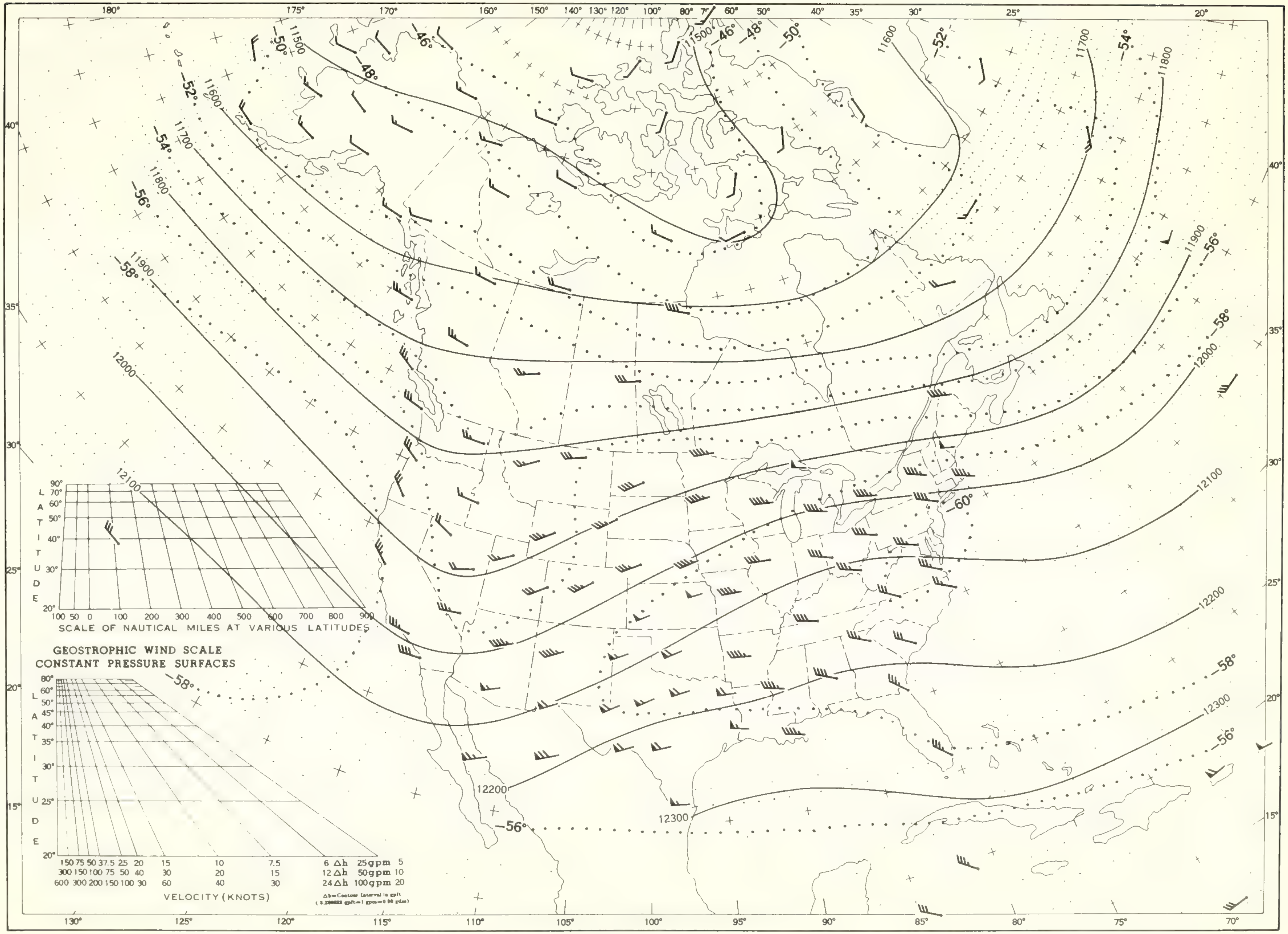
See Chart XI for explanation of map.

Chart XIV. 300-mb. Surface, 1200 GMT, May 1965. Average Height and Temperature, and Resultant Winds.



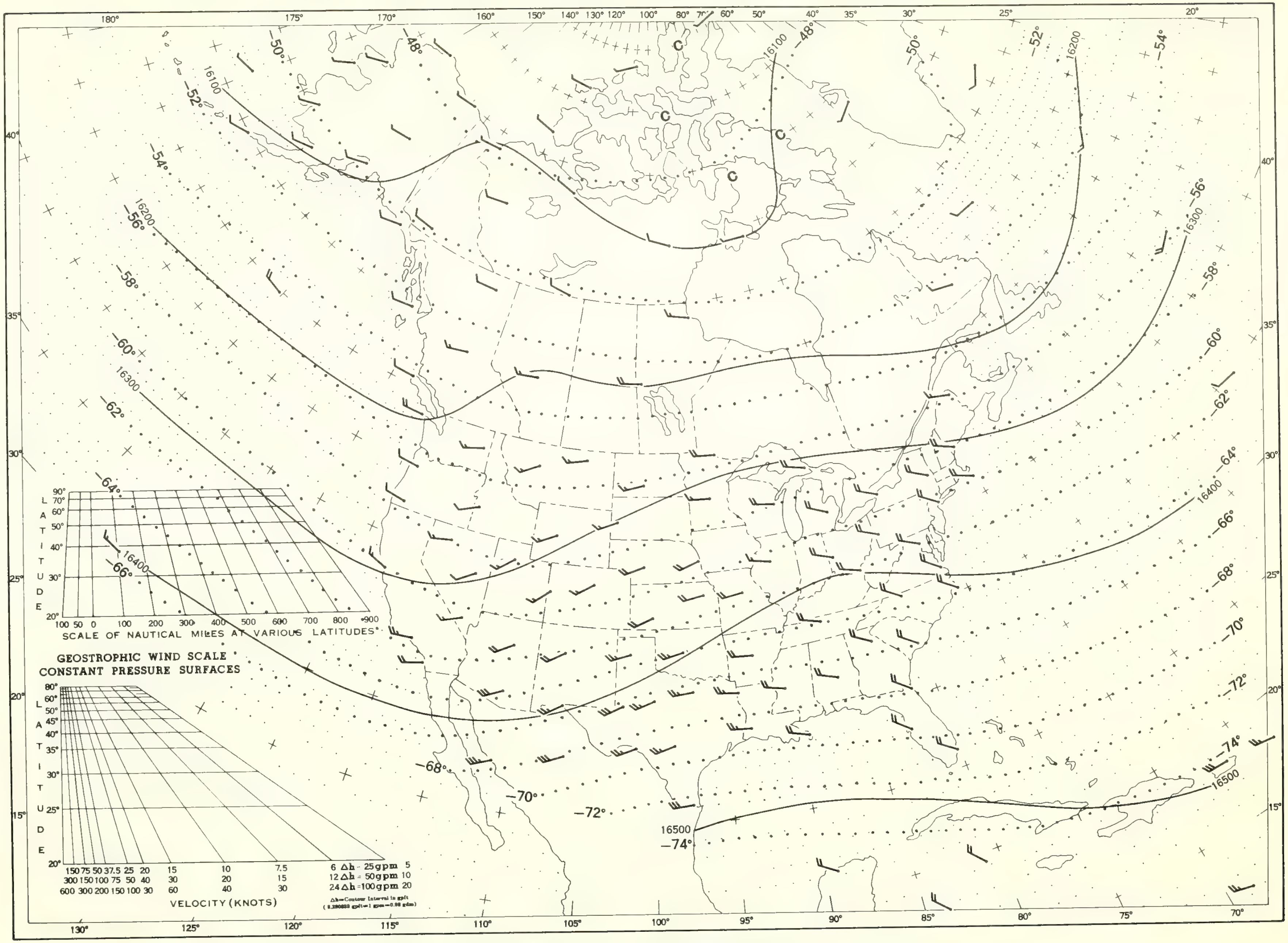
See Chart XI for explanation of map.

Chart XV. 200-mb. Surface, 1200 GMT, May 1965. Average Height and Temperature, and Resultant Winds.



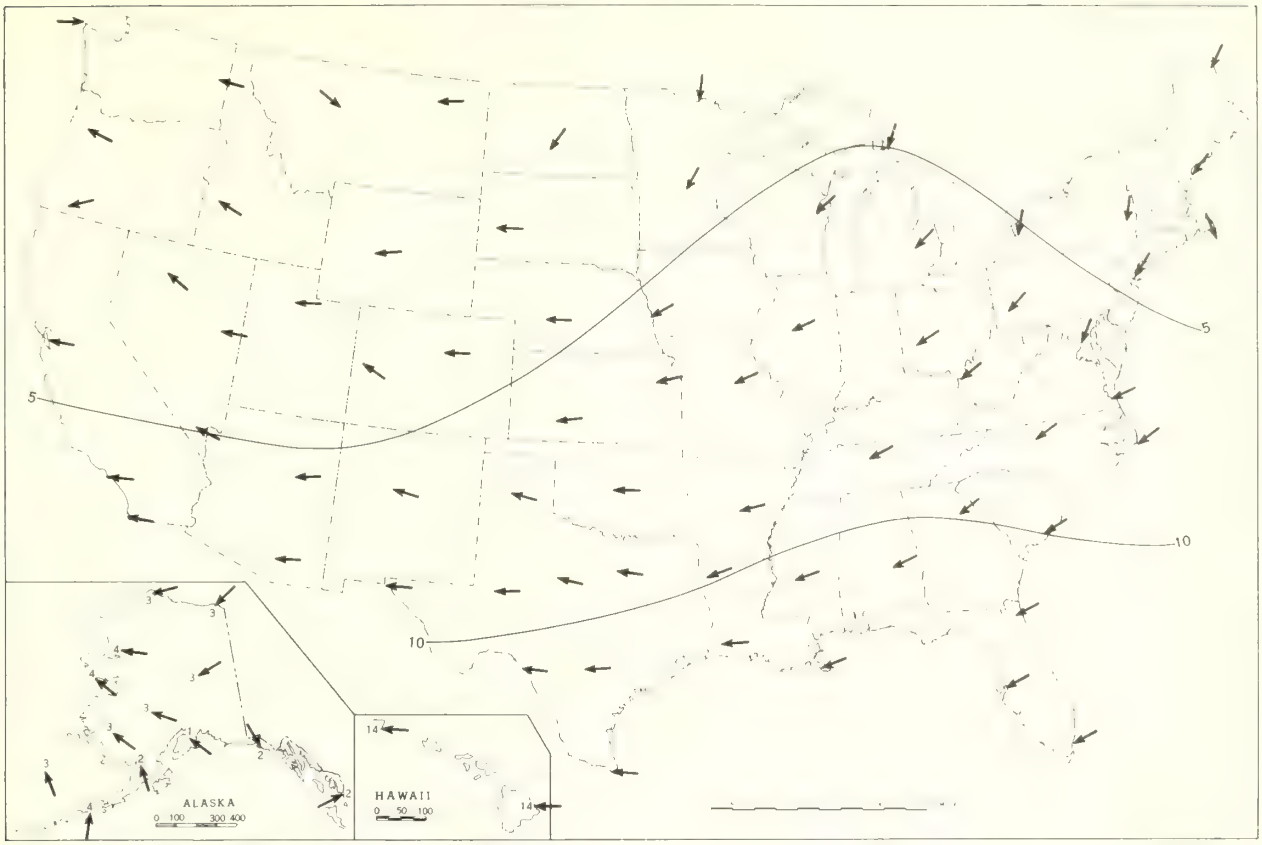
See Chart XI for explanation of map.

Chart XVI. 100-mb. Surface, 1200 GMT, May 1965. Average Height and Temperature, and Resultant Winds.

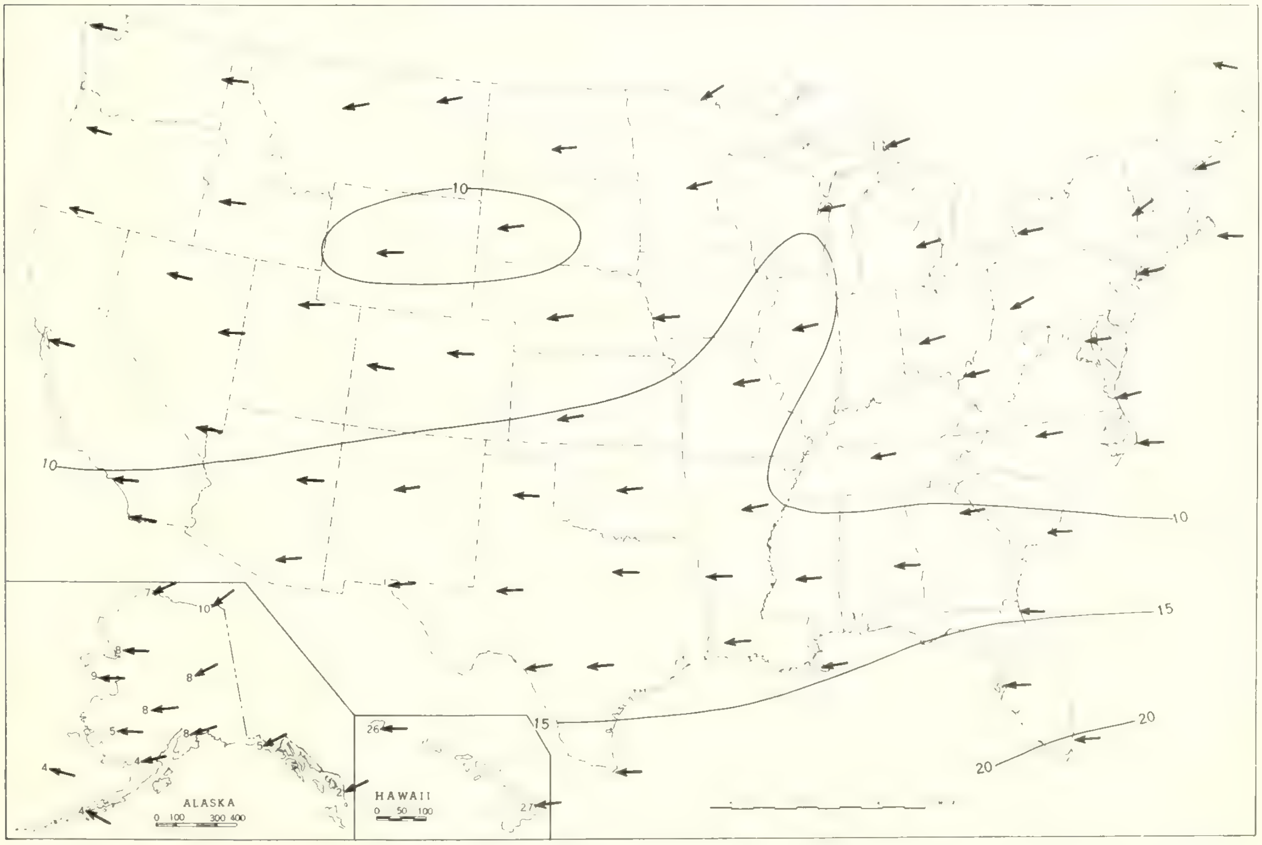


See Chart XI for explanation of map.

Chart XVII. A. 50-mb. Surface, 1200 GMT, May 1965. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, May 1965. Resultant Winds.



Wind speed (isotachs) in knots. Arrows show resultant wind direction. All wind data are based on rawin observations.

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U. S. DEPARTMENT OF COMMERCE
JOHN T. CONNOR, Secretary
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
WEATHER BUREAU

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

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JUNE 1965
Volume 16 No. 6

ASHEVILLE: 1965

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 16 No. 6

JUNE 1965

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. A cool month.
2. Below-normal precipitation persisted in Northeast.
3. Drought-breaking rains in Florida and west-central Great Plains.
4. Numerous severe local storms in Midcontinent.

TEMPERATURE.--Temperatures averaged 4° to 6° below normal in the Far Southwest, 4° in parts of the Southeast, and 2° to 3° in most other areas. Phoenix and Tuscon, Ariz., had their coolest Junes with averages of 79.0° and 77.6°, respectively. This was the coolest June since 1917 at Albuquerque, N. Mex., and the coolest since 1938 at San Diego, Calif. In the Southeast it was the coolest June at Macon, Ga., since 1903.

Above-normal temperatures were mainly limited to he Pacific Northwest the first half of the month, North-Central areas the first week, and the Northeast the second week. There were no extended periods of unusually hot weather; however, during a brief hot spell in the Northeast he second week, Burlington, Vt., recorded 92°.

An extensive high pressure area covered the eastern half of the Nation during the third week which was 6° to 2° cooler than normal in a large portion of the East. Frost and freezing were reported on one or two mornings n northern Wisconsin and Minnesota, and near freezing n other areas along the Canadian border.

PRECIPITATION.--Moderate to heavy precipitation was requent in the central and western Great Plains, the Rocky Mountain and Great Basin area, and the Southeast. Monthly totals ranged up to more than 10 inches and many stations measured more than twice their normal mounts for June. Elsewhere amounts generally ranged etween 50 and 75 percent of normal. Only a few relatively mall areas had less than half normal.

From the central Great Plains to western Nevada, this was one of the wettest Junes on record. Denver, Colo., ad 4.14 inches for its wettest June, and Amarillo, Tex., 0.73 inches for its wettest month. Many flash floods ccurred in this heavy rain area. At Sanderson, Tex., n the 11th one of these flash floods was blamed for 6 deaths and about $3 million damage. Flooding was severe in the North Platte, upper Arkansas, and Missouri Rivers. Damage in eastern Colorado alone during the third week was believed to exceed $100 million. Rains during the last 2 weeks of May and the heavy rainfall in June definitely ended the drought in eastern Colorado and some adjacent areas of nearby States. But the rains came after a considerable acreage of winter wheat had been abandoned.

In the Southeast rainfall was heaviest in the Carolinas, Georgia, Florida, and Alabama. Dry conditions were relieved in these States, particularly Florida where drought was becoming critical and a high fire hazard existed. Tallahassee, Fla., measured 12.62 inches, its greatest June total since 1939. The greatest total for Florida was 20.20 inches at Wewahitchka. Moultrie, Ga., reported 15.07 inches; Fairhope, Ala., 15.43; and Johnston, S. C., 15.88 inches. The heaviest rainfall in the Southeast fell during the second week when a weak tropical disturbance moved from the Gulf of Mexico across northern Florida, Georgia, and the Carolinas.

Below-normal rainfall in the Northeast continued the long period of dry weather there. Monthly totals in parts of western and southern New York, northern New Jersey, northeastern Pennsylvania, and eastern Maine were less than 50 percent of normal. Above-normal amounts were mostly limited to western Maine and northern portions of New Hampshire and Vermont. In most of the Northeast, rainfall was well distributed through the month and was generally sufficient to maintain crop growth, but was of little benefit in replenishing reservoirs and ground water. At the end of the month extreme drought extended from northeastern Maryland and northern Delaware through eastern Pennsylvania, most of New Jersey, eastern New York, and most of western New England.

STORMS.--Severe thunderstorms with hail and high winds were quite frequent, and several tornadoes were reported. During the first week these storms occurred from locations in Wisconsin and the Dakotas southward to the Gulf. In the second week tornadoes were reported in scattered locations from the lower Great Plains to the Carolinas. More tornadoes occurred in the Great Plains the fourth week and one was sighted west of Salt Lake City, Utah.

CONDENSED CLIMATOLOGICAL SUMMARY

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	Brewton 3SSE	99	2	Hefflin	45	19	Fairhope 2NE	15.43	Fort Deposit	1.50
Alaska	2 Stations	82	8	Trims Camp	9	5	Whittier	22.96	Wainwright	T
Arizona	Gila Bend	111	30	Maverick	20	2+	Laveen 3SSE	2.02	24 Stations	.00
Arkansas	Stuttgart	102	4	Evening Shade 1NE	46	19	Cove	12.79	Carlisle 1SW	.48
California	Death Valley	112	11	White Mountain 2	11	15	Jess Valley	3.93	206 Stations	.00
Colorado	Eversoll Ranch	100	29	4 Stations	20	27+	Holly	18.82	Eagle FAA AP	.29
Connecticut	Hartford WBAP	97	23	Coventry	31	4	2 Stations	2.81	Rocky River Dam	.87
Delaware	5 Stations	95	29+	Wilmington Porter Resvr	42	27+	Selbyville	3.56	Middletown 1WSW	.76
Florida	3 Stations	97	17+	Deer Park	52	3	Wewahitchka	20.20	2 Stations	2.45
Georgia	Fort Stewart	98	3	Blairsville Exp Sta	42	19	Moultrie 2ESE	15.07	Waynesboro 2NE	1.45
Hawaii	3 Stations	89	22+	Mauna Loa Slope Obs.	29	23	Puohokamoa 2 343, Maui	16.20	12 Stations	.00
Idaho	2 Stations	99	11	Dubois 34W	20	4	Kilgore	4.74	Burley	.33
Illinois	Marengo	98	27	Barrington 1NW	38	15+	Rockport	10.84	Chillicothe	.40
Indiana	Cambridge City	97	28	LaGrange Sewage Plant	41	13	Rochester	6.92	La Porte	1.02
Iowa	Elkader	98	29	2 Stations	40	20+	Bedford	9.51	Dubuque L and D No 11	.79
Kansas	Medicine Lodge	99	22	Tribune 1W	40	6	Neosho Rapids	19.29	Cedar Vale	2.90
Kentucky	Owensboro 2W	96	29	Falmouth 5WNW	41	18	Hickman 1E	8.35	Jeremiah	.63
Louisiana	Colfax	99	15+	Greensburg	53	20	Slidell	9.48	Riverton Dam	.00
Maine	Newcastle	93	29	2 Stations	29	2	Rumford Power Plant	4.37	Bar Harbor	.46
Maryland	3 Stations	97	29	Sines Deep Creek 2	34	4	Prince Frederick	5.35	Frostburg	.96
Massachusetts	Farmingham	96	8	Hoosac Tunnel	31	4+	Lawrence	4.94	Nantucket WBAP	1.10
Michigan	Monroe Sewage Plant	95	29	Vanderbilt Trout Sta	26	3	Eaton Rapids	5.64	Yale 1NNE	.75
Minnesota	2 Stations	92	28+	2 Stations	29	30+	Sandy Lake Dam Libby	8.99	Rochester WBAP	1.53
Mississippi	do	99	30+	do	50	19+	Pascagoula City	13.85	Tunica 2	.20
Missouri	4 Stations	96	29	Vienna 3NW	42	19	Appleton City	12.90	Jerome	1.42
Montana	Paradise	95	12	Summit	20	7	Rocky Bay	10.40	Grant	.95
Nebraska	Beaver City	96	22	Harrison	36	6	Roca	13.58	Creighton	2.29
Nevada	Sunrise Manor Las Vegas	106	30	2 Stations	24	27+	Sheldon	3.53	2 Stations	.00
New Hampshire	Franklin	95	7	3 Stations	30	26+	Lincoln	6.03	Greenville	1.54
New Jersey	2 Stations	98	24+	2 Stations	35	4	Hammonton 2NNE	3.98	Belmar 2SW	.75
New Mexico	Carlsbad FAA AP	105	27+	do	22	3+	Raton WBAP	11.93	Columbus	T
New York	Poughkeepsie	97	29	Indian Lake 2SW	23	1	Trenton Falls	6.51	2 Stations	.57
North Carolina	Caroleen	96	30	Celo 2S	36	19	Ocracoke	11.76	Southport	1.60
North Dakota	2 Stations	90	21+	Powers Lake 1N	33	23	Hague	7.79	Hansboro 3W	.72
Ohio	Toledo Blade	99	29	2 Stations	36	4	Dorset	4.92	Danville	.54
Oklahoma	Guthrie	102	30	Kenton	44	6	Smithville 3NNW	9.46	Colgate	.82
Oregon	2 Stations	99	11	Fremont	18	27	Valley Falls 3SSE	5.27	Reston	.18
Pennsylvania	3 Stations	97	23+	2 Stations	27	4	Meadville 1S	6.90	Kegg	.13
Puerto Rico	Utuado	94	28+	Cayey 1E	60	26+	Rincon 2NNW	14.16	Dorothea, VI	1.15
Rhode Island	Providence WBAP	91	23	Kingston	37	4	Greenville	2.37	Newport	1.30
South Carolina	2 Stations	96	30+	Walhalla	46	19	Johnston 2SSW	15.88	Edisto Island 5SW	4.08
South Dakota	Wagner	95	19	Deerfield 5NW	24	6	Montrose	8.67	Gettysburg	1.10
Tennessee	Mount Pleasant 2SW	96	8	3 Stations	40	19	Martin U of T Branch	9.79	Memphis WBAP	.98
Texas	3 Stations	110	15+	Claude	42	10	Tulia	13.21	5 Stations	.00
Utah	2 Stations	99	30+	Blowhard Mtn Radar	23	26	Hiawatha	4.04	Saint George Pwr House	.14
Vermont	Cavendish	93	28	West Burke	27	4+	Gilman	5.48	Woodstock 3E	1.55
Virginia	Columbia	98	9	2 Stations	38	4	Holland 1E	6.67	Timberville	.84
Washington	2 Stations	98	10	Rainier Paradise RS	25	13	Mill Creek	4.59	Snoqualmie Pass	T
West Virginia	Harpers Ferry Nat Mon	96	29	Canaan Valley	30	14	Branchland	4.64	Horner	.20
Wisconsin	3 Stations	96	28+	Rainbow Reservoir	26	14	River Falls	9.45	Branchardville 1N	.77
Wyoming	Worland FAA AP	95	23	2 Stations	22	29+	Glendo 4SW	6.91	Rawlins FAA AP	.50

+ And also on an earlier date or dates

NOTE: Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	995.3	1017.5	85	65	75.0	-4.4	93	4	54	19	4	0	65	75	8.17	4.16	3.45	11	7	0.0	0	1.7	12	27	N	24	6	14	10	6.2	59
HUNTSVILLE	600	994.6	1017.4	86	67	76.5	-2.1	92	30+	56	19	6	0	66	72	5.79	2.42	1.55	15	10	0.0	0	2.7	16	35	33	30+	7	9	14	6.2	
MOBILE	211	1008.5	1016.2	89	70	79.4	-2.1	95	30	63	19	12	0	69	76	3.70	-2.53	1.10	13	13	0.0	0	3.1	15	24	22	25	8	13	9	5.8	
MONTGOMERY	194	1010.2	1017.3	87	68	77.5	-1.9	94	30	55	19	6	0	68	77	2.76	-1.41	0.95	12	10	0.0	0	1.9	12	28	S	14	6	8	16	6.8	44
ALASKA												8																				
ANCHORAGE PRK STRIP	85			57	45	50.9	-3.6	61	24+	41	6+	0	0			0.94	-0.04	0.41	11		0.0	0										
ANCHORAGE	143	1007.1	1011.8	59	47	52.9		64	15	40	5	0	0	39	60	0.96		0.42	9	0	0.0	0	5.3	18	28	17	15	0	3	27	9.2	27
ANNETTE	110	1014.2	1018.3	60	43	51.5	-2.8	73	29	37	3	3	0	43	76	4.94	-0.73	2.21	11	0	0.0	0	2.6	20	32	15	10	2	9	19	7.7	
BARROW	22	1014.9	1015.7	35	27	30.8	-2.3	57	30	13	3	0	25	28	90	0.05	-0.31	0.04	2	0	0.3	3	12.2	9	31	9	8	1	6	23	8.6	
BARTER ISLAND	39	1012.9	1014.6	34	28	30.9	-3.3	46	30+	15	3	0	24	29	91	0.08	-0.43	0.03	5	0	0.7	5	13.0	8	37	8	8	4	4	22	8.2	
BETHEL	125	1002.7	1008.3	56	41	48.6	-3.0	71	28	35	21	1	0	41	77	0.69	-0.49	0.21	11	0	0.0	0	1.1	18	26	7	2	1	3	26	8.7	
COLD BAY	94	1001.7	1005.3	48	41	44.4	-0.9	57	30	36	1	0	0	39	83	2.54	0.59	0.46	20	0	0.0	0	7.5	17	50	15	2	0	0	30	9.5	
FAIRBANKS	436	991.9	1008.8	65	45	55.2	-3.2	79	8	37	5	7	0	42	65	1.16	-0.23	0.73	12	4	0.0	0	0.8	22	25	18	15	0	7	23	8.4	
JUNEAU	12	1015.6	1016.4	57	40	48.5	-3.8	74	8	31	13	1	1	43	82	3.11	-0.28	0.67	18	0	0.0	0	5.6	12	32	13	19	2	6	22	8.2	39
KING SALMON	43	1005.8	1007.8	54	38	46.0	-5.4	64	27	29	12	0	3	38	77	1.55	0.15	0.59	16	0	0.0	0	5.4	15	46	9	5	0	5	25	8.8	
KOTZEBUE	10	1008.5	1009.0	50	38	44.0	0.2	66	26	30	18	0	3	38	80	0.13	-0.36	0.08	4	0	T	T	4.2	30	32	29	20	3	8	19	7.7	
MC GRATH	334	995.9	1008.6	63	42	52.7	-3.8	75	27	34	21+	4	0	39	63	0.83	-0.83	0.18	15	3	0.0	0	0.6	21	25	24	24	0	3	27	8.7	
NOME	13	1007.5	1008.2	51	38	44.5	-1.4	67	29	31	19+	0	3	38	79	1.00	0.07	0.30	8	0	T	0	1.4	15	32	25	18	3	8	19	7.4	36
ST. PAUL ISLAND	22	1004.4	1005.3	44	36	39.7	-1.1	50	28	31	2	0	3	38	95	0.94	-0.21	0.22	20	0	1.6	T	6.8	3	44	5	5	0	0	30	9.9	
SHEMYA	122	1006.4	1010.2	45	40	42.3	0.5	50	30	35	17+	0	0	39	88	1.19	-0.13	0.31	16	0	T	0	4.9	34	32	24	17+	0	5	25	9.0	
YAKUTAT	28	1013.9	1015.0	50	38	44.3	-6.2	63	8	31	14	0	1	41	87	16.24	11.18	4.00	20	0	0.0	0	3.4	14	35	14	19	0	5	25	9.1	
ARIZONA																																
FLAGSTAFF	6993	787.0	1012.5	70	36	53.0	-6.5	81	30+	26	27	0	8	27	41	0.30	-0.39	0.10	6	4	0.0	0	5.5	18	26	16	15	13	9	8	4.2	
PHOENIX	1117	969.9	1007.8	97	61	79.0	-4.6	107	29	51	3	27	0	37	24	0.91	0.82	0.84	2	2	0.0	0	1.2	18	47Y	SW	23	24	3	3	2.2	95
TUCSON	2584	922.1	1007.8	94	62	77.6	-5.1	104	29	52	4	23	0	31	20	0.01	-0.28	0.01	1	1	0.0	0	4.7	21	33	E	23	24	4	2	2.0	92
WINSLOW	4895	849.6	1010.4	86	49	67.6	-6.7	98	29	37	27	9	0	28	28	0.33	0.07	0.22	4	6	0.0	0	6.9	20	44	20	23	14	8	8	4.1	
YUMA	194	1000.7	1007.9	96	66	81.0	-6.2	107	29	58	26	25	0	41	26	0.00	-0.01	0.00	0	0	0.0	0	4.7	22	28	W	25	25	3	2	1.5	96
ARKANSAS																																
FORT SMITH	449	999.0	1015.3	88	67	77.5	-1.1	94	30	61	20+	9	0	67	73	2.69	-1.66	0.69	9	10	0.0	0	2.4	13	22	NE	24+	8	11	11	5.9	71
LITTLE ROCK	257	1006.4	1015.8	88	68	78.2	-0.7	94	30+	57	20	13	0	68	73	2.49	-1.12	0.62	9	9	0.0	0	2.1	19	30	S	22	8	12	10	5.5	77
TEXARKANA	372	1003.1	1015.8	88	68	78.0	-1.4	93	30	60	20	10	0	69	76	3.41	-0.48	1.01	8	8	0.0	0	3.9	17				12	9	9	5.1	
CALIFORNIA																																
BAKERSFIELD	494	994.2	1011.6	86	60	73.3	-3.8	97	11	51	15	13	0	45	38	T	-0.09	T	0	0	0.0	0	5.8	33	30	30	25	25	4	1	1.6	
BISHOP	4108			85	49	67.1	-2.7	95	11	42	17	10	0			0.22	0.13	0.22	2		0.0	0						12	13	5	4.1	
BLUE CANYON	5280			67	49	57.8	-1.4	79	20+	37	15	0	0			1.00	0.07	0.58	5		0.0	0			23	18	14	16	11	3	3.8	
BURBANK	724	987.5	1013.1	73	55	64.0	-4.0	87	28	49	27	0	0	52	70	0.08	0.03	0.05	2	0	0.0	0	6.1	17	16	17	15+	9	14	7	5.0	
EUREKA U	43			56	48	51.9	-3.6	61	20	46	28+	0	0			0.35	-0.39	0.33	3		0.0	0			32	NW	16	7	7	16	6.9	47
FRESNO	328	1000.3	1011.8	87	56	71.4	-3.3	99	29	48	26	12	0	49	49	T	-0.07	T	0	0	0.0	0	7.2	32	30	NW	25	20	9	1	2.2	94
LONG BEACH	34	1012.9	1014.1	70	56	63.2	-4.3	80	28	50	27+	0	0	51	70	0.02	-0.01	0.02	1	0	0.0	0	4.1	23	18	17	16+	7	12	11	6.0	
LOS ANGELES	97	1010.2	1013.7	68	58	62.9	-1.9	72	27	52	26	0	0	52	72	0.03	-0.02	0.02	2	0	0.0	0	7.0	25	24Y	W	2	5	12	13	6.6	
LOS ANGELES U	270			71	57	64.1	-3.9	79	29+	52	26	0	0			0.01	-0.05	0.01	1		0.0	0			17	SW	19+	7	10	13	6.3	38
MT SHASTA R	3544			74	45	59.2	-1.1	88	10	35	14	0	0			0.91	-0.34	0.44	6		0.0	0										
OAKLAND	6	1014.2	1014.6	66	54	59.9	-2.9	76	28	51	27+	0	0	50	74	T	-0.12	T	0	0	0.0	0	10.4	28	35	29	25	12	9	9	5.0	
RED BLUFF	341	998.6	1011.1	87	60	73.3	-2.9	102	20	51	8	13	0			T	-0.45	T	0	0	0.0	0	2.0	17	26	NW	25	19	7	4	2.9	91
SACRAMENTO	17	1011.2	1012.1	82	52	67.0	-3.5	96	28	46	15	6	0	49	60	T	-0.10	T	0	0	0.0	0	9.0	21	28	SW	11	18	10	2	2.7	95
SANDBERG R	4517			70	49	59.4	-5.4	85	10	33	26	0	0			0.00	-0.03	0.00	0		0.0	0			46	34	12	23	2	5	2.7	
SAN DIEGO	13	1013.2	1014.1	68	59	63.7	-2.5	72	30+	55	27	0	0	52	70	0.01	-0.04	0.01	1	0	0.0	0	5.2	26	21	S	15	4	9	17	7.3	47
SAN FRANCISCO	8	1014.6	1015.1	66	51	58.3	-3.0	80	28	47	16+	0	0	47	73	T	-0.11	T	0	0	0.0	0	10.1	27	42	WNW	25	11	12	7	4.7	
SAN FRANCISCO U	52			61	52	56.2	-2.9	74	28	49	4	0	0			T	-0.14	T	0		0.0	0			40	W	25					52
SANTA CATALINA	1568			64	52	58.0	-3.9	83	28	49	18+	0	0			0.16	0.05	0.08	3	0	0.0	0						6	7	17	6.8	
SANTA MARIA	236			68	49	58.3	-1.3	76	28	42	14	0	0			T	-0.14	T	0		0.0	0						11	14	5	4.5	
COLORADO																																
ALAMOSA	7536			73	42	57.5	-2.5	84	29	33	26+	0	0			1.77	1.28	0.93	11		0.0	0						10	11	9	5.1	
COLORADO SPRINGS	6145	810.7	1011.0	74	50	62.1	-2.6	87	22	40	6	0	0	45	61	8.00	6.41	2.58	13	17	0.0	0	2.9	14	45	11	17	6	8	16	6.6	
DENVER	5283	835.1	1009.8	76	52	63.9	-2.6	87	22	43	2	0	0	48	62	4.14	2.70	2.77	11	17	0.0	0	2.5	16	38	NW	7	8	9	13	6.3	61

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No of days							No of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
COLORADO																																
GRAND JUNCTION	4855	849.3	1008.3	84	57	70.3	-1.0	93	22+	49	5	5	0	38	36	1.33	0.91	0.82	5	5	0.0	0	0.6	12	49	NE	4	10	11	9	5.2	63
PUEBLO	4684	853.7	1009.5	85	54	69.6	-1.5	95	22	45	6+	8	0	48	54	2.79	1.57	1.67	10	12	0.0	0	3.1	11	46	S	15	9	8	13	5.7	74
CONNECTICUT																																
BRIDGEPORT	7	1016.6	1017.4	76	57	66.7	-1.3	87	22+	47	4	0	0	54	68	1.42	-1.98	1.01	9	3	0.0	0	4.3	25	36	31	13	11	14	5	4.9	
HARTFORD	169	1009.8	1016.1	82	56	68.9	0.2	97	23	44	4	9	0	54	61	1.98	-1.72	0.92	11	4	0.0	0	2.0	26	30	NW	13	5	14	11	6.2	72
NEW HAVEN	6			76	57	66.2	0.0	91	29	47	4	1	0			1.44	-2.09	0.89	7		0.0	0			26	NW	13	10	11	9	5.1	79
DELAWARE																																
WILMINGTON	78	1014.6	1017.5	81	60	70.2	-1.2	95	23	49	14+	4	0	57	67	1.62	-2.45	0.95	9	6	0.0	0	2.3	25	25	4	16	9	11	10	5.6	
DIST.OF COLUMBIA																																
WASH NATL AP	14	1015.6	1017.8	83	62	72.6	-1.6	95	23	51	18+	10	0	59	66	1.88	-1.33	0.82	9	3	0.0	0	2.2	19	34	NW	10	8	12	10	5.7	64
FLORIDA																																
APALACHICOLA U	13			84	71	77.5	-2.7	90	3	65	4	1	0			18.32	13.02	4.47	19	9	0.0	0			33	S	4	5	12	13	6.4	58
DAYTONA BEACH	31	1017.6	1018.9	86	69	77.3	-1.1	92	16+	59	3	3	0	68	79	9.00	3.19	2.84	15	14	0.0	0	3.9	12	40	26	13	8	8	14	6.4	
FORT MYERS	15	1017.6	1017.8	89	71	80.0	-0.8	93	23	64	3	14	0	71	79	7.78	-1.18	2.26	16	18	0.0	0	3.9	10	29	29	4	7	13	10	6.0	
JACKSONVILLE	24	1017.3	1018.3	86	69	77.9	-2.9	94	30	60	21	6	0	68	76	9.79	3.46	3.56	16	12	0.0	0	3.2	15	39	S	25+	7	10	13	6.4	54
KEY WEST	4	1015.9	1016.7	89	80	84.1	2.3	90	29+	74	9	7	0	74	72	2.45	-1.52	1.23	9	10	0.0	0	9.5	11	36	SE	10	4	16	10	6.1	72
LAKELAND U	214			87	70	78.5	-2.1	93	16	66	3	6	0			7.46	0.26	1.66	15		0.0	0						4	12	14	6.9	64
MIAMI	7	1017.3	1017.5	87	75	80.7	-0.1	90	4	69	19+	1	0	71	73	6.55	-0.82	1.70	13	10	0.0	0	7.0	11	31	32	19	2	16	12	6.9	
ORLANDO	108	1014.2	1018.6	88	70	79.0	-2.3	92	30+	63	3	14	0	68	78	7.36	0.40	2.61	13	12	0.0	0	3.9	12	28	22	14	6	10	14	6.6	
PENSACOLA	112	1012.9	1017.0	86	70	78.1	-3.0	92	30+	64	1	4	0	71	81	9.09	3.66	3.14	14		0.0	0	3.2	16	47	SW	7					60
TALLAHASSEE	58	1015.6	1017.9	89	69	79.0	-1.2	97	3	62	21+	16	0	67	72	12.62	6.09	5.29	15	15	0.0	0	2.2	15	29	20	15	4	13	13	6.8	
TAMPA	19	1017.6	1017.9	89	70	79.5	-1.1	95	6	61	3	13	0	68	74	7.30	0.02	2.60	10	14	0.0	0	3.2	12	28	24	18	5	11	14	6.7	62
WEST PALM BEACH	15	1017.6	1018.2	87	72	79.6	-1.4	92	13	62	3	4	0	69	71	8.80	1.27	2.83	11	12	0.0	0	6.9	11	37	27	16	7	9	14	6.4	
GEORGIA																																
ATHENS	802	989.5	1018.1	83	65	74.1	-3.5	92	30+	58	20+	4	0	65	77	6.02	2.14	2.03	10	6	0.0	0	0.7	8	21	31	30	4	10	16	7.2	
ATLANTA	1010	982.1	1018.3	80	64	71.7	-4.9	88	30	55	19	0	0	64	80	7.15	3.32	2.22	10	8	0.0	0	1.4	11	23	NW	3	4	9	17	7.3	40
AUGUSTA	143	1012.5	1017.6	87	65	75.9	-3.0	95	30+	55	19	13	0	65	76	5.67	2.63	1.77	8	9	0.0	0	1.2	17	62	8	10	4	10	16	7.2	
COLUMBUS	385			87	66	76.4	-3.0	93	30+	56	20	7	0	67	79	7.91	4.23	2.67	17		0.0	0	1.1	10	23	32	30	3	9	18	7.3	
MACON	354	1005.8	1018.5	86	66	75.7	-5.0	93	30	55	20	9	0	67	80	9.06	5.72	4.97	15	11	0.0	0	1.2	12	33	NW	3	4	10	16	7.3	45
ROME	637			84	63	73.5	-2.9	90	29+	50	19	3	0			5.90	2.14	1.95	14		0.0	0										
SAVANNAH	46	1016.6	1018.5	86	67	76.4	-3.3	94	3	58	20+	6	0	67	77	5.63	0.54	1.81	15	11	0.0	0	2.1	18	26	SW	8	8	6	16	6.6	51
HAWAII																																
HILO	31	1016.9	1018.2	82	67	74.1	-0.2	85	25+	62	24	0	0	66	77	8.85	2.06	2.13	25	0	0.0	0	0.8	33	25	6	22+	0	11	19	7.8	45
HONOLULU	7	1017.3	1017.8	85	73	79.1	1.2	86	30+	70	25+	0	0	65	64	0.25	-0.08	0.10	8	0	0.0	0	11.8	6	27	NE	29	7	17	6	5.6	82
KAHULUI	48	1014.9	1017.3	85	69	76.6	-0.6	89	14	63	25+	0	0			0.07	-0.11	0.04	3	0	0.0	0	13.6	6	33	NE	13	5	21	4	5.2	
LIHUE	115	1013.9	1019.1	81	72	76.5	-0.1	82	30+	70	25+	0	0	66	72	1.27	-0.19	0.28	16	0	0.0	0	11.2	6	23	E	12	3	20	7	6.1	46
IDAHO																																
BOISE	2838	912.3	1010.6	78	51	64.7	-1.1	95	11	41	27	2	0	43	49	1.20	0.31	0.42	7	3	0.0	0	2.9	29	27	NW	11	15	5	10	4.6	77
IDAHO FALLS 42NW R	4790			75	42	58.2	-1.6	88	23	31	18	0	1			1.43	0.19	0.61	8				2.0	24	28	NNW	9					
IDAHO FALLS 46W R	4932			74	43	58.4	-1.4	88	23	34	18	0	0			1.86	0.77	0.95	7		0.0	0	3.4	24	40	S	23					
LEWISTON	1413			79	51	65.2	0.4	91	10	43	28	1	0			0.95	-0.78	0.47	6		0.0	0						10	10	10	5.3	
POCATELLO	4454	860.1	1010.6	76	45	60.6	-2.2	90	23	35	18	1	0	40	52	1.12	0.16	0.83	6	2	0.0	0	5.9	23	28	SW	18+	12	8	10	5.0	75
ILLINOIS																																
CAIRO U	314			86	68	76.8	-1.1	93	29	61	19+	8	0			4.37	0.24	1.12	10		0.0	0			32	N	8	7	13	10	5.8	74
CHICAGO O HARE	658	992.9	1017.3	77	53	64.9	-3.1	90	27	44	30+	1	0	55	71	3.44	-0.52	0.89	9	4	0.0	0	1.0	7	32	31	20	11	10	9	5.2	
CHICAGO MIDWAY	607	994.9		79	59	68.9	-1.6	94	27	48	13	4	0	53	60	2.89	-1.18	0.94	8	4	0.0	0	1.9	10	40	W	20	12	9	9	5.1	78
MOLINE	582	994.6	1016.0	81	58	69.6	-1.8	93	27	47	18	2	0	57	67	2.07	-2.30	1.14	4	3	0.0	0	2.7	12	29	SW	22	8	10	12	6.2	69
PEORIA	652	992.9	1016.5	82	61	71.3	-0.4	93	27	48	18	3	0	58	67	1.04	-3.04	0.46	7	7	0.0	0	2.2	11	30	SW	22+	9	10	11	5.6	67
ROCKFORD	724	989.8	1016.5	80	56	67.9	-1.8	94	27	46	13	3	0	53	61	2.56	-1.74	1.46	6	3	0.0	0	2.0	13	32	24	5	10	12	8	5.3	
SPRINGFIELD	588	994.2	1016.2	84	63	73.2	-0.8	93	27	51	18	4	0	60	68	6.54	2.09	3.95	8	10	0.0	0	2.1	13	39	W	8	11	9	10	5.5	71

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CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	F.	°F.	°F.	F.		F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h							%
INDIANA																																
EVANSVILLE	381	1003.1	1016.8	86	61	73.7	- 2.1	95	29	50	19	7	0	62	68	2.03	- 1.71	0.71	9	7	0.0	0	1.7	18	36	W	6	5	16	9	6.0	58
FORT WAYNE	791	987.8	1017.4	80	57	68.6	- 2.0	92	22	46	4	3	0	56	66	2.16	- 2.01	0.70	7	5	0.0	0	0.0		30	NW	28	5	17	8	5.7	74
INDIANAPOLIS	792	988.5	1017.2	82	61	71.7	0.6	91	22	50	19+	1	0	58	66	3.49	- 1.13	1.25	7	5	0.0	0	1.0	13	40	NW	28	4	14	12	6.5	75
SOUTH BEND	773	989.5	1017.2	79	56	67.5	- 1.5	90	28+	46	13	3	0	53	64	2.24	- 1.34	0.79	11	5	0.0	0	0.5	19	35	31	8	10	10	10	5.4	
IOWA																																
BURLINGTON	694			81	60	70.3	- 1.8	92	27	49	19	1	0	62	72	3.60	- 1.41		7	7	0.0	0	1.3	12	23	16	26	9	9	12	5.6	
DES MOINES	938	981.4	1015.6	80	61	70.3	- 0.7	89	27	52	21+	0	0	59	70	4.80	0.09	1.88	12	12	0.0	0	3.9	14	60	SW	27	3	11	16	7.0	62
DUBUQUE	1065			78	55	66.5	- 1.4	92	27	46	21+	1	0			1.68	- 2.53	0.46	10		0.0	0						4	13	13	6.7	
SIOUX CITY	1095	974.9	1014.2	79	60	69.4	- 2.0	88	27+	50	21	0	0	60	72	2.01	- 2.32	0.76	8	6	0.0	0	4.6	15	35	SE	2	3	11	16	7.4	50
WATERLOO	868	984.1	1015.6	78	55	66.2	- 3.9	88	12	44	18	0	0	57	73	5.09	0.26	1.73	10	9	0.0	0	3.8	13	29	24	27	4	13	13	6.7	
KANSAS																																
CONCORDIA	1470	960.7	1012.8	82	60	71.2	- 3.0	91	22	50	6	3	0	62	75	8.48	4.28	1.72	15	16	0.0	0	7.3	13	42	SW	27	2	13	15	7.1	66
DODGE CITY	2582	922.8	1011.7	83	61	72.3	- 2.1	93	19	49	6	8	0	61	73	4.76	1.73	1.39	13	15	0.0	0	7.2	16	59	SW	3	7	8	15	6.3	67
GOODLAND	3645	887.2	1011.7	80	56	67.9	- 1.8	97	22	45	6+	2	0	55	70	3.46	0.80	0.75	16	17	0.0	0	8.0	15	39	34	7+	8	7	15	6.4	
TOPEKA	876	982.7	1014.0	82	64	73.1	- 1.6	90	29+	56	15	2	0	65	78	10.14	5.63	2.10	15	15	0.0	0	4.7	14	31	NW	7	1	9	20	7.8	62
WICHITA	1321	965.8	1012.6	86	67	76.3	- 0.2	98	30	58	6	9	0	65	70	8.00	3.79	4.98	10	12	0.0	0	7.6	15	34	SW	27	6	9	15	6.8	60
KENTUCKY																																
COVINGTON	869	986.1	1017.3	84	60	71.9	0.1	93	29	46	19	3	0	58	66	0.95	- 2.94	0.64	8	4	0.0	0	0.9	20	21	1	11	5	14	11	6.5	
LEXINGTON	966	982.7	1017.7	82	61	71.3	- 2.3	88	28+	51	19+	0	0	58	66	3.28	- 1.44	1.92	8	6	0.0	0	1.5	19	31	24	30	7	12	11	6.3	
LOUISVILLE	474	999.7	1016.9	84	63	73.4	0.0	92	22	53	19	3	0	63	72	2.27	- 1.72	1.02	5	7	0.0	0	0.8	18	29	NW	2	6	11	13	6.6	66
LOUISIANA																																
ALEXANDRIA	92	1011.9	1016.3	90	65	77.5	- 2.2	94	30	54	20	18	0	67	76	1.25	- 3.04	0.32	5	5	0.0	0	1.1	18	21	29	15	8	18	4	5.1	
BATON ROUGE	64	1013.9	1016.5	90	68	79.1	- 1.8	93	15+	61	20	22	0	68	74	1.83	- 2.26	1.50	3	11	0.0	0	1.8	12	25	17	22	8	19	3	5.0	
LAKE CHARLES	14	1014.6	1015.6	91	70	80.1	- 1.1	94	15+	64	8	19	0	69	75	1.49	- 3.23	0.78	5	10	0.0	0	3.9	15	35	12	7	11	16	3	4.6	
NEW ORLEANS	3	1015.2	1016.1	89	68	78.5	- 1.6	92	30+	59	20	9	0	70	76	2.21	- 2.22	0.89	11	8	0.0	0	1.8	13	25	33	15	8	17	5	4.7	
SHREVEPORT	252	1006.1	1015.3	88	69	78.4	- 2.2	93	27	63	20+	8	0	69	77	3.18	- 0.16	1.35	11	12	0.0	0	4.0	17	30	16	10	10	11	9	5.2	67
MAINE																																
CARIBOU	624			73	49	61.1	2.1	90	28	36	2	1	0			1.25	- 2.82	0.63	12		0.0	0						3	13	14	6.8	
PORTLAND	61	1012.5	1015.1	76	50	63.1	1.0	89	29+	40	17	0	0	52	69	2.27	- 0.91	0.95	12	7	0.0	0	2.8	26	35	NW	10	8	11	11	5.9	64
MARYLAND																																
BALTIMORE	148	1012.2	1017.7	82	59	70.1	- 2.4	96	29+	46	5	6	0	59	72	1.94	- 1.35	0.81	9	4	0.0	0	2.5	25	40	SW	2	12	9	9	5.3	60
MASSACHUSETTS																																
BLUE HILL OBS P	629			76	55	65.4	0.3	90	23	42	4	1	0			2.70	- 1.05	1.06	12		0.0	0			34	SSW	21+					70
BOSTON	15	1014.6	1015.5	77	58	67.4	- 0.4	91	23+	46	4	4	0	54	67	2.99	- 0.49	1.24	10	5	0.0	0	4.7	27	28	N	13	7	15	8	5.4	72
NANTUCKET	43	1015.9	1016.3	67	54	60.4	- 0.9	78	30	43	15	0	0	53	80	1.10	- 1.82	0.62	9	4	0.0	0	5.9	24	31	NW	13	6	13	11	6.0	66
PITTSFIELD	1170			75	48	61.4	- 1.7	89	23	36	4	0	0			2.27	- 2.01	1.40	11		0.0	0										
WORCESTER	986	980.0	1016.5	74	53	63.7	- 0.9	90	7	42	4	1	0	48	60	3.14	- 0.70	1.36	11	6	0.0	0	5.2	28	25	30	13+	8	14	8	5.7	
MICHIGAN																																
ALPENA	689			73	45	59.2	- 1.4	89	27	30	3	0	1			2.95	0.28	1.41	7		0.0	0			26	SW	20	14	9	7	4.4	82
DETROIT	619	994.9	1017.6	79	57	67.8	- 1.9	92	28	45	3	2	0	53	61	2.11	- 0.72	1.43	9	4	0.0	0	0.9	32	46	NW	28	10	14	6	5.1	75
DETROIT M WAYNE CO	633	993.6	1017.4	80	53	66.8	- 1.6	94	28	44	3	4	0	53	63	2.28	- 1.03	1.40	9	4	0.0	0	0.4	26				8	13	9	5.2	
DETROIT WILLOW RUN	711	989.8	1017.9	78	51	64.8	- 4.8	93	28	39	4	2	0	52	63	1.70	- 1.58	0.94	8	4	0.0	0	1.4	30	35	18	6	11	11	8	5.0	
FLINT	770	990.2	1017.6	79	52	65.4	- 0.3	94	28	40	4+	2	0	51	61	1.87	- 1.25	1.08	10	6	0.0	0	1.2	21	27	28	20	8	13	9	5.5	
GRAND RAPIDS	784	988.8	1017.6	79	53	65.9		91	27	43	13+	2	0	53	66	2.89		0.90	8	8	0.0	0	0.5	21	52	W	20	10	10	10	5.6	70
HOUGHTON LAKE	1150	976.6	1018.4	75	48	61.4		86	27	35	3	0	0	48	63	2.43		1.24	6	6	0.0	0	1.3	26	35	26	20	12	11	7	4.9	
LANSING	841	986.5	1017.7	79	52	65.2	- 2.2	93	28	39	3	3	0	55	70	2.18	- 1.16	1.04	11	6	0.0	0	1.2	25	32	W	20	10	12	8	5.4	70
MARQUETTE U	677			70	50	60.1	0.0	91	27	37	15	1	0			1.51	- 1.95	0.54	9		0.0	0			29	SW	27	12	10	8	4.9	76
MUSKEGON	627	994.6	1017.2	79	55	67.1	0.4	91	27	46	3	1	0	52	62	1.27	- 1.43	0.85	8	7	0.0	0	1.5	20	23	21	20	13	8	9	4.7	
SAULT STE MARIE	721	990.9	1017.6	69	46	57.3	- 1.7	81	19	38	11	0	0	47	71	3.71	0.41	1.00	10	6	0.0	0	2.1	29	35	30	28	8	11	11	5.8	65
MINNESOTA																																
DULUTH	1428	965.5	1016.8	69	47	58.0	- 0.8	82	11	37	17	0	0	46	67	4.51	0.24	1.48	12	6	0.0	0	1.9	12	37	NE	2	5	13	12	6.1	64

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days			Average relative humidity	Precipitation			No. of days		Snow, Sleet		Wind		Fastest mile			No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MINNESOTA																																
INTERNATIONAL FALLS	1179	972.6	1015.4	72	47	59.5	- 0.4	84	11	39	30	0	0	49	71	4.03	0.16	1.20	16	7	0.0	0	3.3	19	32	26	27	7	12	11	6.2	
MINNEAPOLIS	834	985.8	1015.7	76	57	66.5	- 0.3	88	27	48	10	0	0	52	61	4.01	0.01	1.17	10	6	0.0	0	2.6	14	35	W	27	9	7	14	6.0	70
ROCHESTER	1297	969.2	1016.4	75	56	65.4	- 1.6	85	28+	46	17	0	0	53	66	1.53	- 2.93	C.58	9	10	0.0	0	4.3	17	29	20	27	10	6	14	6.0	
ST CLOUD	1034	977.7	1015.3	75	54	64.8	- 0.4	89	27	46	30	0	0		67	6.43	1.94	2.59	9		0.0	0						7	10	13	6.4	
MISSISSIPPI																																
JACKSON	310	1005.1	1016.8	89	66	77.7		93	30+	57	20	14	0	67	75	2.54	- 3.23	0.82	8	6	0.0	0	1.6	15	26	NW	14	9	15	6	5.1	66
MERIDIAN	290	1006.1	1017.3	88	65	76.6	- 2.9	95	3	54	20	11	0	66	76	5.61	1.54	1.77	11	9	0.0	0	1.1	16	23	30	30+	7	11	12	5.8	
VICKSBURG U	234			87	70	78.6	- 1.1	92	30	65	20+	9	0			2.58	- 0.88	1.28	6		0.0	0			31	NW	13+	13	12	5	4.5	81
MISSOURI																																
COLUMBIA	778	987.5	1015.1	83	65	73.9	- 0.1	91	29+	55	17	3	0	62	69	7.55	3.21	2.91	12	15	0.0	0	3.7	15	29	N	29	4	10	16	6.9	74
KANSAS CITY	742	987.8	1014.1	84	66	74.6	- 1.3	93	29	57	16	3	0	62	68	7.50	2.93	2.61	13	11	0.0	0	4.1	14	57	N	29	1	10	19	7.6	65
SAINT JOSEPH	811			85	65	74.8	0.8	91	3	55	15	2	0	62	70	8.30	2.37	1.60	13	12	0.0	0	4.2	14	21	32	28+	2	16	12	6.8	
ST LOUIS	535	995.9	1016.2	85	65	75.1	1.0	93	28	53	18	5	0	61	63	3.03	- 1.26	0.76	10	10	0.0	0	2.1	15	31	N	20	7	11	12	6.1	62
SPRINGFIELD	1268	970.9	1015.6	84	63	73.3	- 0.9	90	27	53	16	1	0	65	78	6.77	1.75	1.45	12	12	0.0	0	5.3	16	30	NE	3	7	9	14	5.9	56
MONTANA																																
BILLINGS	3567	888.6	1011.1	74	49	61.4	- 3.7	86	23+	38	8	0	0	47	64	2.30	- 0.25	0.97	15	11	0.0	0	1.3	32	40	NW	30	7	14	9	5.9	62
GLASGOW	2284			73	50	61.9	- 0.4	84	12	41	8	0	0			4.64	1.66	1.13	15		0.0	0						5	13	12	6.3	
GREAT FALLS	3662	885.9	1011.6	73	48	60.3	0.4	90	11	34	7+	1	0	43	57	5.37	2.47	1.89	13	6	0.7	T	3.6	25	32	SW	23	5	14	11	6.1	75
HAVRE	2582			72	48	60.0	- 1.0	88	11	36	8	0	0			4.72	1.99	1.96	16		0.0	0			59	W	12	8	13	9	5.6	68
HELENA	3828	878.8	1012.2	73	46	59.5	0.0	88	11	36	8	0	0	41	56	3.85	1.62	1.28	11	7	0.0	0	4.2	28	38	W	23	9	13	8	5.2	70
KALISPELL	2965	908.9	1012.6	69	43	56.0	- 2.6	90	11	32	8+	1	2	41	61	2.73	0.52	0.97	11	2	0.0	0	0.9	16	36	1	6	11	6	13	6.1	
MILES CITY	2629	919.7	1011.2	78	52	64.9	- 0.7	87	24+	42	8+	0	0	48	60	3.46	0.75		13	11	0.0		1.5	15								
MISSOULA	3190	902.1	1013.3	71	43	57.2	- 1.3	92	11	32	28	1	1	42	62	1.55	- 0.36	0.78	6	2	0.0	0	3.9	31	43	NE	6	11	7	12	5.8	61
NEBRASKA																																
GRAND ISLAND	1841	948.5	1013.5	80	59	69.7	- 1.3	91	22	48	6	2	0	59	73	5.21	1.42	1.65	13	17	0.0	0	5.6	14	35	18	25	5	11	14	6.9	
LINCOLN U	1150			80	62	70.8	- 2.3	90	22	54	21	1	0			10.71	6.21	3.74	16		0.0	0			51	NE	2	1	11	18	7.5	47
NORFOLK	1544			80	59	69.3	- 1.6	91	22	48	21	2	0			3.61	- 0.65	2.47	12		0.0	0						4	9	17	7.3	
NORTH PLATTE	2775	915.3	1011.5	78	56	67.1	- 2.0	88	22+	40	6	0	0	59	79	6.81	3.56	3.80	11	11	0.0	0	6.0	13	38	S	30	5	9	16	6.9	53
OMAHA	978	979.7	1014.3	82	62	71.8	- 1.3	92	22	51	21	2	0	62	72	5.15	0.62	2.77	14	11	0.0	0	4.4	16	29	S	27	1	11	18	7.4	60
SCOTTSBLUFF	3957	877.8	1011.3	75	54	64.4	- 2.5	85	21	44	6	0	0	54	73	6.53	3.43	1.32	18	16	0.0	0	4.2	13	35	23	1	10	6	14	6.2	
VALENTINE	2587			79	57	67.8	0.3	90	21	49	7+	1	0			4.23	1.12	1.27	9		0.0	0						8	5	17	6.6	55
NEVADA																																
ELKO	5050	842.9	1011.5	75	40	57.7	- 2.3	87	22+	33	27+	0	0	39	54	1.21	0.50	0.60	8	6	0.0	0	2.0	23	25	13	16+	14	7	9	5.1	
ELY	6253	807.0	1009.7	72	38	55.2	- 3.4	84	22	30	3	0	1	30	44	1.25	0.75	0.43	8	7	0.0	0	3.8	20	33	SW	25	10	8	12	5.8	78
LAS VEGAS	2162	932.6	1007.3	92	64	78.0	- 4.9	103	30	52	17	20	0	30	19	T	- 0.04	T	0	3	0.0	0	4.9	21	46	SW	25	16	10	4	3.5	84
RENO	4404	863.9	1011.8	78	40	59.2	- 0.9	89	21	32	13+	0	2	39	52	1.31	0.94	0.37	9	7	0.0	0	2.6	27	35	W	13	12	10	8	4.7	80
WINNEMUCCA	4299	865.2	1011.1	78	45	61.2	- 0.3	92	11	33	27	1	0	37	46	0.95	0.19	0.51	10	7	0.0	0	1.5	30	35	NE	12	13	9	8	4.8	61
NEW HAMPSHIRE																																
CONCORD	342	1003.4	1015.8	78	47	62.5	- 2.0	90	7	35	26+	1	0	50	66	2.72	- 0.88	1.02	12	6	0.0	0	2.0	27	25	SW	23	9	12	9	5.7	62
MT WASHINGTON OBS	6262			49	36	42.5	- 2.4	64	23	25	1	0	12			8.15	1.65	2.70	17	9	7.9	4						2	10	18	7.8	33
NEW JERSEY																																
ATLANTIC CITY	64	1015.6	1017.9	79	56	67.6	- 2.4	96	29+	41	4	5	0	57	72	1.24	- 1.59	0.46	10	6	0.0	0	3.3	24	24	7	16	9	10	11	5.3	67
ATLANTIC CITY U	11			75	61	68.0	- 1.0	94	29	53	4	3	0			1.87	- 1.17	0.73	10						47	NW	29					
NEWARK	11	1015.9	1017.0	82	61	71.6	- 0.7	97	23	51	4	9	0	53	57	1.23	- 2.21	0.73	10	4	0.0	0	3.4	27	27	31	13	11	10	9	5.5	
TRENTON U	56			80	60	70.2	- 0.8	94	29+	48	4	4	0			2.17	- 1.43	1.13	12		0.0	0			27	NW	14	9	12	9	5.5	64
NEW MEXICO																																
ALBUQUERQUE	5310	836.4	1009.3	85	54	69.4	- 5.5	95	30+	44	11	9	0	34	35	0.99	0.42	0.36	9	8	0.0	0	3.5	21	43	SW	4	14	8	8	4.2	74
CLAYTON	4969			79	54	66.8	- 3.4	91	22	45	6	2	0			3.96	2.48	1.15	16		0.0	0						8	9	13	5.8	
RATON	6379			76	47	61.6	- 3.8	87	30+	40	6+	0	0			11.93	10.23	5.60	11		0.0	0						7	7	16	6.5	
ROSWELL	3617			94	60	77.0	- 0.1	101	27+	50	11+	26	0			1.09	0.04	1.07	3	3	0.0	0			29	23	1	11	13	6	4.6	69
SILVER CITY	5373			86	52	69.0	- 5.6	98	29	42	26	8	0			0.13	- 0.45	0.08	4		0.0	0						20	5	5	2.9	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

JUNE 1965

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90° F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	F.	°F.	°F.	°F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW YORK																																
ALBANY	275	1006.1	1016.6	81	53	66.9	- 0.4	96	28	38	4	7	0	51	57	1.91	- 1.34	0.70	15	6	0.0	0	3.3	29	37	N	12	8	10	12	6.2	58
BINGHAMTON	1590	959.4	1017.7	73	53	63.1	- 0.4	88	23	41	3	0	0	51	69	1.90	- 1.95	1.16	11	4	0.0	0	4.1	29	32	SW	23	5	11	14	6.5	71
BUFFALO	705	992.2	1017.6	74	54	64.3	- 0.5	87	27	40	4+	0	0	53	68	1.50	- 1.04	0.49	8	4	0.0	0	4.1	25	36	SW	28	5	14	11	6.4	65
NEW YORK U	132	1014.2	1017.5	80	60	70.1	- 1.3	95	29	52	4+	5	0	52	57	1.27	- 2.04	0.69	10	4	0.0	0	2.0	25	25	NW	13	14	8	8	4.6	70
J.F. KENNEDY	15	1016.3	1017.1	78	58	67.9	- 2.2	95	29	50	17+	3	0	55	68	1.12	- 2.23	0.37	10	2	0.0	0	3.1	22	24	20	28+	8	13	9	5.5	
NEW YORK LA GUARDIA	11	1015.2	1017.0	81	64	72.5	1.0	95	29+	55	4	6	0	53	54	1.14	- 2.24	0.57	9	4	0.0	0	2.6	26	29	NW	13	9	12	9	5.4	
ROCHESTER	547	998.0	1018.2	77	52	64.4	- 2.5	92	28	36	4	2	0	48	58	0.64	- 1.92	0.28	8	5	0.0	0	4.2	27	31	SW	28+	10	8	12	5.7	72
SYRACUSE	410	1002.4	1017.0	75	52	63.7	- 3.6	94	28	36	3	1	0	52	67	2.04	- 0.92	0.64	13	7	0.0	0	3.8	29	43	W	7	8	12	10	5.7	56
NORTH CAROLINA																																
ASHEVILLE	2140	943.8	1019.3	77	57	66.8		84	29+	45	20	0	0	60	85	4.12	- 0.39	1.79	16	8	0.0	0	0.5	1	21	33	19+	6	8	16	6.8	52
CAPE HATTERAS R	7	1018.0	1018.3	79	67	73.2	- 2.0	85	30+	57	1	0	0	66	80	6.72	2.58	2.89	11	9	0.0	0	2.6	22	27	SSW	10	10	10	10	5.7	70
CHARLOTTE	735	990.9	1018.0	83	64	73.3	- 3.8	91	30+	54	19	3	0	63	75	5.30	1.69	1.98	10	6	0.0	0	0.2	3	23	N	29	7	6	17	6.6	60
GREENSBORO	897	987.1	1018.5	82	63	72.8	- 2.0	91	29+	55	19+	6	0	63	75	7.99	4.52	3.16	14	5	0.0	0	0.1	23	29	NW	29	7	6	17	6.8	46
RALEIGH	434	1002.4	1018.1	82	62	71.9	- 3.2	92	30+	48	5	3	0	62	75	8.32	4.62	3.02	10	5	0.0	0	0.9	23	18	2	25+	8	8	14	6.4	54
WILMINGTON	28	1017.3	1018.6	85	67	76.2	- 1.5	92	30	53	5	4	0	65	72	9.38	5.12	2.80	12	7	0.0	0	1.7	23	43	NE	14	6	13	11	6.4	72
NORTH DAKOTA																																
BISMARCK	1647	953.9	1013.1	74	52	63.0	- 1.5	81	3	42	10+	0	0	51	68	2.57	- 0.83	1.12	14	6	0.0	0	2.8	16	42	SW	19	4	8	18	6.9	60
FARGO	896	982.1	1014.6	76	52	63.9	- 0.9	88	19	40	8	0	0	51	65	3.10	0.06	0.81	8	4	0.0	0	2.9	17	38	NW	27	5	9	16	6.8	61
WILLISTON	1899			75	52	63.4	0.3	85	25	38	23	0	0			2.03	- 1.28	0.60	11		0.0	0			42	NW	27	8	5	17	6.4	62
OHIO																																
AKRON	1208	974.3	1018.3	79	55	66.9	- 2.5	90	28	44	4	1	0	54	67	2.04	- 2.22	0.73	12	5	0.0	0	0.6	17	35	33	23	9	13	8	5.4	
CINCINNATI OBS	761			85	63	73.5	0.1	93	29+	54	18+	4	0			1.63	- 2.55	0.85	7		0.0	0			20	SW	29					57
CLEVELAND	777	988.8	1017.6	77	57	66.9	- 0.3	93	28	46	25+	2	0	55	67	3.05	- 0.38	1.36	13	4	0.0	0	1.0	23	33	SW	23	7	16	7	5.6	63
COLUMBUS	812	988.2	1017.9	81	58	69.4	- 1.4	91	29	46	25	2	0	55	63	2.42	- 1.74	1.08	8	4	0.0	0	0.5	9	26	SW	1	7	11	12	5.9	64
DAYTON	1002	982.1	1017.6	84	60	71.8	0.3	94	27	50	15	4	0	57	64	1.44	- 2.66	0.53	8	5	0.0	0	1.2	18	32	NW	1	7	14	9	5.8	80
MANSFIELD	1295			77	54	65.2	- 2.6	87	28+	44	15+	0	0			1.84	- 2.39	0.76	12	6	0.0	0						8	13	9	5.6	
TOLEDO	676	992.9	1017.8	79	54	66.9	- 1.4	92	27+	45	13	3	0	55	69	2.57	- 1.22	0.76	8	5	0.0	0	0.8	33	33	SW	6	8	15	7	5.4	72
YOUNGSTOWN	1178	976.0	1018.3	77	54	65.4	- 1.7	89	28	42	4	0	0	52	64	2.95	- 0.63	1.67	10	6	0.0	0	0.7	28	23	32	1	9	10	11	5.4	
OKLAHOMA																																
OKLAHOMA CITY	1280	967.8	1013.2	88	68	78.0	0.0	96	30	62	18	13	0	65	68	3.65	- 0.82	0.96	9	10	0.0	0	9.7	16	54	NW	1	7	12	11	5.8	68
TULSA	650	990.2	1014.1	89	68	78.1	0.8	97	30	59	18	14	0	66	70	3.76	- 0.93	1.26	8	7	0.0	0	8.0	17	38	SE	5	7	15	8	5.7	77
OREGON																																
ASTORIA	8	1017.6	1018.3	64	49	56.2	- 1.1	75	30	41	22	0	0	48	73	0.75	- 2.27	0.52	7	0	0.0	0	5.1	27	20	29	29+	1	9	20	7.6	
BURNS U	4151	871.0	1012.2	75	46	60.5	0.7	85	23+	31	27	0	1	39	49	1.93	1.05	0.74	9		0.0	0	3.9	33				13	8	9	4.8	
EUGENE	359	1003.4	1016.8	74	47	60.7	- 0.2	92	30	37	27	1	0	49	69	0.44	- 0.98	0.30	3	0	0.0	0	3.1	34	20	23	13	11	6	13	5.7	
MEACHAM	4050			65	45	54.8	1.1	80	10	33	27	0	0			2.14	- 0.31	1.26	6		0.0	0						12	6	12	5.1	
MEDFORD	1298	967.8	1015.1	81	48	64.5	0.3	95	20+	34	27	9	0	45	56	1.05	0.03	0.80	5	3	0.0	0	3.3	31	31	13	30	12	9	9	4.8	
PENDLETON	1482	960.4	1013.4	79	53	66.0	0.2	94	10	45	1	1	0	39	41	1.10	- 0.07	0.73	4	0	0.0	0	5.3	27	36	26	26+	15	7	8	4.5	
PORTLAND	21	1015.2	1016.6	74	50	61.8	- 0.2	93	30	41	27	1	0	49	66	0.83	- 0.84	0.43	3	0	0.0	0	4.9	31	21	SW	13	9	11	10	5.5	66
SALEM	196	1009.8	1017.2	74	44	58.9	- 1.7	91	30	35	27	1	0	49	71	1.11	- 0.34	0.85	3	0	0.0	0	3.1	33	21	30	10	12	7	11	5.3	
SEXTON SUMMIT R	3836	883.2	1014.3	67	43	55.1	- 0.6	82	29	34	26+	0	0			0.45	- 1.08	0.23	4		0.0	0			33	34	20	13	8	9	4.7	
PACIFIC AREA																																
CANTON ISLAND	8			88	77	82.7	- 1.1	91	4	74	12	4	0			2.10	- 0.55	0.48	12		0.0	0						4	17	9	6.3	
ENIWETOK	13	1010.8	1011.4	87	78	82.7	- 0.1	90	27	75	13	1	0	75	78	1.82	- 1.55	0.62	14		0.0	0	13.5	8								
TAGUAC GUAM R	361			86	73	79.4	- 0.8	89	4	65	23	0	0			5.35	- 0.52	1.21	23		0.0	0			23	E	12					50
JOHNSTON	7	1014.6	1015.2	83	74	78.8	- 1.5	84	29+	69	8	0	0	70	74	1.08	0.24	0.46	15	0	0.0	0	16.4	10	33	NE	4	10	18	2	4.7	87
KOROR R	94	1006.8	1010.5	86	75	80.6	- 0.5	89	24+	71	16	0	0	76	88	19.85	6.87	4.39	26	5	0.0	0	0.8	25	24	SW	15	0	0	30	9.9	33
KWAJALEIN	8	1010.2	1011.0	86	76	81.1	- 0.3	88	26+	72	27+	0	0	75	83	12.55	3.87	2.41	23	0	0.0	0	13.0	7	30	8	27+	0	10	20	8.1	
MAJURO WB AIRPORT	10	1010.5	1010.7	85	77	81.2	0.9	87	26+	74	16+	0	0	75	82	11.45	- 1.39	2.53	25	2	0.0	0	9.9	8	23	NE	5+	0	6	24	8.3	46
MARCUS ISLAND	20			87	76	81.5		90	27	73	3	1	0			0.10	- 0.49	0.03	6		0.0	0			22	E	8	10	16	4	4.6	90
PONAPE R	123	1005.1	1010.4	87	74	80.4	0.3	89	13	70	22	0	0	75	87	18.73	2.03	3.21	29	2	0.0	0	5.5	7	19	NE	30	0	2	28	9.3	36
TRUK MOEN ISLAND	5	1009.8	1010.1	86	75	80.1	- 0.6	88	24+	70	1	0	0	75	83	12.17	0.30	3.61	23	1	0.0	0	5.0	6	25	SE	1	1	4	25	9.1	53
WAKE	11	1015.2	1015.4	84	75	79.4	- 2.0	86	30+	71	6	0	0	71	78	1.41	- 0.49	0.83	14	0	0.0	0	10.6	6	26	4	8	4	18	8	6.0	
YAP R	55	1008.1	1009.9	86	76	81.0	- 0.9	90	12	74	29+	1	0	76	86	10.88	0.16	2.96	28	0	0.0	0	2.0	8	34	S	27+	0	0	30	9.9	39

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average dew point	Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90° F. or above	Min. 32° F. or below			Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PENNSYLVANIA																																
ALLENTOWN	376	1003.7	1017.4	80	56	68.3	- 1.1	95	23	44	4	5	0	53	63	1.81	- 2.26	1.04	9	6	0.0	0	3.4	26	26	32	19+	11	9	10	5.3	
ERIE	732	991.5	1018.2	74	55	64.5	- 2.2	91	28	42	3	1	0	53	67	3.75	0.70	1.03	9	6	0.0	0	2.2	23	30	26	23	11	12	7	4.9	
HARRISBURG	338	1005.1	1017.6	83	60	71.7	0.4	97	23	46	4	8	0	55	59	2.60	- 0.82	1.20	9	5	0.0	0	2.4	28	25	NW	23+	10	11	9	5.7	66
PHILADELPHIA	5	1016.3	1017.3	80	60	70.0	- 1.0	94	23	48	14	4	0	56	64	2.85	- 1.20	1.04	11	8	0.0	0	2.4	27	30	W	2	10	11	9	5.5	66
PITTSBURGH	1137	974.3	1018.0	79	55	66.9	- 1.5	87	29+	44	18+	0	0	53	64	2.31	- 1.47	0.50	10	5	0.0	0	1.3	29	32	22	23	5	12	13	6.0	61
READING U	266			82	61	71.5	- 0.7	95	23	49	4	7	0			0.81	- 2.91	0.29	11		0.0	0			42	NW	19	14	9	7	4.7	66
SCRANTON	930	984.1	1017.9	80	56	68.0	- 0.2	94	23	42	4	6	0	52	62	1.22	- 2.69	0.72	8	3	0.0	0	1.9	26	28	NW	1	11	11	8	5.5	73
WILLIAMSPORT	527	999.0	1017.9	78	52	65.2	- 4.0	91	28	39	4	2	0	54	70	1.75	- 1.48	0.57	12	3	0.0	0	2.4	29	23	20	23	11	11	8	5.0	
RHODE ISLAND																																
BLOCK ISLAND	110			68	54	61.0	- 1.9	80	29+	44	4	0	0			1.82	- 0.74	1.44	6		0.0	0						10	13	7	5.2	
PROVIDENCE	51	1013.9	1016.1	79	55	67.0	0.8	91	23	44	4	4	0	51	61	1.91	- 0.85	1.40	8	3	0.0	0	3.7	26	29	32	13	9	13	8	5.3	74
SOUTH CAROLINA																																
CHARLESTON	41	1016.3	1018.1	85	67	76.1	- 3.1	94	3	59	19+	2	0	67	77	6.68	1.70	2.78	17	11	0.0	0	2.4	20	52Y	SW	3	5	9	16	7.1	54
CHARLESTON U	9			83	71	77.2	- 2.4	90	3	62	18+	1	0			8.08	3.83	2.61	16		0.0	0			32	W	3					
COLUMBIA	217	1009.8	1018.0	85	66	75.5	- 4.2	95	30	58	20+	9	0	65	74	8.20	4.35	1.62	15	10	0.0	0	0.7	24	32	2	30	7	7	16	6.6	59
GNVLE-SPARTANBURG	957	984.1	1018.1	82	64	72.7	- 5.6	90	30+	55	19	2	0	62	73	8.62	5.73	3.09	10	7	0.0	0	0.4	1	22	NE	15	7	8	15	6.8	47
SOUTH DAKOTA																																
ABERDEEN	1296	967.2	1013.6	77	53	65.1	- 1.5	90	19	40	8	1	0	53	68	2.11	- 1.65	0.64	12	6	0.0	0	1.9	15	35	30	27	4	9	17	7.3	
HURON	1282	967.5	1013.4	77	54	65.5	- 2.1	86	19	40	8	0	0	58	78	3.49	0.35	1.04	16	9	0.0	0	3.6	13	29	S	26+	3	12	15	6.9	54
RAPID CITY	3165	902.8	1012.0	76	54	64.5	- 0.4	83	24+	43	8	0	0	53	69	3.56	0.48	1.07	16	14	0.0		2.4	11	42	N	7	4	12	14	6.6	43
SIOUX FALLS	1418	963.4	1014.3	76	55	65.5	- 2.6	85	22+	46	21+	0	0	58	79	4.91	0.56	1.69	16	13	0.0	0	3.7	15	29	19	27	5	9	16	7.0	
TENNESSEE																																
BRISTOL	1507	965.1	1018.6	83	60	71.2	- 2.0	90	29	48	19	1	0	61	76	3.45	0.07	1.48	9	3	0.0	0	0.5	2	17	24	2	3	13	14	6.7	
CHATTANOOGA	670	993.6	1018.0	83	64	73.3	- 4.8	90	30	52	19	1	0	65	80	4.92	1.22	1.92	13	9	0.0	0	1.4	17	24	W	4	6	7	17	6.9	57
KNOXVILLE	980	983.4	1018.3	83	65	73.9	- 1.8	89	22+	53	19	0	0	65	76	4.84	1.51	1.66	13	7	0.0	0	0.9	26	37	W	2	4	11	15	6.9	56
MEMPHIS	263	1006.4	1016.4	88	69	78.1	- 0.4	94	29	57	19	11	0	68	72	0.98	- 2.70	0.30	10	5	0.0	0	3.1	18	25	N	30	8	10	12	6.0	62
NASHVILLE	590	995.6	1016.9	84	66	75.1	- 2.3	92	29	54	19	1	0	63	70	2.74	- 0.51	1.01	13	9	0.0	0	2.5	18	29	NW	2	8	11	11	6.0	68
OAK RIDGE	905			82	61	71.4	- 3.1	88	23	49	19	0	0			5.75	2.51	1.49	12		0.0	0						8	10	12	5.8	
TEXAS																																
ABILENE	1762	951.9	1011.9	89	70	79.3	- 1.0	94	15+	62	5+	16	0	65	65	3.70	1.03	1.54	6	6	0.0	0	9.7	16	36	W	4	10	15	5	4.5	68
AMARILLO	3604	889.9	1010.3	84	60	72.1	- 4.9	95	7	49	6	4	0	56	64	10.73	7.84	3.09	15	14	0.0	0	10.6	17	38	SE	24	8	16	6	5.4	70
AUSTIN	597	992.2	1013.9	90	72	80.7	- 1.2	94	14	63	6+	20	0	69	73	0.89	- 2.33	0.53	3	3	0.0	0	6.7	16	24	SE	4	5	18	7	5.6	59
BROWNSVILLE	16	1011.9	1012.6	91	75	82.7	0.0	94	14	69	12	25	0	71	73	0.07	- 2.89	0.05	2	0	0.0	0	13.1	14	31	SE	5	11	17	2	4.3	79
CORPUS CHRISTI	41	1011.5	1013.2	91	73	82.2	- 0.1	95	24+	69	14	23	0	73	77	1.99	- 0.40	0.51	8	1	0.0	0	10.8	14	30	S	5	8	20	2	5.0	64
DALLAS	481	996.6	1013.7	89	72	80.6	- 0.7	93	30+	63	5	17	0	69	70	2.78	- 0.46	0.83	7	6	0.0	0	9.6	16	34	W	5	8	15	7	5.4	59
DEL RIO	1026	976.0	1011.3	93	71	81.9		100	14	64	5	27	0	67	64	2.03		1.21	3	8	0.0	0	10.9	13	35	12	4	3	18	9	6.0	
EL PASO	3918	879.1	1007.5	92	64	78.2	- 2.8	100	30+	53	11+	24	0	40	29	0.66	- 0.03	0.47	5	2	0.0	0	3.0	22	40	SW	23	22	5	3	2.2	92
FORT WORTH	537	993.9	1013.9	90	70	79.9	- 1.6	95	30+	63	5	18	0	67	67	1.50	- 1.48	0.62	7	6	0.0	0	8.1	16	43	35	15	7	18	5	5.3	
GALVESTON U	7			86	78	81.7	0.0	89	18+	68	6	0	0			2.45	- 0.20	1.32	5		0.0	0			40	S	6					71
HOUSTON U	41			91	76	83.1	0.9	96	14	67	7	19	0			1.30	- 2.53	1.09	5		0.0	0										
HOUSTON	50	1012.5	1014.8	92	74	83.0	1.4	95	30+	67	7	27	0	71	72	3.06	- 0.63	1.70	8	6	0.0	0	6.9	15	44	17	5	6	18	6	5.3	70
LUBBOCK	3243	902.1	1010.5	90	65	77.5	0.0	97	26	54	6	18	0	61	62	1.44	- 1.09	0.80	5	5	0.0	0	12.7	16	39	34	21	11	10	9	5.1	
MIDLAND	2851	913.6	1009.4	91	67	79.0	- 2.2	99	14	57	5	21	0		56	0.90	- 0.73	0.80	3	3	0.0	0	11.7	17	28	17	25+	12	12	6	4.4	
PORT ARTHUR	16	1014.6	1015.2	90	72	81.2	0.6	94	28	66	7+	18	0	72	77	2.41	- 1.88	2.07	4	5	0.0	0	4.8	16	41	N	15	6	20	4	5.2	69
SAN ANGELO	1903	946.2	1010.9	93	70	81.4	- 1.1	103	14	61	5	24	0	64	59	2.01	0.19	1.24	4	4	0.0	0	8.2	17	23	19	26+	11	16	3	4.3	
SAN ANTONIO	788	986.1	1013.6	91	72	81.6	- 0.3	95	14	64	5	23	0	69	71	2.42	- 0.53	1.51	4	3	0.0	0	8.6	15	33	SE	19	4	21	5	5.2	57
VICTORIA	104	1009.8	1013.9	91	73	82.0	0.7	94	17	68	7+	22	0	72	76	4.88	1.84	2.06	9	5	0.0	0	7.8	14	48Y	E	6	4	22	4	5.8	
WACO	500	995.9	1013.6	91	74	82.6	0.6	96	15+	65	5	25	0	66	61	0.82	- 1.85	0.80	2	2	0.0	0	9.6	16	25	16	26+	6	21	3	4.9	
WICHITA FALLS	994	977.0	1012.7	90	66	77.8	- 4.0	95	30+	61	19+	14	0	66	70	3.88	0.68	1.53	10	11	0.0	0	8.4	16	41	34	15	8	17	5	5.1	
UTAH																																
MILFORD	5028			79	44	61.8	- 3.6	92	30	36	18	2	0			0.62	0.19	0.37	7		0.0	0						12	6	12	5.0	
SALT LAKE CITY	4220	868.3	1009.7	80	50	64.8	- 2.6	93	30	42	3	4	0	41	47	1.87	0.89	0.84	7	9	0.0	0	2.3	17	34	S	25	9	10	11	5.4	76
WENDOVER	4237			78	57	67.7	- 2.1	91	23+	42	16	4	0			1.13	0.67	0.42	7		0.0	0						12	8	10	4.7	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90°F. or above	Temperature: No. of days: Min. 32°F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Sleet: Total	Precipitation: Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
VERMONT																																
BURLINGTON	332	1003.1	1015.6	76	50	62.9	- 1.3	92	7	33	3	2	0	51	68	4.08	0.59	1.81	15	10	0.0	0	1.1	26	32	NW	23	5	14	11	6.4	66
VIRGINIA																																
LYNCHBURG	916			80	59	69.4	- 3.6	89	29+	51	20	0	0			2.04	- 2.02	1.50	9	4	0.0	0			23	NE	16+	7	10	13	6.5	61
NORFOLK	26	1016.9	1017.9	81	64	72.8	- 2.8	94	29	49	5	7	0	63	75	4.69	1.08	2.09	10	4	0.0	0	2.9	17	34	NE	16+	6	11	13	6.1	60
RICHMOND	162	1012.2	1018.2	81	61	70.7	- 4.4	92	29+	45	5	7	0	60	73	3.39	- 0.36	2.14	12	4	0.0	0	1.1	22	35	N	30	8	10	12	6.1	60
ROANOKE	1149	976.6	1018.3	80	59	69.7	- 3.7	90	29	50	19	1	0	58	70	1.83	- 1.97	1.23	10	5	0.0	0	1.5	26	21	32	29+	7	9	14	6.6	
WASHINGTON																																
OLYMPIA	195	1009.8	1017.1	73	45	59.1	0.0	89	30	37	1	0	0	48	70	0.33	- 1.46	0.28	4	0	0.0	0	3.1	24	22	22	13	10	9	11	5.8	
SEATTLE TACOMA	400	1000.7	1017.0	71	50	60.8	1.0	89	30	46	26+	0	0	46	63	0.59	- 0.99	0.47	4	0	0.0	0	1.7	27	20	23	17	10	7	13	5.8	57
SPOKANE	2356	929.6	1012.3	75	48	61.3	- 0.6	89	10	37	29	0	0	40	50	0.74	- 0.75	0.69	5	0	0.0	0	2.9	22	25	NW	11	12	10	8	5.2	73
STAMPEDE PASS R	3958			59	41	49.9	1.0	72	30+	33	27+	0	0			0.37	- 3.72	0.23	9		0.0	36						10	9	11	5.4	
TATOOSH ISLAND R	101	1014.6	1017.7	57	48	52.6	- 1.3	61	30+	47	19+	0	0	48	87	0.85	- 1.99	0.39	6	0	0.0	0	6.5	21	34	S	7	7	12	11	6.0	46
WALLA WALLA U	949			79	55	66.9	- 0.3	94	10	47	27	1	0			0.87	- 0.35	0.71	5		0.0	0			21	SW	26	16	6	8	4.3	81
YAKIMA	1052	974.6	1012.6	80	49	64.5	0.1	90	10	43	1	1	0	41	44	0.51	- 0.30	0.44	3	0	0.0	0	4.1	31	28	34	3	11	14	5	4.6	
WEST INDIES																																
SAN JUAN P.R.	15	1015.9	1018.3	86	75	80.3	0.3	89	20+	71	2	0	0	73	79	10.96	5.30	3.55	20	4	0.0	0	7.4	10	25	E	28	0	13	17	7.7	54
SWAN ISLAND	28			86	78	82.0	- 0.3	88	7	74	22+	0	0			4.10	- 2.36	1.43	11		0.0	0						3	13	14	7.0	
WEST VIRGINIA																																
BECKLEY	2504	931.6	1018.4	75	55	65.0		83	23+	44	19+	0	0	56	75	3.13	- 1.35	1.22	9	6	0.0	0	2.7	20	29	26	2	2	9	19	7.6	
CHARLESTON	939	983.7	1017.5	81	59	70.0	- 2.0	90	23	47	14	1	0	57	67	2.18	- 1.51	1.10	8	4	0.0	0	2.2	21	24	23	2	5	13	12	6.6	
ELKINS	1970	948.5	1019.0	77	51	63.8	- 3.3	85	28+	40	14+	0	0	55	77	2.21	- 2.98	0.81	10	4	0.0	0	1.4	27	26	31	23+	5	9	16	7.1	
HUNTINGTON	827	987.8	1017.4	83	61	71.9	- 0.1	91	29	50	19	3	0	61	72	4.35	0.25	1.03	10	5	0.0	0	1.5	19	18	24	7+	3	14	13	6.5	
PARKERSBURG U	615			82	61	71.2	- 1.4	90	29	50	4	1	0			1.26	- 3.01	0.41	10		0.0	0			19	N	30					56
WISCONSIN																																
GREEN BAY	682	992.2	1017.5	76	51	63.6	- 1.9	92	27	42	14	1	0	52	65	1.89	- 1.47	0.74	7	7	0.0	0	0.9	22	45	W	20	14	9	7	4.3	75
LA CROSSE	651	992.6	1016.9	78	55	66.3	- 2.5	90	27	46	17	1	0	54	68	3.51	- 0.69	1.80	10	8	0.0	0	3.2	17	35	23	20	10	11	9	5.4	
MADISON	858	985.8	1016.9	79	49	64.2	- 1.9	92	27	36	13	1	0	52	65	2.31	- 1.64	1.01	7	6	0.0	0	1.9	16	54	SW	27	7	13	10	5.8	76
MILWAUKEE	672	993.2	1018.3	74	53	63.1	- 0.2	95	27	44	15+	2	0	52	68	0.85	- 2.79	0.61	5	5	0.0	0	1.0	7	41	W	27	14	9	7	4.3	83
WYOMING																																
CASPER	5338	835.8	1010.6	73	47	60.1	- 3.0	84	30+	36	6	0	0	42	57	2.47	1.22	1.10	11	10	0.0	0	2.0	24	32	29	1	7	13	10	6.1	
CHEYENNE	6126	812.1	1011.9	71	48	59.3	- 3.7	84	22	39	6+	0	0	45	67	4.03	1.92	1.45	17	18	0.0	0	2.8	20	42	W	7	6	9	15	6.7	60
LANDER	5563	827.3	1010.3	73	48	60.4	- 1.6	87	30	43	28+	0	0	41	54	2.07	0.71	0.98	10	7	0.0	0	3.4	25	42	SW	26+	7	11	12	6.1	57
SHERIDAN	3964	876.7	1012.0	74	46	59.9	- 2.0	84	18	35	14	0	0			2.15	- 0.42	0.89	15	17	0.0	0	1.0	22	35	NW	3	5	11	14	6.9	59

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.
A Maximum hourly average.
B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		'C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
ALABAMA																																
BIRMINGHAM	189	995.3	1017.5	29.4	18.3	23.9	-2.4	33.9	4	12.2	19	4	0	18.3	75	208	106	88	11	7	0	0	0.8	12	12.1	N	24	6	14	10	6.2	59
HUNTSVILLE	183	994.6	1017.4	30.0	19.4	24.7	-1.2	33.3	30+	13.3	19	6	0	18.9	72	147	61	39	15	10	0	0	1.2	16	15.6	33	30+	7	9	14	6.2	
MOBILE	64	1008.5	1016.2	31.7	21.1	26.3	-1.2	35.0	30	17.2	19	12	0	20.6	76	94	- 64	28	13	13	0	0	1.4	15	10.7	22	25	8	13	9	5.8	
MONTGOMERY	59	1010.2	1017.3	30.6	20.0	25.3	-1.1	34.4	30	12.8	19	6	0	20.0	77	70	- 36	24	12	10	0	0	0.8	12	12.5	S	14	6	8	16	6.8	44
ALASKA												B																				
ANCHORAGE PRK STRIP	26			13.9	7.2	10.5	-2.0	16.1	24+	5.0	6+	0	0			24	- 1	10	11		0	0										
ANCHORAGE	44	1007.1	1011.8	15.0	8.3	11.6		17.8	15	4.4	5	0	0	3.9	60	24		11	9	0	0	0	2.4	18	12.5	17	15	0	3	27	9.2	27
ANNETTE	34	1014.2	1018.3	15.6	6.1	10.8	-1.6	22.8	29	2.8	3	3	0	6.1	76	125	- 19	56	11	0	0	0	1.2	20	14.3	15	10	2	9	19	7.7	
BARROW	7	1014.9	1015.7	1.7	- 2.8	- 0.7	-1.3	13.9	30	-10.6	3	0	25	- 2.2	90	1	- 8	1	2	0	8	76	5.5	9	13.9	9	8	1	6	23	8.6	
BARTER ISLAND	12	1012.9	1014.6	1.1	- 2.2	- 0.6	-1.8	7.8	30+	- 9.4	3	0	24	- 1.7	91	2	- 11	1	5	0	18	127	5.8	8	16.5	8	8	4	4	22	8.2	
BETHEL	38	1002.7	1008.3	13.3	5.0	9.2	-1.7	21.7	28	1.7	21	1	0	5.0	77	18	- 12	5	11	0	0	0	0.5	18	11.6	7	2	1	3	26	8.7	
COLD BAY	29	1001.7	1005.3	8.9	5.0	6.9	-0.5	13.9	30	2.2	1	0	0	3.9	83	65	15	12	20	0	0	0	3.4	17	22.4	15	2	0	0	30	9.5	
FAIRBANKS	133	991.9	1008.8	18.3	7.2	12.9	-1.8	26.1	8	2.8	5	7	0	5.6	65	29	- 6	19	12	4	0	0	0.4	22	11.2	18	15	0	7	23	8.4	
JUNEAU	4	1015.6	1016.4	13.9	4.4	9.2	-2.1	23.3	8	- 0.6	13	1	1	6.1	82	79	- 7	17	18	0	0	0	2.5	12	14.3	13	19	2	6	22	8.2	39
KING SALMON	13	1005.8	1007.8	12.2	3.3	7.8	-3.0	17.8	27	- 1.7	12	0	3	3.3	77	39	4	15	16	0	0	0	2.4	15	20.6	9	5	0	5	25	8.8	
KOTZEBUE	3	1008.5	1009.0	10.0	3.3	6.7	0.1	18.9	26	- 1.1	18	0	3	3.3	80	3	- 9	2	4	0	T	T	1.9	30	14.3	29	20	3	8	19	7.7	
MC GRATH	102	995.9	1008.6	17.2	5.6	11.5	-2.1	23.9	27	1.1	21+	4	0	3.9	63	21	- 21	5	15	3	0	0	0.3	21	11.2	24	24	0	3	27	8.7	
NOME	4	1007.5	1008.2	10.6	3.3	6.9	-0.8	19.4	29	- 0.6	19+	0	3	3.3	79	25	2	8	8	0	T	0	0.6	15	14.3	25	18	3	8	19	7.4	36
ST. PAUL ISLAND	7	1004.4	1005.3	6.7	2.2	4.3	-0.6	10.0	28	- 0.6	2	0	3	3.3	95	24	- 5	6	20	0	41	T	3.0	3	19.7	5	5	0	0	30	9.9	
SHEMYA	37	1006.4	1010.2	7.2	4.4	5.7	0.3	10.0	30	1.7	17+	0	0	3.9	88	30	- 3	8	16	0	T	0	2.2	34	14.3	24	17+	0	5	25	9.0	
YAKUTAT	9	1013.9	1015.0	10.0	3.3	6.8	-3.4	17.2	8	- 0.6	14	0	1	5.0	87	412	284	102	20	0	0	0	1.5	14	15.6	14	19	0	5	25	9.1	
ARIZONA																																
FLAGSTAFF	2131	787.0	1012.5	21.1	2.2	11.7	-3.6	27.2	30+	- 3.3	27	0	8	- 2.8	41	8	- 10	3	6	4	0	0	2.5	18	11.6	16	15	13	9	8	4.2	
PHOENIX	340	969.9	1007.8	36.1	16.1	26.1	-2.6	41.7	29	10.6	3	27	0	2.8	24	23	21	21	2	2	0	0	0.5	18	21.0Y	SW	23	24	3	3	2.2	95
TUCSON	788	922.1	1007.8	34.4	16.7	25.3	-2.8	40.0	29	11.1	4	23	0	- 0.6	20	T	- 7	T	1	1	0	0	2.1	21	14.8	E	23	24	4	2	2.0	92
WINSLOW	1492	849.6	1010.4	30.0	9.4	19.8	-3.7	36.7	29	2.8	27	9	0	- 2.2	28	8	2	6	4	6	0	0	3.1	20	19.7	20	23	14	8	8	4.1	
YUMA	59	1000.7	1007.9	35.6	18.9	27.2	-3.4	41.7	29	14.4	26	25	0	5.0	26	0		0	0	0	0	0	2.1	22	12.5	W	25	25	3	2	1.5	96
ARKANSAS																																
FORT SMITH	137	999.0	1015.3	31.1	19.4	25.3	-0.6	34.4	30	16.1	20+	9	0	19.4	73	68	- 42	18	9	10	0	0	1.1	13	9.8	NE	24+	8	11	11	5.9	71
LITTLE ROCK	78	1006.4	1015.8	31.1	20.0	25.7	-0.4	34.4	30+	13.9	20	13	0	20.0	73	63	- 28	16	9	9	0	0	0.9	19	13.4	S	22	8	12	10	5.5	77
TEXARKANA	113	1003.1	1015.8	31.1	20.0	25.6	-0.8	33.9	30	15.6	20	10	0	20.6	76	87	- 12	26	8	8	0	0	1.7	17				12	9	9	5.1	
CALIFORNIA																																
BAKERSFIELD	151	994.2	1011.6	30.0	15.6	22.9	-2.1	36.1	11	10.6	15	13	0	7.2	38	T	- 2	T	0	0	0	0	2.6	33	13.4	30	25	25	4	1	1.6	
BISHOP	1252			29.4	9.4	19.5	-1.5	35.0	11	5.6	17	10	0			6	3	6	2		0	0						12	13	5	4.1	
BLUE CANYON	1609			19.4	9.4	14.3	-0.8	26.1	20+	2.8	15	0	0			25	2	15	5		0	0			10.3	18	14	16	11	3	3.8	
BURBANK	221	987.5	1013.1	22.8	12.8	17.8	-2.2	30.6	28	9.4	27	0	0	11.1	70	2	1	1	2	0	0	0	2.7	17	7.2	17	15+	9	14	7	5.0	
EUREKA U	13			13.3	8.9	11.1	-2.0	16.1	20	7.8	28+	0	0			9	- 10	8	3	0	0	0			14.3	NW	16	7	7	16	6.9	47
FRESNO	100	1000.3	1011.8	30.6	13.3	21.9	-1.8	37.2	29	8.9	26	12	0	9.4	49	T	- 2	T	0	0	0	0	3.2	32	13.4	NW	25	20	9	1	2.2	94
LONG BEACH	10	1012.9	1014.1	21.1	13.3	17.3	-2.4	26.7	28	10.0	27+	0	0	10.6	70	1		1	1	0	0	0	1.8	23	8.0	17	16+	7	12	11	6.0	
LOS ANGELES	30	1010.2	1013.7	20.0	14.4	17.2	-1.1	22.2	27	11.1	26	0	0	11.1	72	1	- 1	1	2	0	0	0	3.1	25	10.7Y	W	2	5	12	13	6.6	
LOS ANGELES U	82			21.7	13.9	17.8	-2.2	26.1	29+	11.1	26	0	0			T	- 1	T	1		0	0			7.6	SW	19+	7	10	13	6.3	38
MT SHASTA R	1080			23.3	7.2	15.1	-0.6	31.1	10	1.7	14	0	0			23	- 9	11	6		0	0										
OAKLAND	2	1014.2	1014.6	18.9	12.2	15.5	-1.6	24.4	28	10.6	27+	0	0	10.0	74	T	- 3	T	0	0	0	0	4.6	28	15.6	29	25	12	9	9	5.0	
RED BLUFF	104	998.6	1011.1	30.6	15.6	22.9	-1.6	38.9	20	10.6	8	13	0			T	- 11	T	0	0	0	0	0.9	17	11.6	NW	25	19	7	4	2.9	91
SACRAMENTO	5	1011.2	1012.1	27.8	11.1	19.4	-1.9	35.6	28	7.8	15	6	0	9.4	60	T	- 3	T	0	0	0	0	4.0	21	12.5	SW	11	18	10	2	2.7	95
SANDBERG R	1377			21.1	9.4	15.2	-3.0	29.4	10	0.6	26	0	0			0	- 1	0	0		0	0			20.6	34	12	23	2	5	2.7	
SAN DIEGO	4	1013.2	1014.1	20.0	15.0	17.6	-1.4	22.2	30+	12.8	27	0	0	11.1	70	T	- 1	T	1	0	0	0	2.3	26	9.4	S	15	4	9	17	7.3	47
SAN FRANCISCO	2	1014.6	1015.1	18.9	10.6	14.6	-1.7	26.7	28	8.3	16+	0	0	8.3	73	T	- 3	T	0	0	0	0	4.5	27	18.8	WNW	25	11	12	7	4.7	
SAN FRANCISCO U	16			16.1	11.1	13.4	-1.6	23.3	28	9.4	4	0	0			T	- 4	T	0		0	0			17.9	W	25					52
SAN A CATALINA	478			17.8	11.1	14.4	-2.2	28.3	28	9.4	18+	0	0			4	1	2	3	0	0	0						6	7	17	6.8	
SANTA MARIA	72			20.0	9.4	14.6	-0.7	24.4	28	5.6	14	0	0			T	- 4	T	0		0	0						11	14	5	4.5	
COLORADO																																
ALAMOSA	2297			22.8	5.6	14.2	-1.4	28.9	29	0.6	26+	0	0			45	33	24	11		0	0						10	11	9	5.1	
COLORADO SPRINGS	1873	810.7	1011.0	23.3	10.0	16.7	-1.4	30.6	22	4.4	6	0	0	7.2	61	203	163	66	13	17	0	0	1.3	14	20.1	11	17	6	8	16	6.6	
DENVER	1610	835.1	1009.8	24.4	11.1	17.7	-1.4	30.6	22	6.1	2	0	0	8.9	62	105	69	70	11	17	0	0	1.1	16	17.0	NW	7	8	9	13	6.3	61
GRAND JUNCTION	1480	849.3	1008.3	28.9	13.9	21.3	-0.6	33.9	22+	9.4	5	5	0	3.3	36	34	23	21	5	5	0	0	0.3	12	21.9	NE	4	10	11	9	5.2	63
PUEBLO	1428	853.7	1009.5	29.4	12.2	20.9	-0.8	35.0	22	7.2	6+	8	0	8.9	54	71	40	42	10	12	0	0	1.4	11	20.6	S	15	9	8	13	5.7	74

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
CONNECTICUT																																
BRIDGEPORT	2	1016.6	1017.4	24.4	13.9	19.3	-0.7	30.6	22+	8.3	4	0	0	12.2	68	36	- 50	26	9	3	0	0	1.9	25	16.1	31	13	11	14	5	4.9	
HARTFORD	52	1009.8	1016.1	27.8	13.3	20.5	0.1	36.1	23	6.7	4	9	0	12.2	61	50	- 44	23	11	4	0	0	0.9	26	13.4	NW	13	5	14	11	6.2	72
NEW HAVEN	2			24.4	13.9	19.0	0.0	32.8	29	8.3	4	1	0			37	- 53	23	7		0	0			11.6	NW	13	10	11	9	5.1	79
DELAWARE																																
WILMINGTON	24	1014.6	1017.5	27.2	15.6	21.2	-0.7	35.0	23	9.4	14+	4	0	13.9	67	41	- 62	24	9	6	0	0	1.0	25	11.2	4	16	9	11	10	5.6	
DIST.OF COLUMBIA																																
WASH NATL AP	4	1015.6	1017.8	28.3	16.7	22.6	-0.9	35.0	23	10.6	18+	10	0	15.0	66	48	- 34	21	9	3	0	0	1.0	19	15.2	NW	10	8	12	10	5.7	64
FLORIDA																																
APALACHICOLA U	4			28.9	21.7	25.3	-1.5	32.2	3	18.3	4	1	0			465	331	114	19	9	0	0			14.8	S	4	5	12	13	6.4	58
DAYTONA BEACH	9	1017.6	1018.9	30.0	20.6	25.2	-0.6	33.3	16+	15.0	3	3	0	20.0	79	229	81	72	15	14	0	0	1.7	12	17.9	26	13	8	8	14	6.4	
FORT MYERS	5	1017.6	1017.8	31.7	21.7	26.7	-0.4	33.9	23	17.8	3	14	0	21.7	79	198	- 30	57	16	18	0	0	1.7	10	13.0	29	4	7	13	10	6.0	
JACKSONVILLE	7	1017.3	1018.3	30.0	20.6	25.5	-1.6	34.4	30	15.6	21	6	0	20.0	76	249	88	90	16	12	0	0	1.4	15	17.4	S	25+	7	10	13	6.4	54
KEY WEST	1	1015.9	1016.7	31.7	26.7	28.9	1.3	32.2	29+	23.3	9	7	0	23.3	72	62	- 39	31	9	10	0	0	4.2	11	16.1	SE	10	4	16	10	6.1	72
LAKELAND U	65			30.6	21.1	25.8	-1.2	33.9	16	18.9	3	6	0			189	7	42	15		0	0						4	12	14	6.9	64
MIAMI	2	1017.3	1017.5	30.6	23.9	27.1	-0.1	32.2	4	20.6	19+	1	0	21.7	73	166	- 21	43	13	10	0	0	3.1	11	13.9	32	19	2	16	12	6.9	
ORLANDO	33	1014.2	1018.6	31.1	21.1	26.1	-1.3	33.3	30+	17.2	3	14	0	20.0	78	187	10	66	13	12	0	0	1.7	12	12.5	22	14	6	10	14	6.6	
PENSACOLA	34	1012.9	1017.0	30.0	21.1	25.6	-1.7	33.3	30+	17.8	1	4	0	21.7	81	231	93	80	14		0	0	1.4	16	21.0	SW	7					60
TALLAHASSEE	18	1015.6	1017.9	31.7	20.6	26.1	-0.7	36.1	3	16.7	21+	16	0	19.4	72	321	154	134	15	15	0	0	1.0	15	13.0	20	15	4	13	13	6.8	
TAMPA	6	1017.6	1017.9	31.7	21.1	26.4	-0.6	35.0	6	16.1	3	13	0	20.0	74	185	1	66	10	14	0	0	1.4	12	12.5	24	18	5	11	14	6.7	62
WEST PALM BEACH	5	1017.6	1018.2	30.6	22.2	26.4	-0.8	33.3	13	16.7	3	4	0	20.6	71	224	32	72	11	12	0	0	3.1	11	16.5	27	16	7	9	14	6.4	
GEORGIA																																
ATHENS	244	989.5	1018.1	28.3	18.3	23.4	-1.9	33.3	30+	14.4	20+	4	0	18.3	77	225	52	54	25	0	0	0	0.4	33	11.2	6	22+	0	11	19	7.8	45
ATLANTA	308	982.1	1018.3	26.7	17.8	22.1	-2.7	31.1	30	12.8	19	0	0	17.8	80	6	- 2	3	8	0	0	0	5.3	6	12.1	NE	29	7	17	6	5.6	82
AUGUSTA	44	1012.5	1017.6	30.6	18.3	24.4	-1.7	35.0	30+	12.8	19	13	0	18.3	76	2	- 3	1	3	0	0	0	6.1	6	14.8	NE	13	5	21	4	5.2	
COLUMBUS	117			30.6	18.9	24.7	-1.7	33.9	30+	13.3	20	7	0	19.4	79	32	- 5	7	16	0	0	0	5.0	6	10.3	E	12	3	20	7	6.1	46
MACON	108	1005.8	1018.5	30.0	18.9	24.3	-2.8	33.9	30	12.8	20	9	0	19.4	80																	
ROME	194			28.9	17.2	23.1	-1.6	32.2	29+	10.0	19	3	0																			
SAVANNAH	14	1016.6	1018.5	30.0	19.4	24.7	-1.8	34.4	3	14.4	20+	6	0	19.4	77	153	54	52	10	6	0	0	0.3	8	9.4	31	30	4	10	16	7.2	
																182	84	56	10	8	0	0	0.6	11	10.3	NW	3	4	9	17	7.3	40
HAWAII																144	67	45	8	9	0	0	0.5	17	27.7	8	10	4	10	16	7.2	
HILO	9	1016.9	1018.2	27.8	19.4	23.4	-0.1	29.4	25+	16.7	24	0	0	18.9	77	261	107	68	17		0	0	0.5	10	10.3	32	30	3	9	18	7.3	
HONOLULU	2	1017.3	1017.8	29.4	22.8	26.2	0.7	30.0	30+	21.1	25+	0	0	18.3	64	230	145	126	15	11	0	0	0.5	12	14.8	NW	3	4	10	16	7.3	45
KAHULUI	15	1014.9	1017.3	29.4	20.6	24.8	-0.3	31.7	14	17.2	25+	0	0			150	54	50	14		0	0										
LIHUE	35	1013.9	1019.1	27.2	22.2	24.7	-0.1	27.8	30+	21.1	25+	0	0	18.9	72	143	14	46	15	11	0	0	0.9	18	11.6	SW	8	8	6	16	6.6	51
IDAHO																																
BOISE	865	912.3	1010.6	25.6	10.6	18.2	-0.6	35.0	11	5.0	27	2	0	6.1	49	30	8	11	7	3	0	0	1.3	29	12.1	NW	11	15	5	10	4.6	77
IDAHO FALLS 42NW R	1460			23.9	5.6	14.6	-0.9	31.1	23	- 0.6	18	0	1			36	5	15	8				0.9	24	12.5	NNW	9					
IDAHO FALLS 46W R	1503			23.3	6.1	14.7	-0.8	31.1	23	1.1	18	0	0			47	20	24	7		0	0	1.5	24	17.9	S	23					
LEWISTON	431			26.1	10.6	18.4	0.2	32.8	10	6.1	28	1	0			24	- 20	12	6	0	0	0						10	10	10	5.3	
POCATELLO	1358	860.1	1010.6	24.4	7.2	15.9	-1.2	32.2	23	1.7	18	1	0	4.4	52	28	4	21	6	2	0	0	2.6	23	12.5	SW	18+	12	8	10	5.0	75
ILLINOIS																																
CAIRO U	96			30.0	20.0	24.9	-0.6	33.9	29	16.1	19+	8	0			111	6	28	10		0	0			14.3	N	8	7	13	10	5.8	74
CHICAGO O HARE	201	992.9	1017.3	25.0	11.7	18.3	-1.7	32.2	27	6.7	30+	1	0	12.8	71	87	- 13	23	9	4	0	0	0.4	7	14.3	31	20	11	10	9	5.2	
CHICAGO MIDWAY	185	994.9		26.1	15.0	20.5	-0.9	34.4	27	8.9	13	4	0	11.7	60	73	- 30	24	8	4	0	0	0.8	10	17.9	W	20	12	9	9	5.1	78
MOLINE	177	994.6	1016.0	27.2	14.4	20.9	-1.0	33.9	27	8.3	18	2	0	13.9	67	53	- 58	29	4	3	0	0	1.2	12	13.0	SW	22	8	10	12	6.2	69
PEORIA	199	992.9	1016.5	27.8	16.1	21.8	-0.2	33.9	27	8.9	18	3	0	14.4	67	26	- 77	12	7	7	0	0	1.0	11	13.4	SW	22+	9	10	11	5.6	67
ROCKFORD	221	989.8	1016.5	26.7	13.3	19.9	-1.0	34.4	27	7.8	13	3	0	11.7	61	65	- 44	37	6	3	0	0	0.9	13	14.3	24	5	10	12	8	5.3	
SPRINGFIELD	179	994.2	1016.2	28.9	17.2	22.9	-0.4	33.9	27	10.6	18	4	0	15.6	68	166	53	100	8	10	0	0	0.9	13	17.4	W	8	11	9	10	5.5	71
INDIANA																																
EVANSVILLE	116	1003.1	1016.8	30.0	16.1	23.2	-1.2	35.0	29	10.0	19	7	0	16.7	68	52	- 43	18	9	7	0	0	0.8	18	16.1	W	6	5	16	9	6.0	58
FORT WAYNE	241	987.8	1017.4	26.7	13.9	20.3	-1.1	33.3	22	7.8	4	3	0	13.3	66	55	- 51	18	7	5	0	0	0.0		13.4	NW	28	5	17	8	5.7	74
INDIANAPOLIS	241	988.5	1017.2	27.8	16.1	22.1	0.3	32.8	22	10.0	19+	1	0	14.4	66	89	- 29	32	7	5	0	0	0.4	13	17.9	NW	28	4	14	12	6.5	75
SOUTH BEND	236	989.5	1017.2	26.1	13.3	19.7	-0.8	32.2	28+	7.8	13	3	0	11.7	64	57	- 34	20	11	5	0	0	0.2	19	15.6	31	8	10	10	10	5.4	
IOWA																																
BURLINGTON	212			27.2	15.6	21.3	-1.0	33.3	27	9.4	19	1	0	16.7	72	91	- 36		7	7	0	0	0.6	12	10.3	16	26	9	9	12	5.6	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
IOWA																																
DES MOINES	286	981.4	1015.6	26.7	16.1	21.3	-0.4	31.7	27	11.1	21+	0	0	15.0	70	122	2	48	12	12	0	0	1.7	14	26.8	SW	27	3	11	16	7.0	62
DUBUQUE	325			25.6	12.8	19.2	-0.8	33.3	27	7.8	21+	1	0			43	- 64	12	10		0	0						4	13	13	6.7	
SIOUX CITY	334	974.9	1014.2	26.1	15.6	20.8	-1.1	31.1	27+	10.0	21	0	0	15.6	72	51	- 59	19	8	6	0	0	2.1	15	15.6	SE	2	3	11	16	7.4	50
WATERLOO	265	984.1	1015.6	25.6	12.8	19.0	-2.2	31.1	12	6.7	18	0	0	13.9	73	129	7	44	10	9	0	0	1.7	13	13.0	24	27	4	13	13	6.7	
KANSAS																																
CONCORDIA	448	960.7	1012.8	27.8	15.6	21.8	-1.7	32.8	22	10.0	6	3	0	16.7	75	215	109	44	15	16	0	0	3.3	13	18.8	SW	27	2	13	15	7.1	66
DODGE CITY	787	922.8	1011.7	28.3	16.1	22.4	-1.2	33.9	19	9.4	6	8	0	16.1	73	121	44	35	13	15	0	0	3.2	16	26.4	SW	3	7	8	15	6.3	67
GOODLAND	1111	887.2	1011.7	26.7	13.3	19.9	-1.0	36.1	22	7.2	6+	2	0	12.8	70	88	20	19	16	17	0	0	3.6	15	17.4	34	7+	8	7	15	6.4	
TOPEKA	267	982.7	1014.0	27.8	17.8	22.8	-0.9	32.2	29+	13.3	15	2	0	18.3	78	258	143	53	15	15	0	0	2.1	14	13.9	NW	7	1	9	20	7.8	62
WICHITA	403	965.8	1012.6	30.0	19.4	24.6	-0.1	36.7	30	14.4	6	9	0	18.3	70	203	96	126	10	12	0	0	3.4	15	15.2	SW	27	6	9	15	6.8	60
KENTUCKY																																
COVINGTON	265	986.1	1017.3	28.9	15.6	22.2	0.1	33.9	29	7.8	19	3	0	14.4	66	24	- 75	16	8	4	0	0	0.4	20	9.4	1	11	5	14	11	6.5	
LEXINGTON	294	982.7	1017.7	27.8	16.1	21.8	-1.3	31.1	28+	10.6	19+	0	0	14.4	66	83	- 37	49	8	6	0	0	0.7	19	13.9	24	30	7	12	11	6.3	
LOUISVILLE	144	999.7	1016.9	28.9	17.2	23.0	0.0	33.3	22	11.7	19	3	0	17.2	72	58	- 44	26	5	7	0	0	0.4	18	13.0	NW	2	6	11	13	6.6	66
LOUISIANA																																
ALEXANDRIA	28	1011.9	1016.3	32.2	18.3	25.3	-1.2	34.4	30	12.2	20	18	0	19.4	76	32	- 77	8	5	5	0	0	0.5	18	9.4	29	15	8	18	4	5.1	
BATON ROUGE	20	1013.9	1016.5	32.2	20.0	26.2	-1.0	33.9	15+	16.1	20	22	0	20.0	74	46	- 57	38	3	11	0	0	0.8	12	11.2	17	22	8	19	3	5.0	
LAKE CHARLES	4	1014.6	1015.6	32.8	21.1	26.7	-0.6	34.4	15+	17.8	8	19	0	20.6	75	38	- 82	20	5	10	0	0	1.7	15	15.6	12	7	11	16	3	4.6	
NEW ORLEANS	1	1015.2	1016.1	31.7	20.0	25.8	-0.9	33.3	30+	15.0	20	9	0	21.1	76	56	- 56	23	11	8	0	0	0.8	13	11.2	33	15	8	17	5	4.7	
SHREVEPORT	77	1006.1	1015.3	31.1	20.6	25.8	-1.2	33.9	27	17.2	20+	8	0	20.6	77	81	- 4	34	11	12	0	0	1.8	17	13.4	16	10	10	11	9	5.2	67
MAINE																																
CARIBOU	190			22.8	9.4	16.2	1.2	32.2	28	2.2	2	1	0			32	- 72	16	12		0	0						3	13	14	6.8	
PORTLAND	19	1012.5	1015.1	24.4	10.0	17.3	0.6	31.7	29+	4.4	17	0	0	11.1	69	58	- 23	24	12	7	0	0	1.3	26	15.6	NW	10	8	11	11	5.9	64
MARYLAND																																
BALTIMORE	45	1012.2	1017.7	27.8	15.0	21.2	-1.3	35.6	29+	7.8	5	6	0	15.0	72	49	- 34	21	9	4	0	0	1.1	25	17.9	SW	2	12	9	9	5.3	60
MASSACHUSETTS																																
BLUE HILL OBS R	192			24.4	12.8	18.6	0.2	32.2	23	5.6	4	1	0			69	- 27	27	12		0	0			15.2	SSW	21+					70
BOSTON	5	1014.6	1015.5	25.0	14.4	19.7	-0.2	32.8	23+	7.8	4	4	0	12.2	67	76	- 12	31	10	5	0	0	2.1	27	12.5	N	13	7	15	8	5.4	72
NANTUCKET	13	1015.9	1016.3	19.4	12.2	15.8	-0.5	25.6	30	6.1	15	0	0	11.7	80	28	- 46	16	9	4	0	0	2.6	24	13.9	NW	13	6	13	11	6.0	66
PITTSFIELD	357			23.9	8.9	16.3	-0.9	31.7	23	2.2	4	0	0			58	- 51	36	11	0	0	0										
WORCESTER	301	980.0	1016.5	23.3	11.7	17.6	-0.5	32.2	7	5.6	4	1	0	8.9	60	80	- 18	35	11	6	0	0	2.3	28	11.2	30	13+	8	14	8	5.7	
MICHIGAN																																
ALPENA	210			22.8	7.2	15.1	-0.8	31.7	27	- 1.1	3	0	1			75	7	36	7		0	0			11.6	SW	20	14	9	7	4.4	82
DETROIT	189	994.9	1017.6	26.1	13.9	19.9	-1.1	33.3	28	7.2	3	2	0	11.7	61	54	- 18	36	9	4	0	0	0.4	32	20.6	NW	28	10	14	6	5.1	75
DETROIT M WAYNE CO	193	993.6	1017.4	26.7	11.7	19.3	-0.9	34.4	28	6.7	3	4	0	11.7	63	58	- 26	36	9	4	0	0	0.2	26				8	13	9	5.2	
DETROIT WILLOW RUN	217	989.8	1017.9	25.6	10.6	18.2	-2.7	33.9	28	3.9	4	2	0	11.1	63	43	- 40	24	8	4	0	0	0.6	30	15.6	18	6	11	11	8	5.0	
FLINT	235	990.2	1017.6	26.1	11.1	18.6	-0.2	34.4	28	4.4	4+	2	0	10.6	61	47	- 32	27	10	6	0	0	0.5	21	12.1	28	20	8	13	9	5.5	
GRAND RAPIDS	239	988.8	1017.6	26.1	11.7	18.8		32.8	27	6.1	13+	2	0	11.7	66	73		23	8	8	0	0	0.2	21	23.2	W	20	10	10	10	5.6	70
HOUGHTON LAKE	351	976.6	1018.4	23.9	8.9	16.3		30.0	27	1.7	3	0	0	8.9	63	62		31	6	6	0	0	0.6	26	15.6	26	20	12	11	7	4.9	
LANSING	256	986.5	1017.7	26.1	11.1	18.4	-1.2	33.9	28	3.9	3	3	0	12.8	70	55	- 29	26	11	6	0	0	0.5	25	14.3	W	20	10	12	8	5.4	70
MARQUETTE U	206			21.1	10.0	15.6	0.0	32.8	27	2.8	15	1	0			38	- 50	14	9		0	0			13.0	SW	27	12	10	8	4.9	76
MUSKEGON	191	994.6	1017.2	26.1	12.8	19.5	0.2	32.8	27	7.8	3	1	0	11.1	62	32	- 36	22	8	7	0	0	0.7	20	10.3	21	20	13	8	9	4.7	
SAULT STE MARIE	220	990.9	1017.6	20.6	7.8	14.1	-0.9	27.2	19	3.3	11	0	0	8.3	71	94	10	25	10	6	0	0	0.9	29	15.6	30	28	8	11	11	5.8	65
MINNESOTA																																
DULUTH	435	965.5	1016.8	20.6	8.3	14.4	-0.4	27.8	11	2.8	17	0	0	7.8	67	115	6	38	12	6	0	0	0.8	12	16.5	NE	2	5	13	12	6.1	64
INTERNATIONAL FALLS	359	972.6	1015.4	22.2	8.3	15.3	-0.2	28.9	11	3.9	30	0	0	9.4	71	102	4	30	16	7	0	0	1.5	19	14.3	26	27	7	12	11	6.2	
MINNEAPOLIS	254	985.8	1015.7	24.4	13.9	19.2	-0.2	31.1	27	8.9	10	0	0	11.1	61	102	0	30	10	6	0	0	1.2	14	15.6	W	27	9	7	14	6.0	70
ROCHESTER	395	969.2	1016.4	23.9	13.3	18.6	-0.9	29.4	28+	7.8	17	0	0	11.7	66	39	- 74	15	9	10	0	0	1.9	17	13.0	20	27	10	6	14	6.0	
ST CLOUD	315	977.7	1015.3	23.9	12.2	18.2	-0.2	31.7	27	7.8	30	0	0		67	163	49	66	9		0	0						7	10	13	6.4	
MISSISSIPPI																																
JACKSON	94	1005.1	1016.8	31.7	18.9	25.4		33.9	30+	13.9	20	14	0	19.4	75	65	- 82	21	8	6	0	0	0.7	15	11.6	NW	14	9	15	6	5.1	66
MERIDIAN	88	1006.1	1017.3	31.1	18.3	24.8	-1.6	35.0	3	12.2	20	11	0	18.9	76	142	39	45	11	9	0	0	0.5	16	10.3	30	30+	7	11	12	5.8	
VICKSBURG U	71			30.6	21.1	25.9	-0.6	33.3	30	18.3	20+	9	0			66	- 22	33	6		0	0			13.9	NW	13+	13	12	5	4.5	81

See footnotes at end of table

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	°C.	°C.	°C.	°C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
MISSOURI																																
COLUMBIA	237	987.5	1015.1	28.3	18.3	23.3	-0.1	32.8	29+	12.8	17	3	0	16.7	69	192	82	74	12	15	0	0	1.7	15	13.0	N	29	4	10	16	6.9	74
KANSAS CITY	226	987.8	1014.1	28.9	18.9	23.7	-0.7	33.9	29	13.9	16	3	0	16.7	68	191	74	66	13	11	0	0	1.8	14	25.5	N	29	1	10	19	7.6	65
SAINT JOSEPH	247			29.4	18.3	23.8	0.4	32.8	3	12.8	15	2	0	16.7	70	211	60	41	13	12	0	0	1.9	14	9.4	32	28+	2	16	12	6.8	
ST LOUIS	163	995.9	1016.2	29.4	18.3	23.9	0.6	33.9	28	11.7	18	5	0	16.1	63	77	- 32	19	10	10	0	0	0.9	15	13.9	N	20	7	11	12	6.1	62
SPRINGFIELD	386	970.9	1015.6	28.9	17.2	22.9	-0.5	32.2	27	11.7	16	1	0	18.3	78	172	44	37	12	12	0	0	2.4	16	13.4	NE	3	7	9	14	5.9	56
MONTANA																																
BILLINGS	1087	888.6	1011.1	23.3	9.4	16.3	-2.1	30.0	23+	3.3	8	0	0	8.3	64	58	- 6	25	15	11	0	0	0.6	32	17.9	NW	30	7	14	9	5.9	62
GLASGOW	696			22.8	10.0	16.6	-0.2	28.9	12	5.0	8	0	0			118	42	29	15		0	0						5	13	12	6.3	
GREAT FALLS	1116	885.9	1011.6	22.8	8.9	15.7	0.2	32.2	11	1.1	7+	1	0	6.1	57	136	63	48	13	6	18	T	1.6	25	14.3	SW	23	5	14	11	6.1	75
HAVRE	787			22.2	8.9	15.6	-0.6	31.1	11	2.2	8	0	0			120	51	50	16		0	0			26.4	W	12	8	13	9	5.6	68
HELENA	1167	878.8	1012.2	22.8	7.8	15.3	0.0	31.1	11	2.2	8	0	0	5.0	56	98	41	33	11	7	0	0	1.9	28	17.0	W	23	9	13	8	5.2	70
KALISPELL	904	908.9	1012.6	20.6	6.1	13.3	-1.4	32.2	11	0.0	8+	1	2	5.0	61	69	13	25	11	2	0	0	0.4	16	16.1	1	6	11	6	13	6.1	
MILES CITY	801	919.7	1011.2	25.6	11.1	18.3	-0.4	30.6	24+	5.6	8+	0	0	8.9	60	88	19		13	11	0		0.7	15								
MISSOULA	972	902.1	1013.3	21.7	6.1	14.0	-0.7	33.3	11	0.0	28	1	1	5.6	62	39	- 9	20	6	2	0	0	1.7	31	19.2	NE	6	11	7	12	5.8	61
NEBRASKA																																
GRAND ISLAND	561	948.5	1013.5	26.7	15.0	20.9	-0.7	32.8	22	8.9	6	2	0	15.0	73	132	36	42	13	17	0	0	2.5	14	15.6	18	25	5	11	14	6.9	
LINCOLN U	351			26.7	16.7	21.6	-1.3	32.2	22	12.2	21	1	0			272	158	95	16		0	0			22.8	NE	2	1	11	18	7.5	47
NORFOLK	471			26.7	15.0	20.7	-0.9	32.8	22	8.9	21	2	0			92	- 17	63	12		0	0						4	9	17	7.3	
NORTH PLATTE	846	915.3	1011.5	25.6	13.3	19.5	-1.1	31.1	22+	4.4	6	0	0	15.0	79	173	90	97	11	11	0	0	2.7	13	17.0	S	30	5	9	16	6.9	53
OMAHA	298	979.7	1014.3	27.8	16.7	22.1	-0.7	33.3	22	10.6	21	2	0	16.7	72	131	16	70	14	11	0	0	2.0	16	13.0	S	27	1	11	18	7.4	60
SCOTTSBLUFF	1206	877.8	1011.3	23.9	12.2	18.0	-1.4	29.4	21	6.7	6	0	0	12.2	73	166	87	34	18	16	0	0	1.9	13	15.6	23	1	10	6	14	6.2	
VALENTINE	789			26.1	13.9	19.9	0.2	32.2	21	9.4	7+	1	0			107	28	32	9		0	0						8	5	17	6.6	55
NEVADA																																
ELKO	1539	842.9	1011.5	23.9	4.4	14.3	-1.3	30.6	22+	0.6	27+	0	0	3.9	54	31	13	15	8	6	0	0	0.9	23	11.2	13	16+	14	7	9	5.1	
ELY	1906	807.0	1009.7	22.2	3.3	12.9	-1.9	28.9	22	- 1.1	3	0	1	- 1.1	44	32	19	11	8	7	0	0	1.7	20	14.8	SW	25	10	8	12	5.8	78
LAS VEGAS	659	932.6	1007.3	33.3	17.8	25.6	-2.7	39.4	30	11.1	17	20	0	- 1.1	19	T	- 1	T	0	3	0	0	2.2	21	20.6	SW	25	16	10	4	3.5	84
RENO	1342	863.9	1011.8	25.6	4.4	15.1	-0.5	31.7	21	0.0	13+	0	2	3.9	52	33	24	9	9	7	0	0	1.2	27	15.6	W	13	12	10	8	4.7	80
WINNEMUCCA	1310	865.2	1011.1	25.6	7.2	16.2	-0.2	33.3	11	0.6	27	1	0	2.8	46	24	5	13	10	7	0	0	0.7	30	15.6	NE	12	13	9	8	4.8	61
NEW HAMPSHIRE																																
CONCORD	104	1003.4	1015.8	25.6	8.3	16.9	-1.1	32.2	7	1.7	26+	1	0	10.0	66	69	- 22	26	12	6	0	0	0.9	27	11.2	SW	23	9	12	9	5.7	62
MT WASHINGTON OBS	1909			9.4	2.2	5.8	-1.3	17.8	23	- 3.9	1	0	12			207	42	69	17	9	201	102						2	10	18	7.8	33
NEW JERSEY																																
ATLANTIC CITY	20	1015.6	1017.9	26.1	13.3	19.8	-1.3	35.6	29+	5.0	4	5	0	13.9	72	31	- 40	12	10	6	0	0	1.5	24	10.7	7	16	9	10	11	5.3	67
ATLANTIC CITY U	3			23.9	16.1	20.0	-0.6	34.4	29	11.7	4	3	0			47	- 30	19	10						21.0	NW	29					
NEWARK	3	1015.9	1017.0	27.8	16.1	22.0	-0.4	36.1	23	10.6	4	9	0	11.7	57	31	- 56	19	10	4	0	0	1.5	27	12.1	31	13	11	10	9	5.5	
TRENTON U	17			26.7	15.6	21.2	-0.4	34.4	29+	8.9	4	4	0			55	- 36	29	12		0	0			12.1	NW	14	9	12	9	5.5	64
NEW MEXICO																																
ALBUQUERQUE	1618	836.4	1009.3	29.4	12.2	20.8	-3.1	35.0	30+	6.7	11	9	0	1.1	35	25	11	9	9	8	0	0	1.6	21	19.2	SW	4	14	8	8	4.2	74
CLAYTON	1515			26.1	12.2	19.3	-1.9	32.8	22	7.2	6	2	0			101	63	29	16		0	0						8	9	13	5.8	
RATON	1944			24.4	8.3	16.4	-2.1	30.6	30+	4.4	6+	0	0			303	260	142	11		0	0						7	7	16	6.5	
ROSWELL	1102			34.4	15.6	25.0	-0.1	38.3	27+	10.0	11+	26	0			28	1	27	3	3	0	0			13.0	23	1	11	13	6	4.6	69
SILVER CITY	1638			30.0	11.1	20.6	-3.1	36.7	29	5.6	26	8	0			3	- 11	2	4		0	0						20	5	5	2.9	
NEW YORK																																
ALBANY	84	1006.1	1016.6	27.2	11.7	19.4	-0.2	35.6	28	3.3	4	7	0	10.6	57	49	- 34	18	15	6	0	0	1.5	29	16.5	N	12	8	10	12	6.2	58
BINGHAMTON	485	959.4	1017.7	22.8	11.7	17.3	-0.2	31.1	23	5.0	3	0	0	10.6	69	48	- 50	29	11	4	0	0	1.8	29	14.3	SW	23	5	11	14	6.5	71
BUFFALO	215	992.2	1017.6	23.3	12.2	17.9	-0.3	30.6	27	4.4	4+	0	0	11.7	68	38	- 26	12	8	4	0	0	1.8	25	16.1	SW	28	5	14	11	6.4	65
NEW YORK U	40	1014.2	1017.5	26.7	15.6	21.2	-0.7	35.0	29	11.1	4+	5	0	11.1	57	32	- 52	18	10	4	0	0	0.9	25	11.2	NW	13	14	8	8	4.6	70
J.F. KENNEDY	5	1016.3	1017.1	25.6	14.4	19.9	-1.2	35.0	29	10.0	17+	3	0	12.8	68	28	- 57	9	10	2	0	0	1.4	22	10.7	20	28+	8	13	9	5.5	
NEW YORK LA GUARDIA	3	1015.2	1017.0	27.2	17.8	22.5	0.6	35.0	29+	12.8	4	6	0	11.7	54	29	- 57	14	9	4	0	0	1.2	26	13.0	NW	13	9	12	9	5.4	
ROCHESTER	167	998.0	1018.2	25.0	11.1	18.0	-1.4	33.3	28	2.2	4	2	0	8.9	58	16	- 49	7	8	5	0	0	1.9	27	13.9	SW	28+	10	8	12	5.7	72
SYRACUSE	125	1002.4	1017.0	23.9	11.1	17.6	-2.0	34.4	28	2.2	3	1	0	11.1	67	52	- 23	16	13	7	0	0	1.7	29	19.2	W	7	8	12	10	5.7	56
NORTH CAROLINA																																
ASHEVILLE	652	943.8	1019.3	25.0	13.9	19.3		28.9	29+	7.2	20	0	0	15.6	85	105	- 10	45	16	8	0	0	0.2	1	9.4	33	19+	6	8	16	6.8	52
CAPE HATTERAS R	2	1018.0	1018.3	26.1	19.4	22.9	-1.1	29.4	30+	13.9	1	0	0	18.9	80	171	66	73	11	9	0	0	1.2	22	12.1	SSW	10	10	10	10	5.7	70
CHARLOTTE	224	990.9	1018.0	28.3	17.8	22.9	-2.1	32.8	30+	12.2	19	3	0	17.2	75	135	43	50	10	6	0	0	0.1	3	10.3	N	29	7	6	17	6.6	60

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days		Average dew point	Average relative humidity	Precipitation			No. of days		Snow, Sleet		Wind		Fastest mile (1.6 kilometers)			No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower			Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	°C.	°C.	°C.	°C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
NORTH CAROLINA																																
GREENSBORO	273	987.1	1018.5	27.8	17.2	22.7	-1.1	32.8	29+	12.8	19+	6	0	17.2	75	203	115	80	14	5	0	0	0.0	23	13.0	NW	29	7	6	17	6.8	46
RALEIGH	132	1002.4	1018.1	27.8	16.7	22.2	-1.8	33.3	30+	8.9	5	3	0	16.7	75	211	117	77	10	5	0	0	0.4	23	8.0	2	25+	8	8	14	6.4	54
WILMINGTON	9	1017.3	1018.6	29.4	19.4	24.6	-0.8	33.3	30	11.7	5	4	0	18.3	72	238	130	71	12	7	0	0	0.8	23	19.2	NE	14	6	13	11	6.4	72
NORTH DAKOTA																																
BISMARCK	502	953.9	1013.1	23.3	11.1	17.2	-0.8	27.2	3	5.6	10+	0	0	10.6	68	65	- 21	28	14	6	0	0	1.3	16	18.8	SW	19	4	8	18	6.9	60
FARGO	273	982.1	1014.6	24.4	11.1	17.7	-0.5	31.1	19	4.4	8	0	0	10.6	65	79	2	21	8	4	0	0	1.3	17	17.0	NW	27	5	9	16	6.8	61
WILLISTON	579			23.9	11.1	17.4	0.2	29.4	25	3.3	23	0	0			52	- 33	15	11		0	0			18.8	NW	27	8	5	17	6.4	62
OHIO																																
AKRON	368	974.3	1018.3	26.1	12.8	19.4	-1.4	32.2	28	6.7	4	1	0	12.2	67	52	- 56	19	12	5	0	0	0.3	17	15.6	33	23	9	13	8	5.4	
CINCINNATI OBS	232			29.4	17.2	23.1	0.1	33.9	29+	12.2	18+	4	0			41	- 65	22	7		0	0			8.9	SW	29					57
CLEVELAND	237	988.8	1017.6	25.0	13.9	19.4	-0.2	33.9	28	7.8	25+	2	0	12.8	67	77	- 10	35	13	4	0	0	0.4	23	14.8	SW	23	7	16	7	5.6	63
COLUMBUS	247	988.2	1017.9	27.2	14.4	20.8	-0.8	32.8	29	7.8	25	2	0	12.8	63	61	- 44	27	8	4	0	0	0.2	9	11.6	SW	1	7	11	12	5.9	64
DAYTON	305	982.1	1017.6	28.9	15.6	22.1	0.2	34.4	27	10.0	15	4	0	13.9	64	37	- 68	13	8	5	0	0	0.5	18	14.3	NW	1	7	14	9	5.8	80
MANSFIELD	395			25.0	12.2	18.4	-1.4	30.6	28+	6.7	15+	0	0			47	- 61	19	12	6	0	0						8	13	9	5.6	
TOLEDO	206	992.9	1017.8	26.1	12.2	19.4	-0.8	33.3	27+	7.2	13	3	0	12.8	69	65	- 31	19	8	5	0	0	0.4	33	14.8	SW	6	8	15	7	5.4	72
YOUNGSTOWN	359	976.0	1018.3	25.0	12.2	18.6	-0.9	31.7	28	5.6	4	0	0	11.1	64	75	- 16	42	10	6	0	0	0.3	28	10.3	32	1	9	10	11	5.4	
OKLAHOMA																																
OKLAHOMA CITY	390	967.8	1013.2	31.1	20.0	25.6	0.0	35.6	30	16.7	18	13	0	18.3	68	93	- 21	24	9	10	0	0	4.3	16	24.1	NW	1	7	12	11	5.8	68
TULSA	198	990.2	1014.1	31.7	20.0	25.6	0.4	36.1	30	15.0	18	14	0	18.9	70	96	- 24	32	8	7	0	0	3.6	17	17.0	SE	5	7	15	8	5.7	77
OREGON																																
ASTORIA	2	1017.6	1018.3	17.8	9.4	13.4	-0.6	23.9	30	5.0	22	0	0	8.9	73	19	- 58	13	7	0	0	0	2.3	27	8.9	29	29+	1	9	20	7.6	
BURNS U	1265	871.0	1012.2	23.9	7.8	15.8	0.4	29.4	23+	- 0.6	27	0	1	3.9	49	49	27	19	9		0	0	1.7	33				13	8	9	4.8	
EUGENE	109	1003.4	1016.8	23.3	8.3	15.9	-0.1	33.3	30	2.8	27	1	0	9.4	69	11	- 25	8	3	0	0	0	1.4	34	8.9	23	13	11	6	13	5.7	
MEACHAM	1234			18.3	7.2	12.7	0.6	26.7	10	0.6	27	0	0			54	- 8	32	6		0	0						12	6	12	5.1	
MEDFORD	396	967.8	1015.1	27.2	8.9	18.1	0.2	35.0	20+	1.1	27	9	0	7.2	56	27	1	20	5	3	0	0	1.5	31	13.9	13	30	12	9	9	4.8	
PENDLETON	452	960.4	1013.4	26.1	11.7	18.9	0.1	34.4	10	7.2	1	1	0	3.9	41	28	- 2	19	4	0	0	0	2.4	27	16.1	26	26+	15	7	8	4.5	
PORTLAND	6	1015.2	1016.6	23.3	10.0	16.6	-0.1	33.9	30	5.0	27	1	0	9.4	66	21	- 21	11	3	0	0	0	2.2	31	9.4	SW	13	9	11	10	5.5	66
SALEM	60	1009.8	1017.2	23.3	6.7	14.9	-0.9	32.8	30	1.7	27	1	0	9.4	71	28	- 9	22	3	0	0	0	1.4	33	9.4	30	10	12	7	11	5.3	
SEXTON SUMMIT R	1169	883.2	1014.3	19.4	6.1	12.8	-0.3	27.8	29	1.1	26+	0	0			11	- 27	6	4		0	0			14.8	34	20	13	8	9	4.7	
PACIFIC AREA																																
CANTON ISLAND	2			31.1	25.0	28.2	-0.6	32.8	4	23.3	12	4	0			53	- 14	12	12		0	0						4	17	9	6.3	
ENIWETOK	4	1010.8	1011.4	30.6	25.6	28.2	-0.1	32.2	27	23.9	13	1	0	23.9	78	46	- 39	16	14		0	0	6.0	8								
TAGUAC GUAM R	110			30.0	22.8	26.3	-0.4	31.7	4	18.3	23	0	0			136	- 13	31	23		0	0			10.3	E	12					50
JOHNSTON	2	1014.6	1015.2	28.3	23.3	26.0	-0.8	28.9	29+	20.6	8	0	0	21.1	74	27	6	12	15	0	0	0	7.3	10	14.8	NE	4	10	18	2	4.7	87
KOROR R	29	1006.8	1010.5	30.0	23.9	27.0	-0.3	31.7	24+	21.7	16	0	0	24.4	88	504	174	112	26	5	0	0	0.4	25	10.7	SW	15	0	0	30	9.9	33
KWAJALEIN	2	1010.2	1011.0	30.0	24.4	27.3	-0.2	31.1	26+	22.2	27+	0	0	23.9	83	319	98	61	23	0	0	0	5.8	7	13.4	8	27+	0	10	20	8.1	
MAJURO WB AIRPORT	3	1010.5	1010.7	29.4	25.0	27.3	0.5	30.6	26+	23.3	16+	0	0	23.9	82	291	- 35	64	25	2	0	0	4.4	8	10.3	NE	5+	0	6	24	8.3	46
MARCUS ISLAND	6			30.6	24.4	27.5		32.2	27	22.8	3	1	0			3	- 12	1	6		0	0			9.8	E	8	10	16	4	4.6	90
PONAPE R	37	1005.1	1010.4	30.6	23.3	26.9	0.2	31.7	13	21.1	22	0	0	23.9	87	476	52	82	29	2	0	0	2.5	7	8.5	NE	30	0	2	28	9.3	36
TRUK MOEN ISLAND	2	1009.8	1010.1	30.0	23.9	26.7	-0.3	31.1	24+	21.1	1	0	0	23.9	83	309	8	92	23	1	0	0	2.2	6	11.2	SE	1	1	4	25	9.1	53
WAKE	3	1015.2	1015.4	28.9	23.9	26.3	-1.1	30.0	30+	21.7	6	0	0	21.7	78	36	- 12	21	14	0	0	0	4.7	6	11.6	4	8	4	18	8	6.0	
YAP R	17	1008.1	1009.9	30.0	24.4	27.2	-0.5	32.2	12	23.3	29+	1	0	24.4	86	276	4	75	28	0	0	0	0.9	8	15.2	S	27+	0	0	30	9.9	39
PENNSYLVANIA																																
ALLENTOWN	115	1003.7	1017.4	26.7	13.3	20.2	-0.6	35.0	23	6.7	4	5	0	11.7	63	46	- 57	26	9	6	0	0	1.5	26	11.6	32	19+	11	9	10	5.3	
ERIE	223	991.5	1018.2	23.3	12.8	18.1	-1.2	32.8	28	5.6	3	1	0	11.7	67	95	18	26	9	6	0	0	1.0	23	13.4	26	23	11	12	7	4.9	
HARRISBURG	103	1005.1	1017.6	28.3	15.6	22.1	0.2	36.1	23	7.8	4	8	0	12.8	59	66	- 21	30	9	5	0	0	1.1	28	11.2	NW	23+	10	11	9	5.7	66
PHILADELPHIA	2	1016.3	1017.3	26.7	15.6	21.1	-0.6	34.4	23	8.9	14	4	0	13.3	64	72	- 30	26	11	8	0	0	1.1	27	13.4	W	2	10	11	9	5.5	66
PITTSBURGH	347	974.3	1018.0	26.1	12.8	19.4	-0.8	30.6	29+	6.7	18+	0	0	11.7	64	59	- 37	13	10	5	0	0	0.6	29	14.3	22	23	5	12	13	6.0	61
READING U	81			27.8	16.1	21.9	-0.4	35.0	23	9.4	4	7	0			21	- 74	7	11		0	0			18.8	NW	19	14	9	7	4.7	66
SCRANTON	283	984.1	1017.9	26.7	13.3	20.0	-0.1	34.4	23	5.6	4	6	0	11.1	62	31	- 68	18	8	3	0	0	0.8	26	12.5	NW	1	11	11	8	5.5	73
WILLIAMSPORT	161	999.0	1017.9	25.6	11.1	18.4	-2.2	32.8	28	3.9	4	2	0	12.2	70	44	- 38	14	12	3	0	0	1.1	29	10.3	20	23	11	11	8	5.0	
RHODE ISLAND																																
BLOCK ISLAND	34			20.0	12.2	16.1	-1.1	26.7	29+	6.7	4	0	0			46	- 19	37	6		0	0						10	13	7	5.2	
PROVIDENCE	16	1013.9	1016.1	26.1	12.8	19.4	0.4	32.8	23	6.7	4	4	0	10.6	61	49	- 22	36	8	3	0	0	1.7	26	13.0	32	13	9	13	8	5.3	74

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)				
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm.	M.p.s.		M.p.s.							%
SOUTH CAROLINA																																
CHARLESTON	12	1016.3	1018.1	29.4	19.4	24.5	-1.7	34.4	3	15.0	19+	2	0	19.4	77	170	43	71	17	11	0	0	1.1	20	23.2Y	SW	3	5	9	16	7.1	54
CHARLESTON U	3			28.3	21.7	25.1	-1.3	32.2	3	16.7	18+	1	0			205	97	66	16		0	0			14.3	W	3					
COLUMBIA	66	1009.8	1018.0	29.4	18.9	24.2	-2.3	35.0	30	14.4	20+	9	0	18.3	74	208	110	41	15	10	0	0	0.3	24	14.3	2	30	7	7	16	6.6	59
GNVLE SPARTANBURG	292	984.1	1018.1	27.8	17.8	22.6	-3.1	32.2	30+	12.8	19	2	0	16.7	73	219	146	78	10	7	0	0	0.2	1	9.8	NE	15	7	8	15	6.8	47
SOUTH DAKOTA																																
ABERDEEN	395	967.2	1013.6	25.0	11.7	18.4	-0.8	32.2	19	4.4	8	1	0	11.7	68	54	-42	16	12	6	0	0	0.8	15	15.6	30	27	4	9	17	7.3	
HURON	391	967.5	1013.4	25.0	12.2	18.6	-1.2	30.0	19	4.4	8	0	0	14.4	78	89	9	26	16	9	0	0	1.6	13	13.0	S	26+	3	12	15	6.9	54
RAPID CITY	965	902.8	1012.0	24.4	12.2	18.1	-0.2	28.3	24+	6.1	8	0	0	11.7	69	90	12	27	16	14	0		1.1	11	18.8	N	7	4	12	14	6.6	43
SIOUX FALLS	432	963.4	1014.3	24.4	12.8	18.6	-1.4	29.4	22+	7.8	21+	0	0	14.4	79	125	14	43	16	13	0	0	1.7	15	13.0	19	27	5	9	16	7.0	
TENNESSEE																																
BRISTOL	459	965.1	1018.6	28.3	15.6	21.8	-1.1	32.2	29	8.9	19	1	0	16.1	76	88	2	38	9	3	0	0	0.2	2	7.6	24	2	3	13	14	6.7	
CHATTANOOGA	204	993.6	1018.0	28.3	17.8	22.9	-2.7	32.2	30	11.1	19	1	0	18.3	80	125	31	49	13	9	0	0	0.6	17	10.7	W	4	6	7	17	6.9	57
KNOXVILLE	299	983.4	1018.3	28.3	18.3	23.3	-1.0	31.7	22+	11.7	19	0	0	18.3	76	123	38	42	13	7	0	0	0.4	26	16.5	W	2	4	11	15	6.9	56
MEMPHIS	80	1006.4	1016.4	31.1	20.6	25.6	-0.2	34.4	29	13.9	19	11	0	20.0	72	25	-69	8	10	5	0	0	1.4	18	11.2	N	30	8	10	12	6.0	62
NASHVILLE	180	995.6	1016.9	28.9	18.9	23.9	-1.3	33.3	29	12.2	19	1	0	17.2	70	70	-13	26	13	9	0	0	1.1	18	13.0	NW	2	8	11	11	6.0	68
OAK RIDGE	276			27.8	16.1	21.9	-1.7	31.1	23	9.4	19	0	0			146	64	38	12		0	0						8	10	12	5.8	
TEXAS																																
ABILENE	537	951.9	1011.9	31.7	21.1	26.3	-0.6	34.4	15+	16.7	5+	16	0	18.3	65	94	26	39	6	6	0	0	4.3	16	16.1	W	4	10	15	5	4.5	68
AMARILLO	1098	889.9	1010.3	28.9	15.6	22.3	-2.7	35.0	7	9.4	6	4	0	13.3	64	273	199	78	15	14	0	0	4.7	17	17.0	SE	24	8	16	6	5.4	70
AUSTIN	182	992.2	1013.9	32.2	22.2	27.1	-0.7	34.4	14	17.2	6+	20	0	20.6	73	23	-59	13	3	3	0	0	3.0	16	10.7	SE	4	5	18	7	5.6	59
BROWNSVILLE	5	1011.9	1012.6	32.8	23.9	28.2	0.0	34.4	14	20.6	12	25	0	21.7	73	2	-73	1	2	0	0	0	5.9	14	13.9	SE	5	11	17	2	4.3	79
CORPUS CHRISTI	12	1011.5	1013.2	32.8	22.8	27.9	-0.1	35.0	24+	20.6	14	23	0	22.8	77	51	-10	13	8	1	0	0	4.8	14	13.4	S	5	8	20	2	5.0	64
DALLAS	147	996.6	1013.7	31.7	22.2	27.0	-0.4	33.9	30+	17.2	5	17	0	20.6	70	71	-12	21	7	6	0	0	4.3	16	15.2	W	5	8	15	7	5.4	59
DEL RIO	313	976.0	1011.3	33.9	21.7	27.7		37.8	14	17.8	5	27	0	19.4	64	52		31	3	8	0	0	4.9	13	15.6	12	4	3	18	9	6.0	
EL PASO	1194	879.1	1007.5	33.3	17.8	25.7	-1.6	37.8	30+	11.7	11+	24	0	4.4	29	17	-1	12	5	2	0	0	1.3	22	17.9	SW	23	22	5	3	2.2	92
FORT WORTH	164	993.9	1013.9	32.2	21.1	26.6	-0.9	35.0	30+	17.2	5	18	0	19.4	67	38	-38	16	7	6	0	0	3.6	16	19.2	35	15	7	18	5	5.3	
GALVESTON U	2			30.0	25.6	27.6	0.0	31.7	18+	20.0	6	0	0			62	-5	34	5		0	0			17.9	S	6					71
HOUSTON U	12			32.8	24.4	28.4	0.5	35.6	14	19.4	7	19	0			33	-64	28	5		0	0										
HOUSTON	15	1012.5	1014.8	33.3	23.3	28.3	0.8	35.0	30+	19.4	7	27	0	21.7	72	78	-16	43	8	6	0	0	3.1	15	19.7	17	5	6	18	6	5.3	70
LUBBOCK	988	902.1	1010.5	32.2	18.3	25.3	0.0	36.1	26	12.2	6	18	0	16.1	62	37	-28	20	5	5	0	0	5.7	16	17.4	34	21	11	10	9	5.1	
MIDLAND	869	913.6	1009.4	32.8	19.4	26.1	-1.2	37.2	14	13.9	5	21	0		56	23	-19	20	3	3	0	0	5.2	17	12.5	17	25+	12	12	6	4.4	
PORT ARTHUR	5	1014.6	1015.2	32.2	22.2	27.3	0.3	34.4	28	18.9	7+	18	0	22.2	77	61	-48	53	4	5	0	0	2.1	16	18.3	N	15	6	20	4	5.2	69
SAN ANGELO	580	946.2	1010.9	33.9	21.1	27.4	-0.6	39.4	14	16.1	5	24	0	17.8	59	51	5	31	4	4	0	0	3.7	17	10.3	19	26+	11	16	3	4.3	
SAN ANTONIO	240	986.1	1013.6	32.8	22.2	27.6	-0.2	35.0	14	17.8	5	23	0	20.6	71	61	-13	38	4	3	0	0	3.8	15	14.8	SE	19	4	21	5	5.2	57
VICTORIA	32	1009.8	1013.9	32.8	22.8	27.8	0.4	34.4	17	20.0	7+	22	0	22.2	76	124	47	52	9	5	0	0	3.5	14	21.5Y	E	6	4	22	4	5.8	
WACO	152	995.9	1013.6	32.8	23.3	28.1	0.3	35.6	15+	18.3	5	25	0	18.9	61	21	-47	20	2	2	0	0	4.3	16	11.2	16	26+	6	21	3	4.9	
WICHITA FALLS	303	977.0	1012.7	32.2	18.9	25.4	-2.2	35.0	30+	16.1	19+	14	0	18.9	70	99	17	39	10	11	0	0	3.8	16	18.3	34	15	8	17	5	5.1	
UTAH																																
MILFORD	1533			26.1	6.7	16.6	-2.0	33.3	30	2.2	18	2	0			16	5	9	7		0	0						12	6	12	5.0	
SALT LAKE CITY	1286	868.3	1009.7	26.7	10.0	18.2	-1.4	33.9	30	5.6	3	4	0	5.0	47	47	23	21	7	9	0	0	1.0	17	15.2	S	25	9	10	11	5.4	76
WENDOVER	1291			25.6	13.9	19.8	-1.2	32.8	23+	5.6	16	4	0			29	17	11	7		0	0						12	8	10	4.7	
VERMONT																																
BURLINGTON	101	1003.1	1015.6	24.4	10.0	17.2	-0.7	33.3	7	0.6	3	2	0	10.6	68	104	15	46	15	10	0	0	0.5	26	14.3	NW	23	5	14	11	6.4	66
VIRGINIA																																
LYNCHBURG	279			26.7	15.0	20.8	-2.0	31.7	29+	10.6	20	0	0			52	-51	38	9	4	0	0			10.3	NE	16+	7	10	13	6.5	61
NORFOLK	8	1016.9	1017.9	27.2	17.8	22.7	-1.6	34.4	29	9.4	5	7	0	17.2	75	119	27	53	10	4	0	0	1.3	17	15.2	NE	16+	6	11	13	6.1	60
RICHMOND	49	1012.2	1018.2	27.2	16.1	21.5	-2.4	33.3	29+	7.2	5	7	0	15.6	73	86	-9	54	12	4	0	0	0.5	22	15.6	N	30	8	10	12	6.1	60
ROANOKE	350	976.6	1018.3	26.7	15.0	20.9	-2.1	32.2	29	10.0	19	1	0	14.4	70	46	-50	31	10	5	0	0	0.7	26	9.4	32	29+	7	9	14	6.6	
WASHINGTON																																
OLYMPIA	59	1009.8	1017.1	22.8	7.2	15.1	0.0	31.7	30	2.8	1	0	0	8.9	70	8	-37	7	4	0	0	0	1.4	24	9.8	22	13	10	9	11	5.8	
SEATTLE TACOMA	122	1000.7	1017.0	21.7	10.0	16.0	0.6	31.7	30	7.8	26+	0	0	7.8	63	15	-25	12	4	0	0	0	0.8	27	8.9	23	17	10	7	13	5.8	57
SPOKANE	718	929.6	1012.3	23.9	8.9	16.3	-0.3	31.7	10	2.8	29	0	0	4.4	50	19	-19	18	5	0	0	0	1.3	22	11.2	NW	11	12	10	8	5.2	73
STAMPEDE PASS R	1206			15.0	5.0	9.9	0.6	22.2	30+	0.6	27+	0	0			9	-94	6	9		0	914						10	9	11	5.4	
TATOOSH ISLAND R	31	1014.6	1017.7	13.9	8.9	11.4	-0.7	16.1	30+	8.3	19+	0	0	8.9	87	22	-51	10	6	0	0	0	2.9	21	15.2	S	7	7	12	11	6.0	46
WALLA WALLA U	289			26.1	12.8	19.4	-0.2	34.4	10	8.3	27	1	0			22	-9	18	5		0	0			9.4	SW	26	16	6	8	4.3	81
YAKIMA	321	974.6	1012.6	26.7	9.4	18.1	0.1	32.2	10	6.1	1	1	0	5.0	44	13	-8	11	3	0	0	0	1.8	31	12.5	34	3	11	14	5	4.6	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	°C.	°C.	C.	C.	C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
WEST INDIES																																
SAN JUAN P.R.	5	1015.9	1018.3	30.0	23.9	26.8	0.2	31.7	20+	21.7	2	0	0	22.8	79	278	135	90	20	4	0	0	3.3	10	11.2	E	28	0	13	17	7.7	54
SWAN ISLAND	9			30.0	25.6	27.8	-0.2	31.1	7	23.3	22+	0	0			104	- 60	36	11		0	0						3	13	14	7.0	
WEST VIRGINIA																																
BECKLEY	763	931.6	1018.4	23.9	12.8	18.3		28.3	23+	6.7	19+	0	0	13.3	75	80	- 34	31	9	6	0	0	1.2	20	13.0	26	2	2	9	19	7.6	
CHARLESTON	286	983.7	1017.5	27.2	15.0	21.1	-1.1	32.2	23	8.3	14	1	0	13.9	67	55	- 38	28	8	4	0	0	1.0	21	10.7	23	2	5	13	12	6.6	
ELKINS	600	948.5	1019.0	25.0	10.6	17.7	-1.8	29.4	28+	4.4	14+	0	0	12.8	77	56	- 76	21	10	4	0	0	0.6	27	11.6	31	23+	5	9	16	7.1	
HUNTINGTON	252	987.8	1017.4	28.3	16.1	22.2	-0.1	32.8	29	10.0	19	3	0	16.1	72	110	6	26	10	5	0	0	0.7	19	8.0	24	7+	3	14	13	6.5	
PARKERSBURG U	187			27.8	16.1	21.8	-0.8	32.2	29	10.0	4	1	0			32	- 76	10	10		0	0			8.5	N	30					56
WISCONSIN																																
GREEN BAY	208	992.2	1017.5	24.4	10.6	17.6	-1.1	33.3	27	5.6	14	1	0	11.1	65	48	- 37	19	7	7	0	0	0.4	22	20.1	W	20	14	9	7	4.3	75
LA CROSSE	198	992.6	1016.9	25.6	12.8	19.1	-1.4	32.2	27	7.8	17	1	0	12.2	68	89	- 18	46	10	8	0	0	1.4	17	15.6	23	20	10	11	9	5.4	
MADISON	262	985.8	1016.9	26.1	9.4	17.9	-1.1	33.3	27	2.2	13	1	0	11.1	65	59	- 42	26	7	6	0	0	0.8	16	24.1	SW	27	7	13	10	5.8	76
MILWAUKEE	205	993.2	1018.3	23.3	11.7	17.3	-0.1	35.0	27	6.7	15+	2	0	11.1	68	22	- 71	15	5	5	0	0	0.4	7	18.3	W	27	14	9	7	4.3	83
WYOMING																																
CASPER	1627	835.8	1010.6	22.8	8.3	15.6	-1.7	28.9	30+	2.2	6	0	0	5.6	57	63	31	28	11	10	0	0	0.9	24	14.3	29	1	7	13	10	6.1	
CHEYENNE	1867	812.1	1011.9	21.7	8.9	15.2	-2.1	28.9	22	3.9	6+	0	0	7.2	67	102	49	37	17	18	0	0	1.3	20	18.8	W	7	6	9	15	6.7	60
LANDER	1696	827.3	1010.3	22.8	8.9	15.8	-0.9	30.6	30	6.1	28+	0	0	5.0	54	53	18	25	10	7	0	0	1.5	25	18.8	SW	26+	7	11	12	6.1	57
SHERIDAN	1208	876.7	1012.0	23.3	7.8	15.5	-1.1	28.9	18	1.7	14	0	0			55	- 11	23	15	17	0	0	0.4	22	15.6	NW	3	5	11	14	6.9	59

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.
A Maximum hourly average.
B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

MONTHLY AND SEASONAL HEATING DEGREE DAYS

(Base 65°F)

1964 - 1965

State and Station	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total for Season	Normals July-June
ALABAMA														
BIRMINGHAM	0	0	0	196	305	520	591	571	478	85	2	0	2748	2551
HUNTSVILLE	0	0	2	257	389	644	711	614	549	87	0	0	3253	3070
MOBILE	0	0	0	78	167	347	387	342	240	4	0	0	1565	1560
MONTGOMERY	0	0	0	151	242	454	512	459	364	46	0	0	2228	2291
ALASKA														
ANCHORAGE PRK STRIP	236	310	457	895	1322	1929	1703	1461	924	806	667	416	11126	10864
ANCHORAGE	240	316	485	922	1303	1980	1701	1530	879	754	598	357	11065	
ANNETTE	285	282	369	565	855	1200	1014	846	819	661	588	398	7882	7069
BARROW	831	926	1134	1607	1993	2723	2676	2562	2289	1885	1482	1019	21127	20174
BARTER ISLAND	814	866	1006	1541	1929	2741	2723	2720	2247	1811	1397	1017	20812	19862
BETHEL	254	394	525	1020	1589	2108	2033	1952	1203	1148	997	486	13709	13196
COLD BAY	522	501	529	778	957	1068	1162	1121	907	886	884	608	9923	9880
FAIRBANKS	165	256	595	1133	1876	2841	2574	2334	1249	1019	680	287	15009	14279
JUNEAU	324	347	453	614	980	1496	1291	1154	923	813	693	487	9575	9075
KING SALMON	329	364	503	924	1303	1929	1631	1615	964	1009	861	566	11998	11343
KOTZEBUE	451	366	694	1184	1715	2400	2235	2217	1662	1506	1247	625	16302	16105
MC GRATH	152	316	584	1132	1772	2692	2368	2155	1168	1064	786	363	14552	14283
NOME	384	396	645	1046	1504	2090	1992	1992	1400	1333	1157	606	14545	14171
ST. PAUL ISLAND	615	562	650	857	1004	1091	1307	1347	1252	1054	995	750	11484	11199
SHEMYA	638	544	600	760	914	936	1051	899	994	867	802	675	9680	9687
YAKUTAT	364	360	522	754	1068	1520	1322	1218	1012	870	791	614	10415	9092
ARIZONA														
FLAGSTAFF	9	72	245	417	1001	1070	1034	983	985	768	560	353	7497	7152
PHOENIX	0	0	0	0	281	396	375	346	269	133	14	0	1814	1765
TUCSON	0	0	0	5	293	383	348	383	305	114	21	0	1852	1800
WINSLOW	0	0	21	164	761	927	849	762	686	363	217	22	4772	4782
YUMA	0	0	0	0	199	278	258	190	126	64	1	0	1116	974
ARKANSAS														
FORT SMITH	0	0	14	182	338	733	705	658	712	83	0	0	3425	3292
LITTLE ROCK	0	0	14	175	336	646	639	604	629	70	0	0	3113	3219
TEXARKANA	0	0	10	123	237	534	525	494	538	38	0	0	2499	2533
CALIFORNIA														
BAKERSFIELD	0	0	1	17	407	438	546	405	241	186	45	7	2293	2122
BISHOP	0	0	27	133	688	777	732	585	562	355	201	38	4098	4227
BLUE CANYON	47	47	152	197	791	881	807	680	759	669	421	224	5675	5507
BURBANK	0	1	0	18	262	350	326	282	264	225	88	50	1866	1646
EUREKA U	256	243	288	306	444	505	544	533	505	441	459	385	4909	4643
FRESNO	0	3	3	41	410	492	572	423	287	191	58	8	2488	2492
LONG BEACH	1	0	8	23	264	342	352	305	231	172	99	53	1850	1711
LOS ANGELES	9	0	8	21	197	301	291	271	226	198	130	60	1712	1799
LOS ANGLES U	0	0	0	5	186	256	224	196	183	168	70	38	1326	1349
MT SHASTA R	36	58	189	302	804	896	887	708	669	581	403	183	5716	5722
OAKLAND	96	44	73	75	340	385	478	371	331	263	218	146	2820	2870
RED BLUFF	0	2	6	56	434	472	570	387	311	219	47	2	2506	2515
SACRAMENTO	0	4	10	49	436	469	602	434	363	246	86	21	2720	2773
SANDBERG U	1	23	34	111	686	765	691	594	707	571	361	199	4743	4209
SAN DIEGO	0	0	0	8	187	280	277	249	195	138	73	35	1442	1439
SAN FRANCISCO	76	46	94	135	393	416	505	404	384	311	295	193	3252	3012
SAN FRANCISCO U	186	152	139	100	284	343	414	302	319	280	306	259	3084	3001
SANTA CATALINA	4	2	8	52	256	344	312	314	399	269	195	216	2371	2052
SANTA MARIA	127	90	149	142	398	395	394	400	376	286	279	192	3228	2967
STOCKTON	0	6	8	50	457	452	591	427	320	201	50	10	2572	2676
COLORADO														
ALAMOSA	[illegible]	107	289	621	1166	1807	1495	1299	1136	689	484	219	9320	8529
COLORADO SPRINGS	0	22	151	385	790	992	910	1034	1214	497	306	107	6408	6423
DENVER	0	16	123	375	743	981	921	1044	1108	411	245	63	6030	6283
GRAND JUNCTION	0	2	39	219	800	1067	1004	893	758	334	158	8	5282	5641
PUEBLO	0	2	59	317	693	905	876	987	1030	338	143	15	5365	5462
CONNECTICUT														
BRIDGEPORT	6	9	83	364	562	952	1190	993	872	546	145	50	5772	5617
HARTFORD	2	16	128	419	644	1084	1311	1068	888	518	99	45	6222	6172
NEW HAVEN	5	11	96	391	601	955	1196	992	884	572	183	59	5945	5897
DELAWARE														
WILMINGTON	0	9	49	372	514	854	1108	873	816	467	63	27	5152	4930
DIST.OF COLUMBIA														
WASH NATL AP	0	0	29	300	415	771	974	785	724	395	27	24	4444	4224
FLORIDA														
APALACHICOLA U	0	0	0	43	74	239	338	284	177	6	0	0	1161	1308
DAYTONA BEACH	0	0	0	18	22	126	246	138	136	9	1	0	696	879
FORT MYERS	0	0	0	0	0	26	96	36	38	0	0	0	196	442
JACKSONVILLE	0	0	0	39	66	213	310	231	170	10	0	0	1039	1239
KEY WEST	0	0	0	0	0	0	10	4	0	0	0	0	14	108
LAKELAND U	0	0	0	15	17	92	162	82	83	0	0	0	451	661
MIAMI	0	0	0	0	0	4	63	25	18	0	0	0	110	214
ORLANDO	0	0	0	7	14	84	178	89	82	0	0	0	454	766
PENSACOLA	0	0	0	73	142	304	380	341	252	9	0	0	1501	1463
TALLAHASSEE	0	0	0	88	151	304	450	323	218	25	1	0	1560	1485
TAMPA	0	0	0	22	24	114	204	96	84	2	0	0	546	683
WEST PALM BEACH	0	0	0	0	0	9	86	36	30	0	0	0	161	253
GEORGIA														
ATHENS	0	0	1	214	273	539	627	540	467	123	0	1	2785	2929
ATLANTA	0	0	2	201	288	567	669	586	500	110	0	[illegible]	2926	2961
AUGUSTA	0	0	0	177	238	446	576	432	367	84	0	0	2288	2397
COLUMBUS	0	0	0	143	219	418	530	441	349	45	0	0	2145	2383
MACON	0	0	1	170	216	442	559	452	373	63	0	0	2308	2136
ROME	0	0	6	266	367	617	717	616	519	108	0	0	3216	3326
SAVANNAH	0	0	0	116	157	355	463	359	282	66	0	0	1798	1819
IDAHO														
BOISE	0	62	166	370	835	916	951	781	793	435	317	82	5708	5809
IDAHO FALLS 42NW R	3	84	338	668	1099	1387	1442	1233	1134	630	490	204	8712	8760
IDAHO FALLS 46W R	4	106	337	622	1104	1325	1316	1134	1112	615	496	195	8366	8475
LEWISTON	3	30	129	386	775	1034	951	705	765	380	260	46	5464	5542
POCATELLO	0	68	223	478	894	1105	1082	952	999	543	443	143	6930	7033
ILLINOIS														
CAIRO U	0	1	20	208	407	777	826	713	773	147	4	0	3876	3821
CHICAGO O HARE	10	52	148	521	699	1240	1342	1134	1185	545	157	77	7110	6639
CHICAGO MIDWAY	1	17	101	423	633	1160	1250	1048	1069	515	105	32	6354	6155
MOLINE	3	24	100	437	624	1241	1344	1096	1174	471	86	3	6603	6408
PEORIA	2	8	108	435	637	1212	1254	1058	1139	416	72	1	6342	6025
ROCKFORD	9	51	145	519	713	1298	1405	1194	1204	579	145	26	7288	6830
SPRINGFIELD	0	10	66	356	554	1100	1158	973	1041	320	36	0	5614	5429

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

MONTHLY AND SEASONAL HEATING DEGREE DAYS

(Base 65°F)

1964 - 1965

State and Station	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total for Season	Normals July-June
INDIANA														
EVANSVILLE	0	8	52	367	518	885	1008	867	867	254	18	0	4844	4435
FORT WAYNE	3	31	109	478	642	1145	1238	1083	1098	499	73	22	6421	6205
INDIANAPOLIS	2	16	73	405	581	1009	1155	989	964	323	39	0	5556	5699
SOUTH BEND	5	40	155	493	648	1157	1244	1058	1120	535	99	36	6590	6439
IOWA														
BURLINGTON	1	11	88	390	601	1187	1294	1078	1183	422	72	1	6328	6114
DES MOINES	0	28	124	433	707	1286	1465	1247	1305	509	86	1	7191	6588
DUBUQUE	7	43	169	505	756	1391	1509	1282	1259	582	157	34	7694	7376
SIOUX CITY	0	41	134	406	818	1424	1474	1294	1270	446	89	2	7398	6951
WATERLOO	0	53	181	526	809	1417	1582	1353	1327	612	183	31	8074	7320
KANSAS														
CONCORDIA	0	12	69	283	645	1107	1088	1074	1050	305	51	2	5686	5479
DODGE CITY	0	3	81	254	632	1051	943	905	960	226	65	4	5124	4986
GOODLAND	0	29	121	369	770	1065	1001	1035	1134	349	133	20	6026	6141
TOPEKA	0	9	67	316	572	1087	1044	955	984	263	30	0	5327	5182
WICHITA	0	1	34	200	531	1038	918	851	868	176	23	0	4640	4620
KENTUCKY														
COVINGTON	0	14	68	376	529	907	1058	894	872	350	43	0	5111	5265
LEXINGTON	0	11	61	375	502	850	1010	851	834	277	26	8	4805	4683
LOUISVILLE	0	5	44	349	502	829	943	808	802	223	20	0	4525	4660
LOUISIANA														
ALEXANDRIA	0	0	3	156	233	456	455	431	416	35	6	0	2191	1921
BATON ROUGE	0	0	0	75	155	372	367	343	286	7	0	0	1605	1560
LAKE CHARLES	0	0	0	60	139	347	313	298	276	4	0	0	1437	1459
NEW ORLEANS	0	0	0	73	163	297	315	316	231	11	1	0	1407	1385
SHREVEPORT	0	0	6	93	216	479	446	432	473	28	0	0	2173	2184
MAINE														
CARIBOU	46	199	419	737	1063	1484	1743	1493	1213	831	485	164	9877	9767
PORTLAND	28	134	293	549	857	1222	1396	1212	975	710	320	125	7821	7511
MARYLAND														
BALTIMORE	0	0	41	358	448	797	1052	838	792	433	55	44	4858	4654
MASSACHUSETTS														
BLUE HILL OBS R	28	47	165	409	654	1066	1299	1079	970	645	190	99	6651	6368
BOSTON	14	26	140	380	620	1004	1220	1032	900	617	195	80	6228	5634
NANTUCKET	20	32	136	352	586	833	1106	983	910	709	366	135	6168	5891
PITTSFIELD	22	131	243	554	760	1158	1452	1190	1095	719	239	161	7724	7578
WORCESTER	36	80	189	472	704	1122	1362	1136	1040	658	206	118	7123	6969
MICHIGAN														
ALPENA	40	155	293	584	778	1290	1506	1313	1313	864	324	197	8657	8506
DETROIT	0	25	110	411	594	1066	1215	1070	1078	596	121	45	6331	6232
DETROIT M WAYNE CO	4	82	175	566	710	1137	1239	1088	1074	591	131	45	6842	6293
DETROIT WILLOW RUN	1	62	171	516	670	1121	1301	1147	1140	638	178	81	7026	6258
FLINT	11	83	207	581	698	1152	1326	1117	1167	660	158	71	7231	7377
GRAND RAPIDS	12	54	179	545	690	1202	1310	1145	1197	657	142	57	7190	
HOUGHTON LAKE	38	136	283	659	789	1331	1533	1303	1314	807	237	144	8574	
LANSING	10	69	188	569	672	1206	1328	1145	1190	667	162	71	7277	6909
MARQUETTE U	43	137	268	540	850	1355	1520	1370	1287	795	344	187	8696	8393
MUSKEGON	11	50	165	528	656	1113	1251	1098	1108	609	147	23	6759	6696
SAULT STE MARIE	51	177	332	643	894	1467	1636	1454	1316	864	409	229	9472	9048
MINNESOTA														
DULUTH	50	215	377	631	1037	1751	1854	1650	1519	802	397	209	10492	10000
INTERNATIONAL FALLS	18	207	416	675	1144	1944	2077	1756	1606	799	390	170	11202	10606
MINNEAPOLIS	0	63	224	515	894	1551	1702	1486	1405	690	211	19	8760	8382
ROCHESTER	5	92	253	565	930	1535	1711	1494	1444	684	223	39	8975	8295
ST CLOUD	0	92	256	547	1014	1700	1850	1583	1523	722	247	49	9583	8879
MISSISSIPPI														
JACKSON	0	0	0	124	219	465	512	500	459	48	2	0	2329	
MERIDIAN	0	0	0	185	277	480	521	504	418	51	2	0	2438	2289
VICKSBURG U	0	0	3	108	223	454	461	450	447	20	0	0	2166	2041
MISSOURI														
COLUMBIA	0	6	44	270	488	1004	1023	908	990	248	22	0	5003	5046
KANSAS CITY	0	2	49	235	473	1004	1033	911	955	237	15	0	4914	4711
ST JOSEPH	0	12	67	322	582	1114	1107	978	1032	290	23	0	5527	5484
ST LOUIS	0	2	55	333	526	1019	1016	869	938	250	19	0	5027	4900
SPRINGFIELD	1	10	49	276	457	901	884	788	857	180	21	0	4424	4561
MONTANA														
BILLINGS	0	67	253	415	1009	1454	1135	1110	1347	570	381	120	7861	7049
GLASGOW	0	52	298	482	1135	1974	1816	1507	1689	690	359	118	10120	8996
GREAT FALLS	0	93	337	375	990	1666	1271	1055	1361	602	411	164	8325	7750
HAVRE	4	85	370	518	1129	1992	1740	1361	1551	706	405	179	10040	8700
HELENA	1	101	332	542	1028	1420	1090	1070	1250	612	454	169	8069	8129
KALISPELL	69	199	439	700	1011	1454	1204	1138	1249	638	515	270	8886	8191
MILES CITY	0	66	253	448	1176	1775	1591	1307	1472	606	329	66	9089	7723
MISSOULA	30	153	409	698	1031	1406	1246	1124	1218	602	491	230	8638	8125
NEBRASKA														
GRAND ISLAND	0	44	159	399	810	1294	1301	1190	1229	422	97	8	6953	6530
LINCOLN U	0	14	94	319	684	1187	1252	1182	1182	387	60	1	6362	5864
NORFOLK	0	48	146	416	848	1412	1389	1290	1271	473	113	7	7413	6979
NORTH PLATTE	0	43	143	450	870	1229	1189	1158	1217	405	173	26	6903	6684
OMAHA	0	24	93	353	676	1227	1298	1191	1168	361	55	0	6446	6218
SCOTTSBLUFF	0	52	185	458	831	1232	1010	1060	1198	414	245	56	6741	6673
VALENTINE	0	74	188	469	947	1403	1266	1150	1354	496	235	22	7604	7425
NEVADA														
ELKO	7	85	317	481	1029	1067	1071	937	969	596	505	215	7279	7433
ELY	17	74	314	470	1064	1203	1097	1037	1006	684	586	285	7837	7733
LAS VEGAS	0	0	0	12	444	606	551	427	358	220	49	0	2667	2709
RENO	6	28	203	296	802	892	968	695	667	454	336	174	5521	6332
WINNEMUCCA	7	69	262	389	907	919	996	829	859	504	448	137	6326	6761
NEW HAMPSHIRE														
CONCORD	8	106	246	539	831	1230	1418	1191	1015	704	257	133	7678	7383
MT WASHINGTON OBS	431	699	812	1125	1330	1590	1973	1733	1771	1397	878	668	14407	13817
NEW JERSEY														
ATLANTIC CITY	0	1	42	351	532	869	1152	890	838	485	109	77	5346	4812
ATLANTIC CITY U	0	0	17	272	426	785	1022	851	778	492	126	38	4807	4741
NEWARK	1	0	40	278	461	895	1133	905	799	442	55	17	5026	4859
TRENTON U	1	4	59	341	474	867	1113	882	806	461	65	30	5103	4980

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MONTHLY AND SEASONAL HEATING DEGREE DAYS

(Base 65°F)

1964 - 1965

State and Station	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total for Season	Normals July-June
NEW MEXICO														
ALBUQUERQUE	2	0	20	173	632	909	805	709	624	300	128	24	4326	4348
CLAYTON	0	2	106	270	670	926	811	865	965	312	165	39	5131	5158
RATON	3	10	140	421	783	1094	993	1012	1043	496	323	118	6436	6228
ROSWELL	0	0	21	145	501	782	637	693	● 606	126	22	0	3533	3793
SILVER CITY	0	0	40	149	555	765	700	680	646	296	124	22	3977	3705
NEW YORK														
ALBANY	1	48	169	484	702	1141	1449	1193	1041	679	197	68	7172	6875
BINGHAMTON	9	61	165	510	657	1142	1392	1176	1119	734	211	140	7316	7286
BUFFALO	5	68	176	518	680	1097	1277	1092	1080	706	186	100	6985	7062
NEW YORK U	3	0	63	308	461	879	1088	867	765	426	64	30	4954	4871
J.F. KENNEDY	0	0	42	282	478	878	1126	909	809	496	146	26	5192	5219
NEW YORK LA GUARDIA	2	0	52	290	444	872	1072	858	763	426	47	14	4840	4811
ROCHESTER	3	48	169	500	674	1090	1337	1096	1095	706	192	114	7024	6748
SYRACUSE	2	30	154	475	636	1087	1370	1125	1069	676	215	132	6971	6756
NORTH CAROLINA														
ASHEVILLE			47	400	456	752	863	751	691	232	23	27		
CAPE HATTERAS R	0	0	3	136	194	409	588	538	537	296	15	0	2716	2612
CHARLOTTE	0	5	14	287	307	604	721	565	554	128	0	7	3192	3191
GREENSBORO	0	2	28	329	369	688	803	676	637	215	0	11	3758	3805
RALEIGH	0	1	24	305	365	665	754	616	628	232	0	15	3605	3393
WILMINGTON	0	0	0	145	184	415	575	465	408	131	1	0	2324	2347
NORTH DAKOTA														
BISMARCK	5	108	342	542	1180	1909	1937	1533	1501	684	324	83	10148	8851
FARGO	5	94	304	604	1065	1902	2051	1618	1582	695	324	66	10310	9226
WILLISTON	0	86	349	567	1236	2017	1920	1557	1624	717	370	87	10530	9243
OHIO														
AKRON	2	46	121	458	605	1020	1226	1081	1005	524	94	56	6238	6037
CINCINNATI OBS	0	12	60	339	510	903	1026	867	850	296	22	0	4885	4806
CLEVELAND	3	46	117	483	617	1009	1165	1032	1025	576	130	64	6267	6351
COLUMBUS	0	28	90	424	589	957	1132	999	932	403	39	26	5619	5660
DAYTON	0	24	75	386	559	968	1104	957	930	405	31	4	5443	5622
MANSFIELD	2	37	127	462	627	1061	1208	1098	1059	567	119	76	6443	6403
TOLEDO	1	55	150	536	676	1149	1242	1088	1084	538	123	51	6693	6494
YOUNGSTOWN	8	57	140	490	603	1044	1266	1098	1053	589	123	80	6551	6417
OKLAHOMA														
OKLAHOMA CITY	0	0	24	150	454	831	808	706	745	71	2	0	3791	3725
TULSA	0	0	18	162	385	797	775	711	752	73	1	0	3674	3860
OREGON														
ASTORIA	174	179	222	345	598	768	696	576	542	466	432	259	5257	5186
BURNS U	40	121	278	465	934	1108	1120	846	852	573	469	150	6956	6957
EUGENE	40	45	120	282	646	753	744	572	522	389	350	138	4601	4726
MEACHAM	149	222	375	478	968	1200	1080	923	1018	684	592	299	7988	7874
MEDFORD	8	23	120	284	710	723	802	621	498	346	267	78	4480	5008
PENDLETON	6	30	92	397	742	990	912	664	750	357	223	44	5207	5127
PORTLAND	67	81	191	358	711	860	761	599	533	388	325	113	4987	4635
SALEM	41	79	181	357	684	783	751	607	565	433	390	188	5059	4754
SEXTON SUMMIT R	162	165	241	303	804	972	868	732	670	668	552	297	6434	6254
PENNSYLVANIA														
ALLENTOWN	1	15	78	436	599	990	1256	969	889	526	92	44	5895	5810
ERIE	3	53	140	461	596	978	1209	1072	1093	696	174	105	6580	6451
HARRISBURG	0	4	71	399	570	958	1192	902	847	441	66	27	5477	5251
PHILADELPHIA	0	2	51	377	532	847	1107	883	839	475	66	26	5205	5101
PITTSBURGH	1	51	99	447	577	954	1134	1018	920	476	63	53	5793	5987
PITTSBURGH U	0	15	67	361	491	858	1068	936	890	428	48	37	5199	5053
READING U	0	5	52	342	498	876	1122	879	806	442	52	23	5097	4945
SCRANTON	0	31	110	475	621	1028	1293	1027	951	582	100	55	6273	6254
WILLIAMSPORT	0	20	89	417	639	1032	1317	1047	970	611	137	80	6359	5934
RHODE ISLAND														
BLOCK ISLAND	9	14	99	359	555	884	1136	982	923	669	320	132	6082	5804
PROVIDENCE	9	24	125	377	605	981	1231	1018	891	581	182	67	6091	5954
SOUTH CAROLINA														
CHARLESTON	0	0	0	135	153	385	507	392	340	95	0	0	2007	2033
CHARLESTON U	0	0	0	82	109	323	442	354	310	76	0	0	1696	1794
COLUMBIA	0	0	3	204	216	473	592	466	398	93	0	0	2445	2484
GNVLE SPARTANBURG	0	2	0	237	281	604	681	572	527	147	0	6	3057	2980
SOUTH DAKOTA														
ABERDEEN	2	77	274	560	1139	1789	1951	1505	1413	635	279	52	9676	8473
HURON	1	55	179	463	1068	1699	1846	1415	1352	579	229	40	8926	8223
RAPID CITY	0	64	198	410	931	1419	1218	1098	1351	534	327	55	7605	7345
SIOUX FALLS	0	55	210	499	965	1528	1639	1452	1340	568	195	41	8492	7839
TENNESSEE														
BRISTOL	0	12	26	349	436	719	874	772	656	223	17	5	4089	4143
CHATTANOOGA	0	1	5	255	378	646	741	674	587	130	2	0	3419	3254
KNOXVILLE	0	8	9	308	374	657	765	701	559	125	0	0	3506	3494
MEMPHIS	0	0	13	202	335	634	666	614	645	72	0	0	3181	3232
NASHVILLE	0	3	18	265	398	685	768	698	711	168	3	0	3717	3578
OAK RIDGE	0	6	29	310	405	715	815	724	610	166	9	2	3791	3817
TEXAS														
ABILENE	0	0	2	44	293	505	519	538	522	59	0	0	2482	2624
AMARILLO	0	0	48	149	517	795	740	762	820	194	56	7	4088	3985
AUSTIN	0	0	0	17	158	415	370	431	367	12	0	0	1770	1711
BROWNSVILLE	0	0	0	5	52	215	127	136	138	0	0	0	673	600
CORPUS CHRISTI	0	0	0	18	70	289	219	252	222	0	0	0	1070	914
DALLAS	0	0	6	57	225	507	514	512	538	31	0	0	2390	2363
DEL RIO	0	0	0	21	152	417	326	397	268	4	0	0	1585	
EL PASO	0	0	0	76	391	643	521	504	397	54	7	2	2595	2700
FORT WORTH	0	0	6	81	260	550	550	530	551	36	0	0	2564	2405
GALVESTON U	0	0	0	5	102	293	254	276	249	2	0	0	1181	1235
HOUSTON U	0	0	0	11	99	284	234	256	239	0	0	0	1123	1278
HOUSTON	0	0	0	31	114	315	300	284	250	0	0	0	1294	1396
LUBBOCK	0	0	35	111	433	677	635	683	682	107	12	0	3375	3578
MIDLAND	0	0	6	34	283	493	535	604	529	52	5	0	2541	2591
PORT ARTHUR	0	0	0	52	135	337	322	298	270	3	0	0	1417	1447
SAN ANGELO	0	0	2	65	277	492	469	514	471	31	0	0	2321	2255
SAN ANTONIO	0	0	0	41	155	414	346	419	327	13	0	0	1715	1546
VICTORIA	0	0	0	22	102	321	275	294	255	0	0	0	1269	1173
WACO	0	0	0	45	196	458	427	465	424	15	0	0	2030	2030
WICHITA FALLS	0	0	12	86	352	706	679	563	647	47	2	0	3094	2832

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

MONTHLY AND SEASONAL HEATING DEGREE DAYS

(Base 65°F)

1964 - 1965

State and Station	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total for Season	Normals July-June
UTAH														
MILFORD	0	29	147	355	996	995	1029	949	855	523	374	109	6361	6497
SALT LAKE CITY	0	44	134	365	808	975	1046	889	869	414	316	61	5921	6052
WENDOVER	0	21	86	378	837	959	970	850	824	385	263	50	5623	5778
VERMONT														
BURLINGTON	12	102	280	601	872	1238	1585	1256	1159	766	257	136	8264	8269
VIRGINIA														
LYNCHBURG	0	5	48	374	438	743	926	803	724	321	15	27	4424	4166
NORFOLK	0	0	4	232	312	575	780	667	635	320	29	15	3569	3421
RICHMOND	0	0	32	352	402	676	909	726	674	339	17	34	4161	3865
ROANOKE	0	9	41	338	409	770	892	794	710	305	21	19	4308	4150
WASHINGTON														
OLYMPIA	130	150	266	450	715	945	801	652	650	470	408	177	5814	5236
SEATTLE TACOMA	76	91	189	349	679	882	761	611	553	459	400	136	5186	5145
SPOKANE	31	118	290	524	976	1268	1121	915	942	528	387	129	7229	6655
STAMPEDE PASS R	322	431	525	665	1077	1365	1179	1015	1001	829	760	445	9614	9283
TATOOSH ISLAND R	305	252	345	398	601	815	732	625	589	522	489	366	6039	5719
WALLA WALLA U	3	22	81	356	710	988	872	607	657	292	206	36	4830	4805
YAKIMA	32	94	229	456	798	1167	1114	763	731	430	264	49	6127	5941
WEST VIRGINIA														
BECKLEY	8	48	93	509	550	868	1037	895	891	379	60	70	5408	
CHARLESTON	0	13	40	364	474	791	974	820	780	299	24	15	4594	4476
HUNTINGTON	0	17	69	396	504	786	956	806	741	264	17	7	4563	4446
PARKERSBURG U	0	12	67	381	517	822	1021	883	819	333	21	5	4881	4754
WISCONSIN														
GREEN BAY	15	74	229	531	771	1392	1564	1388	1249	733	197	86	8229	8029
LA CROSSE	0	37	179	469	806	1470	1672	1427	1299	640	182	25	8206	7589
MADISON	13	68	216	556	789	1427	1517	1294	1234	631	208	79	8032	7863
MILWAUKEE	7	47	177	515	730	1290	1404	1222	1226	664	232	123	7637	7635
WYOMING														
CASPER	0	101	272	545	1004	1283	1084	1181	1377	569	463	145	8024	7410
CHEYENNE	2	95	239	500	883	1095	1012	1088	1320	569	435	169	7407	7278
LANDER	0	84	230	505	965	1237	1088	1142	1275	582	469	143	7720	7870
SHERIDAN	0	101	292	520	1103	1389	1078	1158	1412	594	464	153	8264	7683

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Note: "Heating Degree Days" has been discontinued in the June issues of this publication. Data which would usually be shown in that table for June are shown in the last three columns of the above Table.

STORM SUMMARY

JUNE 1965

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				∅ ALL OTHER			
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS	DEATHS	INJURIES	†DAMAGE PROP-ERTY	†DAMAGE CROPS
Alabama						0	0	0	4					2	2	4	0												
Alaska *																													
Arizona						0	0	0	4	0	0	4	0	0	0	0	4									0	0	0	4
Arkansas														1	2	4	0												
California *																													
Colorado	19	15	0	M	4	0	M	4	5	0	M	5	5	1	1	4	0									16	M	8	8
Connecticut														0	1	0	0												
Delaware *																													
Florida	4	2	0	0	4					1	0	0	0	4	1	0	L 4												
Georgia	2	2	0	0	4	0	0	3	4	0	0	4	0																
Hawaii *																													
Idaho	1	1						U	U			U	U																
Illinois	1	1	0	0	3	0	0	?	?	0	0	4	0	1	2	4	0												
Indiana	4	3	0	0	5	0	0	4	4	0	1	4	3	1	0	5	0												
Iowa	6	3	0	0	4	0	0	0	5	0	19	6	0	0	2	0	0									0	0	4	0
Kansas	14	6		3	6		1	6	6		2	5	5		1	5	4												
Kentucky								?	?			4	?	1		5													
Louisiana	1	1	0	0	4	0	0	?	4	0	1	0	0	2	0	0	0												
Maine	2	2	0	0	4	0	0	0	2	0	7	5	0	0	0	4	0												
Maryland						0	0	0	3	0	0	4	0	0	2	4	0												
Massachusetts	1	1	0	0	1					0	0	4	0	0	1	5	0												
Michigan						0	0	4	5	0	0	6	0	0	1	5	0												
Minnesota	3	2	0	0	4	0	0	2	4	0	0	4		0	0	4	0									0	0	5	3
Mississippi	2	2	0	0	4	0	0	2	3	0	0	4	0	2	1	0	0												
Missouri	1	1	0	0	2	0	0	0	4	0	1	5	0	1	0	4	0									F 1	0	6	0
Montana	1	1	0	0	4	0	0	5	6	5	2	5	0													2	0	°5	C
Nebraska	8	8	0	0	4	0	0	6	6	0	0	5	0	0	0	4	0												
Nevada *																													
New Hampshire	1	1	0	0	3	0	0	0	3	0	0	4	0	0	2	5	0												
New Jersey *																													
New Mexico	9	5	0	3	4	0	0	6	5	0	2	2	0	2	1	0	0									1	0	7	6
New York									4			5				5													
North Carolina						0	0	0	5	0	1	4	4	0	5	5	0									0	0	5	5
North Dakota	14	7	0	1	5	0	0	5	4					1	0	0	0												
Ohio										0	0	4	0																
Oklahoma	8	5	0	0	4	0	0	5	5	0	0	5	0	0	8	5	0												
Oregon	1	1	0	0	0					1	0	3	2																
Pacific Area *																													
Pennsylvania										0	0	4	0	4	6	5	0												
Puerto Rico										2	0	0	0																
Rhode Island *																													
South Carolina	4	1	0	0	0					0	1	0	0	1	1	5	0									5	3	5	6
South Dakota	17	7	1	?	6	0	0	5	6					0	1	0	0												
Tennessee						0	0	0	4	0	3	5	4	7	1	4	0												
Texas	24	12	5	85	5	0	3	6	6	0	1	6	5	1	2	0	0									23	0	6	5
Utah	2	2	0	0	3	0	0	5	3	0	0	3	3	0	1	3	3									7	0	6	0
Vermont	1	1	0	1	4	0	0	0	2	0	0	4	0	0	3	5	0												
U. S. Virgin Is.*																													
Virginia										0	1	0	0	0	1	3	0												
Washington N																													
West Virginia						0	0	3	0	0	0	2	0	0	0	3	0												
Wisconsin	2	2	0	0	5	0	0	5		0	4	5	0	0	3	0	0												
Wyoming	2	2	0	1	4	0	0	°5	C					0	1	0	0												

C	Crop damage
°	Includes crop damage
M	Many
F	Flood
U	Unknown
L	Livestock killed by lightning
N	No report received by printing deadline

*	No occurrence of storms or unusual weather phenomena.
‡	Includes heavy sleet storm.
#	Freezing drizzle and freezing rain, commonly known as glaze.
∅	For breakdown of "All Others", and for detailed listing of other storms, see the U. S. Weather Bureau monthly publication STORM DATA.
†	Storm damages are placed in categories varying from 1 to 9 as follows:

1	Less than $50
2	$50 to $500
3	$500 to $5,000
4	$5,000 to $50,000
5	$50,000 to $500,000
6	$500,000 to $5,000,000
7	$5,000,000 to $50,000,000
8	$50,000,000 to $500,000,000
9	$500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

JUNE 1965

Floods during June caused heavy property damage and a loss of at least 56 lives. The most destructive of these floods occurred in the South Platte and Arkansas Basins of eastern Colorado. Preliminary damage estimates for the South Platte Basin range up to $250 million. The flooding on the Arkansas from the Kansas-Colorado State line to Great Bend, Kans., was the most damaging of record. Record stages were reached for a distance of more than 200 miles. The flooding on the Purgatoire River at Trinidad, Colo., was the worst since May 30, 1935. At Pueblo, Colo., the Fountain River had an estimated peak flow of 80,000 c.f.s., which was more than twice the previous high flow of May 1935. The toll of life in eastern Colorado was 21; New Mexico, 2; and in Kansas, 4.

A severe flash flood occurred at Sanderson, Tex., in the Sanderson Canyon claiming at least 22 lives. Property damage was heavy.

HUDSON BAY DRAINAGE

Minor flooding occurred on the Red River of the North at Wahpeton and Fargo, N. Dak., between the 8th and 16th. It was due to heavy rains over the upper portion during the first week in June. Little, if any, damage resulted from the overflow.

ATLANTIC SLOPE DRAINAGE

A tropical low pressure system, developing and moving northward out of the Gulf of Mexico, produced general rains over eastern North Carolina on the 12th and 13th. The rainfall amounts ranged from 2 to 3 inches with local amounts of 6.5 inches over the extreme lower Roanoke. Substantial rises and some flooding resulted. More general and heavy rains followed on the 15th and on the morning of the 16th. Rainfall amounts averaged 2.5 inches, ranging from 1 inch on the upper Roanoke to 4 inches along the lower Neuse and middle and lower reaches of the Cape Fear. Soil conditions in the upper Roanoke and Dan Basins were rather dry, so only minor rises of around 2 feet occurred. A sharp rise of 1 to 9 feet over bankfull stage occurred over the Cape Fear River. The Neuse rose generally from 3 to 6 feet above flood stage and the Tar less than 2 feet above bankfull stage. Scattered heavy rains on the 25th resulted in a sharp rise of near 8 feet along the upper half of the Neuse, prolonging the overflow along the river. No damage was reported.

Heavy thundershowers, beginning during the second week of June and continuing for 8 to 9 days, caused flooding along many streams in South Carolina. The heavy rains beginning on the 12th caused an unusual situation at Lake Murray on the Saluda River during the 14-16th. Several inches of runoff occurred late on the 13th and early on the 14th over the Saluda Basin around and immediately above Lake Murray to the Chappells area. Spillage became necessary at the 360.0 feet level on the 14th and continued through the 16th. Maximum spillage was 45,800 c.f.s. During this time, the hydro plant at Lake Murray was in full operation, which released an additional 9,900 c.f.s. This flood water passed on downstream through the upper Santee into Lake Marion. Storage and controlled spillage at Lakes Murray and Marion were beneficial in preventing higher crests. The Black River at Kingstree, S. C., reached a stage of 14.3 feet, 2.3 feet above flood stage on the 20th. This was the highest crest at this point since the big flood of October 1964, and one of the few floods that have exceeded 14 feet. Extensive flooding occurred along the Congaree River below Columbia, S. C., following the crest of 22.2 feet (flood stage 19 feet) on June 16. Some damage resulted to pastures and cropland in the Chappells and Blair areas. Principal losses were along the Congaree below Columbia, S. C., and along the upper Santee to Rimini, S. C., and along the lower Santee from Lake Marion to the coast. These losses consisted of damage to pastures and lowland crops, mostly corn and soybeans, and to interruption of timber operations. Logging operations along the middle portion of the Pee Dee were suspended for about 10 days.

Minor flooding occurred along the lower Savannah River in Georgia during the last decade of June. No damage was reported.

EAST GULF OF MEXICO DRAINAGE

Moderate flooding occurred along the Apalachicola River at Blountstown, Fla., on June 16-24 due to recurring heavy rains from the 4th to the 17th. Considerable lowland areas were inundated. No damages resulted as the lowland areas were entirely wooded and unpopulated.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--The Minnesota River which went above flood stage at Savage, Minn., on April 8, receded below flood stage on June 20.

Locally heavy rains occurred during the evening of May 31 and early June 1 over Minneapolis - St. Paul eastward over Stillwater, Minn., and Spring Valley, Wis. The heaviest 24-hour rainfall reported was 7.98 inches at Stillwater. Local flooding and washouts occurred over parts of St. Paul and Stillwater. The Eau Galle River, which runs through the center of Spring Valley, Wis., flash flooded, cresting 3 feet deep on the main street at 6:30 a.m. on June 1. Many homes in Spring Valley were damaged by water above the floor lines. Rush River, west of the Eau Galle River, also overflowed but damage was slight.

Extremely heavy rainfall occurred during the early evening of June 1 north and northeast of Browns Valley, Minn., on the divide between the Red River of the North and the upper Minnesota River (Big Stone Lake). Unofficial rainfall amounts of 8 to 10 inches were reported. Many Browns Valley residents were forced to leave their homes because of basement flooding and water that poured down ravines and valleys into the town. By 11:30 p.m., June 1, the water was receding. Heavy rainfall (7 to 8 inches) in the Canby to Granite Falls, Minn., area on the afternoon of June 2 caused storm sewer flooding in Granite Falls, St. Leo, and Clarkfield. The rains of June 1 and 2 produced a rise on the Minnesota River, but the rise was well within banks.

Precipitation during the first 6 months in the Minneapolis-St. Paul, Minn., area totaled 22.20 inches. This is the greatest of record. The previous record for January through June was 21.84 inches in 1908. This excessive precipitation holds true for much of north-central, central, and east-central Minnesota.

Minor flooding occurred along the lower Des Moines River in Iowa on the 6th and 7th due to thundershowers on the 3d-5th. No losses were reported. The continued wet weather delayed the planting of crops in the lowland areas.

The Sangamon River at Riverton, Ill., rose to over 6 feet above flood stage on the 4th due to heavy rainfall during the afternoon of the 1st and the morning of the 2d. Decatur, Ill., reported 5.78 inches in less than 24 hours. The stream was out of its banks from the 2d to the 12th.

Moderate to heavy rains over the upper Mississippi River above Fort Ripley, Minn., produced flooding along the main stem from Aitkin to Fort Ripley, Minn., from the 7th to the 16th. There is enough water available in the upper reservoirs to keep the outflow at Pokegama Dam at the present rate until March 1966.

Missouri Basin.--Minor flooding occurred on the Jefferson River at Sappington, Mont., from the 16th to the 21st. There was some damage to roads and undercutting of a levee southwest of Whitehall, Mont. Light flooding occurred on the Madison River at Logan, Mont., on the 13th and 14th.

There were several cases of minor flooding of agricultural land in low areas along the Yellowstone, Powder, and Big Horn Rivers in Montana during June. The greatest damage occurred along Griffith Creek in the vicinity of Glendive, Mont., where the approaches to several bridges were partially washed out. These minor overflows were due to runoff from the mountain snow accumulation.

Very intense and heavy rains during the night of the 12th and 13th over a small area between Hawarden, Iowa, and Alcester, S. Dak., caused the Big Sioux to rise to about two-thirds bankfull stage at Hawarden. In the reach at and below Akron, Iowa, the Big Sioux approached within 1 foot of bankfull stage. Rainfall ranged from 3 to 6 inches with most of it occurring in 1 to 2 hours. Damage was mostly due to erosion. Small branches and ditches in the hills cut through road grades, washing out or covering up growing crops in the Big Sioux bottoms. A second period of heavy rains during the night of the 28-29th between Hawarden, Iowa, and Canton, S. Dak., caused the Big Sioux to rise again to within 1 foot of flood stage at Akron, Iowa, and near bankfull below Akron to Sioux City, Iowa. The rains were not as intense as on the 12th and 13th. Little damage resulted.

Several periods of locally heavy rains during June resulted in isolated instances of minor flash-flooding on Salt Creek in eastern Nebraska. Locally heavy rains on the 12-13th caused some high water over a highway west of Roca, Nebr., on Salt Creek during the evening of the 12th. River stages, however, remained below bankfull. Locally heavy rains again during the afternoon and early evening of the 28th resulted in some additional flash flooding on portions of the Salt Creek during the night of the 28-29th. Damage was minor and confined mostly to lowland fields.

Severe thunderstorms during the period from June 14 to 18, caused severe flooding of tributaries of the South Platte River and portions of the main stem from above Denver, Colo., to the Nebraska State line. Very severe turbulence, funnel clouds, tornadoes, hail, and heavy cloudbursts accompanied the severe thunderstorms. Heavy rains during the night of the 14th (12 inches south of Rockport) flooded Lone Tree Creek on the morning of the 15th from north of Nunn, Colo., to south of Lucerne, Colo. The dam at Lone Tree Reservoir broke, destroying several smaller dams lower along the creek. Nunn, Pierce, and many ranches in the area were inundated. Other creeks, including Owl and Crow Creeks, overflowed. To the east, Pawnee Creek and other creeks overflowed, flooding areas of Sterling, Sedgwick, and Ovid. During the afternoon of the 15th, heavy rains in the Agate, Colo., area flooded West Bijou Creek and portions of Deertrail and Byers. There was flooding from heavy rains in areas east and south of Strasburg and in the Greeley, Colo., area. Hail accumulated to 6 inches on U. S. Highway 85 north of Greeley and in drifts up to 3 feet at New Raymer. Julesburg and Ovid were partially flooded by water from Lodgepole Creek during the day. Water from Bijou Creek with contributions from Muddy Creek crested and flooded areas at Fort Morgan, Colo., on the morning of the 16th. Roads east of U. S. 85 and north of U. S. 34 to Julesburg were closed by high water. Some bridges were washed out or damaged. Most rail lines in the area were blocked. Heavy rains during the night of the 16th flooded East and West Plum Creeks at Castle Rock and Sedalia, Colo. Major flooding resulted on the South Platte at Littleton, Englewood, Denver, and as far north as Brighton, Colo., during the night of the 16th and the morning of the 17th. Flooding extended to areas west of Fort Morgan along the South Platte. The crest of the South Platte flood combined with high water from the Cache la Poudre River caused flooding near Greeley, Colo. Heavy rains during the afternoon of the 17th caused flash floods on Indian Creek, and west of Loveland, Colo., in the Fort Collins area, and in the Limon area. Heavy showers occurred along the headwaters of creeks between Limon and Denver. The dam on East Bijou Creek broke and flooded Deertrail where most of the business buildings were severely damaged or destroyed. The Byers, Colo., area on West Bijou Creek was flooded. Comanche Creek overflowed in and near Strasburg, Colo. Water from these streams reached the Fort Morgan and Brush areas on the morning of the 18th to contribute to the second flooding in that area. The high water reached the Sterling area about noon of the 18th. Atwood, Colo., was inundated a second time. Crook and other areas were flooded by the high water on the South Platte. Minor flooding occurred on the Fall River at Estes Park on the 18th.

The South Platte flood closed nearly every major east-west highway in Colorado, causing heavy damage to state and county roads. Railroads were also hard hit. Heavy damage resulted to sewerage and water supply facilities. Damage to irrigation works along the South Platte was heavy. Preliminary damage estimates for the South Platte Basin range from $200 million to $250 million. The State Extension Service estimated total agricultural damage, including damage to crops, land, farm buildings, farm homes, equipment, and irrigation systems at about $18 million. Total agricultural damage was estimated at $43.5 million. There were at least 11 deaths from drowning in the South Platte Basin.

Heavy rains of 2 to 3 inches in southeast Nebraska during the night of June 1-2 caused brief flooding on the Little Nemaha at Auburn, Nebr., on the 2d. Frequent and occasionally heavy rains during the first 5 days of June resulted in 3 feet of overflow on the One Hundred And Two River at Rosendale, Mo., on the 5th. Moderate to heavy rains during the night of the 7-8th caused additional flooding in the Rosendale area on the 9th and 10th, closing a state highway east of that town. Extremely heavy rains during the night of the 28-29th caused record flooding on the Nemaha River at Falls City, Nebr., and more than 3.5 feet of overflow on the Nishnabotna at Hamburg, Iowa. Between 7 and 8 inches of rain was reported in the Nemaha Basin during that period. The Nemaha began flooding late on the 28th at Falls City, Nebr., and reached a record crest of 29.09 feet on the 30th. The previous highest stage of record (28.8 feet) occurred in June 1949.

Heavy flooding occurred during June on the lower portion of the Smoky Hill Basin below Kanapolis Reservoir and on the lower Big Blue River in southern Nebraska. There was also some heavy flooding in the Marais des Cygnes and Osage River Basins in Kansas and Missouri. Tributary overflow in the lower Smoky Hill River Basin reached record levels. Lyon Creek near Woodbine, Kans., with a crest of 30.4 feet on the 9th, 13.4 feet above flood stage, exceeded the accepted high water mark of about 30 feet for the July 1951 flood. However, tentative USGS estimates indicate discharge less than 1/3 of the 1951 value. Gypsum Creek at Gypsum, Kans., crested at 20.7 feet, 5.7 feet above flood stage on the 26th which was within a foot of the 1951 levels. Turkey Creek near Abilene, Kans., approached within 0.1 foot of the May 1959 crest which has not been exceeded since records began in 1958. It, however, was well below the high water mark of 29.7 feet established in 1903 and 1951. On the main channel of the Smoky Hill River at Lindsborg, Kans., a crest of 24.85 feet, 3.85 feet above flood stage, on the 26th was the highest stage recorded since July 1951. Crests along the Marais des Cygnes River were the highest since November 1961. Light to moderate overflows were recorded on the lower Solomon River, on the lower Big Blue River in Kansas, on the upper Republican tributaries, and in the Kansas River Basin. Heavy agricultural losses occurred along much of the Marais des Cygnes Valley, on the lower Big Blue River in Nebraska, and locally in the lower Smoky Hill and upper Kansas Basins.

There were numerous occurrences of flash flooding from local torrential rains during June. Nine-inch rains near David City, Nebr., around midnight of the 4-5th flooded roads east of the city. Minor overflow developed on the Big Blue River at Ulysses, Nebr., on the 6th. A pilot reported inundation of a few farmsteads by Johnson Creek 5 miles northwest of Dorchester, Nebr., by nighttime rains of the 7-8th. Another heavy rain center of 7 inches of about 3 miles in diameter, north of Ulysses, Nebr., caused additional minor flooding on the upper Big Blue River in Nebraska. Heavy rains during the evening of the 12th caused Sappa Creek at Oberlin, Kans., to rise rapidly to 4.65 feet above flood stage that evening. Heavy agricultural flooding continued downstream to Stamford, Nebr. Considerable flash flooding occurred near heavier rain centers in east-central Kansas during the evening of the 20th. Heavy general rains in the upper Kansas River Basin on the night of the 27-28th caused Rock Creek at Louisville, Kans., to rise to a record stage of 34.1 feet on the 28th, 19.1 feet above flood stage and 0.8 foot above the record crest of May 1962. Heavy agricultural losses occurred on Wildcat Creek northwest of Manhattan, Kans. Major flooding developed along the lower Big Blue River in Nebraska from the 3 to 5 inches of rainfall during the night of the 28th. Unofficial rainfall reports of 8 inches were reported in the vicinity of Wilber, Nebr.

The heavy rains and heavy inflow from tributaries caused flooding along the main stem of the Missouri River at most points between the mouth of the Nemaha River and Miami, Mo., on the 30th. Flooding continued until July 6 at Hermann and St. Charles, Mo.

Arkansas Basin.--Frequent heavy showers during June caused moderate to severe flooding on the Little Arkansas, Walnut, Cottonwood, and Neosho Rivers in Kansas. Rainfall during the month in the Kansas portion of the Arkansas Basin was excessive and ranged as high as 19.29 inches at Neosho Rapids with most stations reporting in excess of 10 inches for the month. Flooding began on the 5th. There were two separate periods of flooding on the Little Arkansas and Cottonwood Rivers, with continuous flooding on the latter at Emporia, Kans., until the 16th. A record crest of 36.3 feet occurred on the Walnut River at Augusta, Kans., on the 5th. Flood stage at this point is 23 feet. The city is protected to a stage of 36 feet. Torrential rains on Sand Creek caused heavy damage at Newton, Kans., on the 10th. Heavy rains during the latter part of June caused flooding on Cow Creek near Lyons, Kans., with considerable damage to rural private structures and crops. This overflow contributed to the severe flooding along the Arkansas which resulted from excessive rainfall and flash flooding in eastern Colorado. The damages along the Walnut and Cottonwood Rivers were heavy.

Brief lowland flooding occurred along the Chikaskia River in Kansas and northern Oklahoma on June 5 and 6 due to heavy showers on the 5th. Precipitation averaged 1.82 inches with some stations reporting amounts between 3.5 and 7.5 inches. Moderate rain on the morning of the 15th produced minor flooding on the Chikaskia River at Corbin, Kans. Heavy rains in the headwaters of the Cimarron River caused minor flooding at Waynoka, Okla., on the 22d. The heavy rains slowed down the wheat harvesting and hay cutting but there were no reports of crops destroyed.

Heavy rains over northwestern Oklahoma and the northern portions of the Texas Panhandle between the 8th and 14th caused 1 to 2 feet of overflow on the North Canadian from Beaver to Seiling, Okla., and on the Canadian at Amarillo, Tex. Additional heavy rain on the 15th caused 2 feet of overflow on the Canadian at Amarillo, Tex. Heavy rains on the 17th and 18th in Colfax County, New Mexico, caused severe flash floods on the Cimarron and Mora Rivers, tributaries of the Canadian River, above Conchas Dam. This flood is reported to have at least equalled the great flood of 1904. The U. S. Geological Survey reported that they lost 5 of their recording gage stations during this flood. Damages were heavy. At least 2 lives were lost. Both the North Canadian and Canadian Rivers went out of their banks from the heavy rainfall on the 24-25th. An estimated 11 inches of rain occurred at Channing, 45 miles northwest of Amarillo, Tex., during that period. The total monthly rainfall at Amarillo, Tex., during June was 10.73 inches. This is the greatest monthly amount at this point since records began in 1892. There was considerable damage to streets and roads.

The most damaging flooding of record occurred on the Arkansas River from the Kansas-Colorado State line to Great Bend, Kans., during June 17 to 28. This flood, as the one in 1951, originated in the headwaters area of southeastern Colorado.

The heavy rains began during the afternoon of the 16th in the Cripple Creek-Victor, Colo., area. Rain and hail damaged streets and roads and washed out three water reservoirs that had been in use since 1892. Three to 7 inches of rain was reported unofficially in the area. Five to 10 inches were reported unofficially in the Trinidad, Colo., area, causing floods in the Purgatoire River, Raton Creek, the St. Charles, Cucharas, Huerfano, and Apishipa Rivers. The period of flooding lasted from a few hours to a few days. The most severe flooding occurred from the 16th to the 20th. The flooding on the Purgatoire River at Trinidad, Colo., was the worst since May 30, 1935. At Pueblo, Colo., the Fountain River had an estimated peak flow of 80,000 c.f.s. on the evening of the 17th. This was more than twice the previous high flow of 35,000 c.f.s. of May 30, 1935. About 2 1/2 inches of rain occurred in 3 hours in the Rocky Ford, Colo., area, causing local flooding in the Arkansas River above the John Martin Reservoir.

Heavy rains (5 to 6 inches) occurred during the night of June 16, immediately below the John Martin Dam in eastern Colorado to the Kansas-Colorado State line. Heavy rain continued through the 17th. Two Buttes, Colo., reported 7.86 inches of rain in 4 hours early on the 17th, with as much as 12 inches in the area.

Precipitation amounts averaged 3 to 6 inches over most of the Arkansas Basin in Colorado. Snowmelt was a contributing factor, but alone it would have caused little, if any, significant flooding. The tributaries rose rapidly, causing record flooding on the Arkansas River at Syracuse, Kans., on the 17th. The crest of 21.8 feet exceeded the previous record stage of 13.3 feet of May 1964 by 8.5 feet. Record stages were reached for a distance of more than 200 miles downstream to Great Bend, Kans. The U. S. Geological Survey estimated the peak flow for the June 17, 1965 crest at Syracuse, Kans., as 200,000 c.f.s. compared to 54,000 c.f.s. during the May 1951 flood. Minor dams were broken on tributaries in eastern Colorado, contributing to the duration of the flood.

Farmland damage along the Fountain River was extensive from the southern portion of Colorado Springs to Pueblo. Damage in Pueblo was severe. Flood damage was extensive along Raton Creek (south of Trinidad) and at Trinidad downstream on the Purgatorie River. Damage along the Arkansas Basin was comparatively minor above Pueblo, Colo., but extensive downstream past the Colorado-Kansas State line. Almost every community downstream from Pueblo along the Arkansas suffered some damage. Granada and Holly, Colo., were probably the most severely damaged, as they were almost completely flooded. The number of deaths along the Colorado portion of the Arkansas River and tributaries will probably total between 20 and 25.

Red Basin.--One-half to 2 inches of rainfall on May 27 and 28 caused minor overflow along the Sulphur River in Texas during the latter part of May and the first part of June. Damages were negligible.

WEST GULF OF MEXICO DRAINAGE

The unusually heavy rains during May, which caused extensive flooding over the Trinity and Brazos Basins in Texas during the last two decades of May continued into June. The Trinity crested at Liberty, Tex., on the 2d, 4.3 feet above flood stage and at Moss Bluff, Tex., on the 3d, 4.1 feet above flood stage. It was back within its banks at all points by June 17. On the Brazos, flooding continued at East Columbia, Tex., from May 20 until June 2. Heavy rains on May 28 produced a secondary crest at East Columbia on June 1.

Heavy rain (4 to 8 inches) during the night of 22-23d west of Austin to Fredericksburg, Tex., caused a sharp rise on the Pedernales above Lake Travis. There was some overflow of low water bridges, but the rise was of short duration. There was no damage.

Moderate to heavy rain on the 5th and 6th caused minor flooding of the lowlands in the proximity of the Guadalupe, Lavaca, and Navidad Rivers between the 7th and 12th. Rainfall amounts ranged from 1.34 inches at Boerne to 7.02 inches at Kendalia, Tex. Rainfall amounts of 2 to 3 inches were quite common over the basins. Since the ground was already saturated, most of this precipitation resulted in runoff. Minor damage resulted to pastureland and farmland.

Extensive flooding on the Nueces River which began at Tilden, Tex., on May 18 continued at that point until June 3. The river was back within its banks at Calallen, Tex., on June 7. Heavy rains up to 7 inches on June 22 caused flash flooding on the extreme upper Nueces River at Uvalde, Tex., on the 23d. Damage was confined to roads and fences.

Heavy rains of 5 to 6 inches during the afternoon and evening of June 17 caused flash floods west of Roswell, N. Mex., on the Hondo and Rio Ruidoso, tributaries of the Pecos River. These tributaries, which are normally dry rose several feet above the flood level of 1941. Damages were heavy. A second flood on the 28th resulted in only minor damage.

Sanderson, Tex., located in Sanderson Canyon which drains into the Rio Grande about 25 miles south-southeast of the town was struck by a severe flash flood on the morning of June 11. This flash flood was due to heavy thundershowers (8-12 inches) which fell over higher terrain north and west of Sanderson on the night of the 10th. A wall of water 15 feet high drove hundreds of people from their homes. At least 22 persons lost their lives. Property damage was heavy with preliminary estimates ranging up to $3.5 million. Many homes and businesses were destroyed; automobiles and rail equipment damaged; and highway and railroad bridges washed out. A Red Cross survey showed that the flood covered 35 percent of the town.

Minor flooding occurred on the Rio Grande at Lobatos Bridge, Colo., and Embudo, N. Mex., between the 18th and 28th. At Albuquerque, N. Mex., the Rio Grande exceeded bankfull stage on the 4th, 11 to 15th, and 18 to 27th. There was no reported damage along the main stem.

Great Basin.--Snowmelt from high elevations caused the major streams along the western slopes of the Wasatch Range in northern Utah to crest near or slightly above bankfull stage on June 11-12. Flood damage in the Great Salt Lake Basin was minor with some small roads and farm areas inundated.

A major rise occurred in the upper Humbolt Basin in Nevada on June 15-16. The Humbolt River at Black Mountain, Nev., rose to bankfull stage on the 15th and the South Fork to above bankfull stage.

GULF OF CALIFORNIA DRAINAGE

Colorado Basin.--Heavy rains on the accumulated snowpack in the Uinta Mountains on June 9-11 caused extensive flooding and considerable damage in northeast Utah and southwest Wyoming. A flash flood occurred during the night of the 9-10th in Sheep Creek Canyon, a tributary to Flaming Gorge Reservoir, on the Green River in Utah. It took the lives of 7 members of a Salt Lake City family who had been camping in the area. Utah Highway 44 was mostly destroyed in this stretch of the Canyon. Very high to record peak flows were observed in most streams in the Uinta Basin in Utah. In Wyoming, Smith's Fork flooded the towns of Robertson and Mountainview. About two-thirds of the homes in Mountainview (population 400) were in water. Damages were heavy.

PACIFIC SLOPE DRAINAGE

Columbia Basin.--Flooding occurred on tributary streams of the Snake River in Idaho during June. The flow was greater than during any other month of record on the Salmon River at Whitebird, Idaho, and in several high altitude basins north of the Snake River. Inflow into the Boise River Reservoirs was greater than for any other June since 1896. Flood stages were exceeded on the Salmon River at Salmon, Idaho, on June 5-15. The crest of 8.3 feet was the highest stage reached at this point since June 1942, when it reached a stage of 9.6 feet. Minor flooding occurred on Henrys Fork near Rexburg, Idaho, on the 28th and 29th. The Boise River was above flood stage on the 1st and 2d. Heavy damage occurred on the Big Lost River below Mackay Reservoir to cropland, irrigation facilities, roads, and bridges. Below Ketchum, Idaho, the greatest damage was to roads and bridges.

Warm weather on May 26-29 and during the first 11 days of June caused the Columbia River to rise above flood stage at Vancouver, Wash., on June 1. It rose slowly until the 15th when it crested 2.1 feet above flood stage. The lower Columbia dropped about 1/2 foot during the several days following the crest and then held relatively stationary through the 25th. Little or no damage resulted from this flooding. However, there was added expense to lowland farmers in providing alternate pasture or feed because of inundated land.

FLOOD STAGE DATA

(All dates in June unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest*	
		From–	To–	Stage	Date
HUDSON BAY DRAINAGE	Ft.			Ft.	
Red River of the North. Wahpeton, N. Dak.	10	8	10	10.2	8
Fargo, N. Dak.	17	9	16	18.1	12
ATLANTIC SLOPE DRAINAGE					
Tar: Rocky Mount, N. C.	9	18	18	9.25	18
Tarboro, N. C.	19	20	21	20.1	21
Greenville, N. C.	13	20	24	14.1	22
Neuse: Neuse, N. C.	14	(13 (16	13 19	14.2 16.05	13 17
Smithfield, N. C.	13	13	21	19.4	18
Goldsboro, N. C.	14	(16 (27	26 Jul. 1	19.1 16.1	22 29
Kinston, N. C.	14	19	Jul. 3	17.2	26
Cape Fear: Fayetteville, N. C.	35	17	18	35.8	17
Lock No. 3, Tarheel, N.C.	42	16	20	51.5	18
Lock No. 2, Elizabethtown, N.C.	20	16	21	27.9	19
Rocky: Norwood, N. C.	15	16	17	#19.55	16
Pee Dee: Cheraw, S. C.	30	17	18	30.35	17
Peedee, S. C.	19	18	23	20.5	21
Black: Kingstree, S. C.	12	17	23	14.3	19
Saluda: Chappells, S. C.	14	14	18	21.4	16
Broad: Blair, S. C.	14	16	18	17.7	17
Congaree: Columbia, S. C.	19	16	16	22.3	16
Santee: Jamestown, S. C.	10	24	26	12.4	25
North Fork Edisto: Orangeburg, S. C.	[illegible]	16	21	9.3	18
Edisto: Givhans, S. C.	10	(21 (26	22 26	10.3 10.0	22 25
Savannah: Millhaven, Ga.	15	22	29	15.9	28
Clyo, Ga.	11	21	Jul. 5	13.8	Jul. 1
Ocmulgee: Abbeville, Ga.	12	22	22	12.0	22
EAST GULF OF MEXICO DRAINAGE					
Apalachicola: Blountstown, Fla.	15	16	24	16.9	18,19
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Minnesota: Savage, Minn.	698	Apr. 8	Jun. 20	719.35	Apr. 14
Des Moines: Tracy, Iowa	14	6	6	14.8	6
Ottumwa, Iowa	10	7	7	10.8	7
Sangamon: Riverton, Ill.	13	2	12	19.1	4
Mississippi: Aitkin, Minn.	12	8	12	12.5	10
Fort Ripley, Minn.	10	6	16	12.0	10
Missouri Basin					
Jefferson: Sappington, Mont.	9	16	21	(9.2 (9.35	17 20
Madison: Logan, Mont.	7	13	14	7.5	14
Salt Creek: Roca, Nebr.	19	28	29	19.6	29
Platte: Grand Island, Nebr.	3	27	Jul. 7	5.0	28
Louisville, Nebr.	9	Jul. 1	Jul. 1	9.2	Jul. 1
Nishnabotna: Hamburg, Iowa	18	29	30	#23.6	29
Little Nemaha: Auburn, Nebr.	22	2	2	23.2	2
Nemaha: Falls City, Nebr.	20	28	Jul. 1	#29.1	30
One Hundred and Two: Rosendale, Mo.	13	(5 (9 (30	5 10 Jul. 6	#16.0 16.65	5
Beaver Creek: Beaver City (nr), Nebr.	11	14	16	#12.5	14
Sappa Creek: Oberlin, Kans.	11	12	13	#15.65	12
Beaver City, Nebr.	16	14	15	#18.8	14
Stamford, Nebr.	14	16	17	#16.1	17
Republican: Wakefield, Kans.	11	28	28	14.3	28
Gypsum Creek: Gypsum, Kans.	15	26	27	20.7	26
North Fork Solomon: Lenora, Kans.	10	12	13	#10.5	13
Solomon: Beloit, Kans.	20	28	28	22.55	28
MISSISSIPPI SYSTEM (Cont'd.)	Ft.			Ft.	
Missouri Basin (Cont'd.)					
Solomon (Cont'd.): Glasco, Kans.	22	28	29	23.75	28
Minneapolis, Kans.	26	29	29	26.5	29
Niles, Kans.	24	29	[1]	25.7	Jul. 1
Turkey Creek: Abilene(nr), Kans.	15	26	27	26.0	26-27
Chapman Creek: Chapman, Kans.	19	28	29	22.3	28
Lyon Creek: Woodbine, Kans.	17	(9 (26	10 27	30.4 28.35	9 27
Smoky Hill: Lindsborg, Kans.	21	26	27	24.85	26
Mentor, Kans.	16	26	28	19.5	27
West Fork Big Blue: Dorchester (nr), Nebr.	15	8	8	16.35	8
Turkey Creek: Wilber, Nebr.	11	(2 (9 (13	5 10 14	13.95 13.05 13.25	3 9 13
Little Blue: Deweese (nr), Nebr.	8	13	13	9.0	13
Black Vermillion: Frankfort, Kans.	19	28	29	(22.2 (20.0	28 29
Fancy Creek: Winkler, Kans.	11	28	28	13.4	28
Big Blue: Ulysses, Nebr.	15	(6 (8	6 8	#17.5 #17.9	6 8
Crete, Nebr.	16	(2 (8 (9 (14 (29	2 8 10 14 30	17.9 16.35 22.9 18.6 19.9	2 8 9 14 29
Beatrice, Nebr.	16	29	Jul. 2	23.1	30
Barneston, Nebr.	18	29	Jul. 2	(22.1 (24.5	29 Jul. 1
Blue Rapids, Kans.	1101	30	Jul. 3	(1102.7 (1106.0	30 Jul. 2
Rock Creek: Louisville, Kans.	15	28	28	34.1	28
Vermillion Creek: Wamego (nr), Kans.	24	28	29	27.6	28
Mill Creek: Paxico, Kans.	19	28	28	21.8	28
Soldier Creek: Delia (nr), Kans.	17	28	29	18.4	29
Topeka (nr), Kans.	12	28	28	13.3	28
Wakarusa: Lawrence (nr), Kans.	23	(5 (14 (28	6 14 29	28.5 24.1 26.4	6 14 29
Stranger Creek: Easton, Kans.	15	30	Jul. 2	18.4	Jul. 2
Kansas: Manhattan, Kans.	17	28	28	18.3	28
Lecompton, Kans.	17	28	29	18.9	29
Lawrence, Kans.	18	29	29	18.8	29
Blue: Kansas City, Mo.	21	5	5	#30.15	5
Little Blue: Lake City, Mo.	18	(5 (30	5 30	19.9 21.4	5 30
Grand: Brunswick, Mo.	12	(6 (30	6 Jul. 6	13.25 18.1	6 Jul. 3
Chariton: Prairie Hill, Mo.	15	6	6	#15.5	6
Moniteau Creek: Fayette (nr), Mo.	16	5	5	16.3	5
Dragoon Creek: Burlingame, Kans.	15	5	5	18.1	5
Big Bull Creek: Hillsdale, Kans.	16	5	5	19.2	5
South Grand: Brownington, Mo.	19	17	17	19.3	17
Marais des Cygnes: Reading, Kans.	18	(5 (28	5 28	24.95 19.25	5 28
Melvern, Kans.	23	(5 (9	6 10	28.1 23.8	5 10
Quenemo, Kans.	28	(5 (10	7 10	35.1 28.0	6 10
Ottawa, Kans.	27	5	8	33.6	7
Osawatomie, Kans.	28	(6 (14	12 18	34.1 32.3	8 15
LaCygne, Kans.	25	6	18	(29.4 (30.1	11 14
Trading Post, Kans.	24	10	19	28.3	15
Osage: Schell City, Mo.	25	8	24	32.2	18
Osceola, Mo.	22	16	17	23.7	16

FLOOD STAGE DATA

(All dates in June unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
MISSISSIPPI SYSTEM (Cont'd.)	Ft.			Ft.	
Missouri Basin (Cont'd.)					
Missouri: Rulo, Nebr.	17	30	30	19.5	30
St. Joseph, Mo.	17	30	Jul. 3	20.8	30
Atchison, Kans.	22	30	Jul. 1	#23.3	30
Leavenworth, Kans.	19	30	Jul. 3	20.7	30,Jul.1
Napoleon, Mo.	17	30	Jul. 1	19.2	30
Lexington, Mo.	18	30	Jul. 5	25.9	Jul. 1
Waverly, Mo.	18	(6 (30	6 Jul. 5	#19.1 24.2	6 Jul. 2
Miami, Mo.	18	30	Jul. 5	#23.1	Jul. 2
Glasgow, Mo.	25	Jul. 1	Jul. 3	#27.1	Jul. 3
Boonville, Mo.	21	Jul. 1	Jul. 5	#22.9	Jul. 3
Jefferson City, Mo.	23	Jul. 3	Jul. 4	23.6	Jul. 3
Hermann, Mo.	21	Jul. 2	Jul. 6	24.2	Jul. 4
St. Charles, Mo.	25	Jul. 3	Jul. 6	26.6	Jul. 4
Arkansas Basin					
Little Arkansas: Sedgwick, Kans.	18	(5 (10	7 12	23.35 24.7	5 10
Walnut: El Dorado, Kans.	18	5	6	23.95	5
Augusta, Kans.	23	5	8	36.3	5
Winfield, Kans.	30	6	6	36.1	6
Arkansas City, Kans.	20	6	8	25.1	7
Chikaskia: Corbin, Kans.	10	(5 (13 (27	5 14 27	14.2 10.95 10.9	5 13 27
Blackwell, Okla.	26	(6 (14	6 14	26.6 25.8	6 14
Cimarron: Waynoka, Okla.	8	22	22	8.35	22
Cottonwood: Florence, Kans.	21	(4 (9	6 11	25.3 27.5	5 10
Cottonwood Falls, Kans.	9	(5 (9	8 13	13.5 15.9	6 10
Plymouth, Kans.	28	4	14	(36.0 (34.8 (35.7	5 6 10
Emporia, Kans.	20	5	16	(26.7 (26.9	5 10
Neosho: Iola, Kans.	15	8	8	15.3	8
Neosho Rapids, Kans.	22	5	15	(25.0 (26.5	5 (6 (10
North Canadian: Beaver, Okla.	9	(12 (27	13 27	9.6 9.2	12 28
Woodward, Okla.	10	(14 (29	15 30	11.3 11.0	15 30
Seiling, Okla.	11	(15 (30	16 Jul. 1	11.8 11.45	16 Jul. 1
Canadian: Amarillo, Tex.	7	(10 (15 (25	11 15 26	9.1 9.6 10.0	10 15 25
Canadian, Tex.	8	25	25	8.0	25

River and station	Flood stage	Above flood stages -dates		Crest*	
		From—	To—	Stage	Date
MISSISSIPPI SYSTEM (Cont'd.)	Ft.			Ft.	
Arkansas Basin (Cont'd.)					
Arkansas: Syracuse, Kans.	10	17	20	21.8	17
Garden City, Kans.	10	18	21	16.6	18
Dodge City, Kans.	10	19	22	H 15.65	19
Kinsley, Kans.	9	21	26	14.2	21
Great Bend, Kans.	8	22	28	13.2	23
Hutchinson, Kans.	8	(14 (25	16 30	8.6 10.4	15 27
Arkansas City, Kans.	16	(5 (11 (27	7 12 29	18.5 16.9 17.2	6 11 28
Ponca City, Okla.	14	7	9	16.2	8
Red Basin					
Sulphur: Hagansport, Tex.	38	May 28	1	42.75	May 31
Naples, Tex.	22	3	7	24.0	5
WEST GULF OF MEXICO DRAINAGE					
Trinity: Midway, Tex.	40	May 21	1	#43.7	May 25
Liberty, Tex.	24	May 16	12	#28.3	2
Moss Bluff, Tex.	4	May 14	17	# 8.1	3
Brazos: East Columbia, Tex.	30	May 20	2	(32.8 (#31.4	May 28 1
Navidad: Ganado, Tex.	21	8	10	21.6	9
Lavaca: Edna, Tex.	21	7	8	21.9	8
Guadalupe: Gonzales, Tex.	20	6	[illegible]	29.4	7
Cuero, Tex.	23	10	10	23.3	10
Victoria, Tex.	21	7	12	27.1	11
Nueces: Uvalde, Tex.	11	23	23	11.0	23
Tilden, Tex.	14	May 18	3	(18.5 (18.6	May 23 May 27
Calallen, Tex.	7	May 22	7	9.0	May 28-29
Rio Grande: Lobatos Bridge, Colo.	4	18	28	4.8	22
Embudo, N. Mex.	8	(22 (26	23 26	8.2 8.2	22,23 26
Albuquerque, N. Mex.	6	(4 (11 (18	4 15 27	6.1 6.35 6.9	4 13 19
PACIFIC SLOPE DRAINAGE					
Columbia Basin					
Henrys Fork: Rexburg, Idaho	9	28	29	9.4	28
Boise: Boise, Idaho	7	1	2	7.5	1,2
Salmon: Salmon, Idaho	7	5	15	8.3	13
Columbia: Vancouver, Wash.	16	1	29	18.1	15

* Provisional
# Highest stage observed
Record flooding
1/ Continued at end of month
H High water mark

RAWINSONDE DATA

Average monthly values

ALBANY, N. Y.
1007 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	86	15.0	78	283	1.6
1000	30	145	14.7	74	274	1.4
950	30	579	14.1	61	299	8.7
900	30	1,034	11.9	61	306	11.7
850	30	1,511	9.1	58	307	12.2
800	30	2,011	6.2	54	304	13.4
750	30	2,536	4.1	44	293	15.0
700	30	3,097	1.2	43	286	17.3
650	30	3,686	-2.0	38	285	18.5
600	30	4,324	-5.4	36	284	22.7
550	30	4,993	-9.4	35	284	26.6
500	30	5,733	-14.1	31	283	29.3
450	30	6,519	-19.2	R32	283	31.9
400	30	7,393	-24.9	R32	285	37.1
350	30	8,351	-31.4	R29	283	42.7
300	30	9,427	-38.9	R27	284	47.4
250	30	10,654	-47.4		287	50.7
200	30	12,100	-55.3		290	48.2
175	30	12,948	-57.4		288	41.6
150	30	13,920	-57.6		284	35.0
125	30	15,068	-58.7		280	30.1
100	30	16,469	-58.9		286	18.3
80	30	17,873	-57.2		295	9.1
70	30	18,718	-56.2		320	6.2
60	30	19,701	-54.8		1	2.5
50	30	20,871	-52.8		62	3.9
40	30	22,316	-51.1		71	7.6
30	30	24,197	-48.5		85	10.5
25	29	25,403	-46.5		82	12.2
20	24	26,892	-44.0		88	14.4
15	10	28,853	-39.6			
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ALBUQUERQUE, N. MEX.
837 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	1,619	13.9	50	94	1.0
1000	30	83				
950	30	521				
900	30	994				
850	30	1,486				
800	30	2,002	16.2	36	212	5.1
750	30	2,539	12.6	37	225	8.9
700	30	3,122	8.3	39	234	10.5
650	30	3,723	3.6	42	228	14.4
600	30	4,373	-1.6	45	223	18.6
550	30	5,052	-6.5	41	225	24.1
500	30	5,798	-11.6	36	231	27.4
450	30	6,592	-17.3	R28	237	28.7
400	30	7,470	-23.6	R26	237	29.7
350	30	8,433	-30.6	R27	233	31.9
300	30	9,510	-38.7	R26	231	36.3
250	30	10,739	-47.3		231	40.2
200	30	12,188	-55.3		237	43.5
175	30	13,035	-58.0		239	42.2
150	29	14,001	-60.6		234	36.3
125	29	15,128	-64.0		236	28.6
100	29	16,488	-66.1		229	15.3
80	29	17,846	-63.8		202	3.9
70	29	18,669	-61.2		112	4.3
60	29	19,631	-59.4		90	9.7
50	29	20,778	-56.9		90	12.6
40	29	22,204	-53.3		88	18.6
30	29	24,067	-50.8		89	18.1
25	29	25,260	-48.4		83	17.7
20	27	26,731	-46.4		82	20.2
15	19	28,638	-43.0		85	21.6
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AMARILLO, TEXAS
890 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	1,095	16.9	83	170	8.4
1000	30	89				
950	30	531				
900	30	1,005				
850	30	1,492	17.3	76	196	17.1
800	30	2,010	16.5	57	217	18.5
750	30	2,553	13.3	53	226	16.7
700	30	3,134	9.4	48	221	14.0
650	30	3,738	4.8	42	226	12.6
600	30	4,392	-.1	42	235	13.4
550	30	5,074	-5.4	45	239	14.6
500	30	5,824	-10.5	41	237	16.5
450	30	6,622	-15.8	36	235	20.6
400	30	7,507	-21.7	36	238	22.9
350	30	8,476	-29.0	35	241	25.4
300	30	9,560	-37.2	35	243	28.0
250	30	10,796	-46.2		245	33.6
200	30	12,248	-55.2		245	41.0
175	30	13,092	-59.4		248	40.0
150	30	14,049	-62.4		246	36.5
125	29	15,169	-65.0		244	26.6
100	29	16,521	-67.1		234	14.4
80	29	17,874	-64.3		154	2.1
70	29	18,695	-61.2		96	7.2
60	29	19,657	-58.9		92	9.5
50	27	20,809	-56.4		82	12.8
40	27	22,238	-53.2		91	16.5
30	27	24,104	-50.1		85	17.7
25	27	25,301	-47.9		87	16.3
20	25	26,780	-45.8		81	17.5
15	20	28,704	-42.7		85	22.0
10	11	31,442	-38.3		92	21.6
7	10	33,911	-34.2			
5	8	36,286	-29.9			

ANCHORAGE, ALASKA
1007 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	29	9.5	67	184	5.1
1000	30	104			181	6.2
950	30	525	5.4	71	177	4.9
900	30	965	2.6	75	148	4.5
850	30	1,425	-.5	81	132	8.5
800	30	1,908	-3.3	83	133	13.0
750	30	2,414	-6.0	82	139	15.3
700	30	2,954	-9.0	82	144	14.4
650	30	3,519	-12.4	76	151	13.6
600	30	4,132	-16.1	77	151	13.6
550	30	4,776	-20.5	75	145	14.4
500	30	5,480	-25.2	65	146	15.5
450	30	6,234	-30.4	56	142	16.7
400	30	7,065	-36.4	50	145	15.5
350	30	7,977	-43.2	60	147	16.9
300	30	9,001	-48.9		155	15.9
250	30	10,193	-50.1		166	17.7
200	30	11,659	-47.4		176	13.2
175	30	12,543	-46.8		173	12.0
150	30	13,565	-46.8		170	12.8
125	30	14,772	-47.3		161	10.3
100	30	16,248	-47.0		154	9.7
80	30	17,724	-47.2		143	8.5
70	30	18,607	-47.4		134	8.0
60	29	19,629	-47.0		124	8.0
50	29	20,836	-46.8		112	7.4
40	28	22,317	-46.1		102	10.5
30	26	24,242	-44.7		91	14.0
25	26	25,465	-43.3		96	17.1
20	26	26,973	-41.5		95	18.5
15	21	28,941	-38.5		87	19.0
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* ANNETTE, ALASKA
1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	37	7.6	87	20	.8
1000	30	153	8.4	75	354	1.0
950	30	576	6.6	73	201	1.4
900	30	1,018	3.9	75	196	3.9
850	30	1,481	1.4	72	194	6.2
800	30	1,967	-1.3	65	203	7.4
750	30	2,476	-3.8	58	214	8.7
700	30	3,023	-6.5	55	230	10.3
650	30	3,594	-9.5	55	236	12.4
600	30	4,214	-13.2	56	239	15.2
550	30	4,868	-17.1	49	238	17.1
500	30	5,582	-21.5	44	241	19.2
450	30	6,344	-26.9	44	238	19.2
400	30	7,191	-33.3	41	234	21.0
350	30	8,116	-40.2	37	236	23.3
300	30	9,153	-46.3		242	25.3
250	30	10,352	-50.1		245	25.1
200	30	11,804	-51.3		247	22.1
175	30	12,672	-50.5		242	16.5
150	30	13,679	-50.3		238	15.9
125	29	14,869	-50.8		225	11.8
100	28	16,319	-51.1		218	8.4
80	28	17,769	-51.0		202	4.9
70	28	18,638	-50.7		172	3.9
60	28	19,643	-50.5		154	4.7
50	28	20,834	-49.7		118	5.6
40	27	22,297	-48.8		106	7.2
30	27	24,194	-47.3		90	11.5
25	27	25,403	-45.8		98	13.6
20	26	26,894	-43.8		96	14.0
15	22	28,827	-40.7		89	16.5
10	19	31,633	-34.9		86	22.3
7	9	34,173	-29.7			
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ATHENS, GA.
990 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	246	18.9	91	58	1.0
1000	30	159				
950	30	597	19.0	80	278	2.5
900	30	1,065	16.9	77	263	3.5
850	30	1,551	14.1	77	259	5.4
800	30	2,061	10.9	78	262	6.4
750	30	2,594	7.8	73	264	6.4
700	30	3,165	5.1	63	262	5.8
650	30	3,764	2.2	52	263	6.2
600	30	4,412	-1.1	48	263	7.0
550	30	5,096	-5.1	45	269	6.6
500	30	5,846	-9.2	40	269	7.0
450	30	6,648	-14.1	37	270	8.5
400	30	7,539	-20.1	32	279	9.5
350	30	8,514	-27.3	29	285	12.2
300	30	9,605	-36.0	27	291	12.4
250	30	10,844	-45.8		294	14.8
200	30	12,292	-56.8		299	17.9
175	30	13,129	-61.5		306	20.8
150	30	14,075	-64.6		311	19.8
125	30	15,183	-66.7		318	15.0
100	30	16,530	-67.0		328	10.9
80	30	17,881	-64.5		15	7.4
70	30	18,701	-62.4		46	9.3
60	30	19,658	-59.8		75	12.4
50	30	20,804	-57.0		86	17.3
40	30	22,227	-53.5		91	17.7
30	29	24,092	-50.0		86	18.1
25	27	25,287	-48.3		87	19.8
20	21	26,769	-46.4		87	22.3
15	14	28,705	-43.6		90	27.8
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* BARROW, ALASKA
1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	8	-2.0	94	96	10.5
1000	28	126	-1.8	88	97	12.2
950	28	536	-1.3	79	104	11.8
900	28	967	-.3	64	111	11.7
850	28	1,425	-.9	56	106	10.7
800	28	1,907	-3.4	60	109	7.4
750	28	2,414	-6.0	57	117	5.6
700	28	2,953	-8.9	53	134	5.8
650	28	3,519	-12.3	51	139	5.6
600	28	4,132	-16.1	44	156	5.6
550	28	4,778	-20.4	41	168	5.6
500	28	5,481	-25.2	39	184	5.6
450	28	6,235	-30.6	40	195	4.9
400	28	7,067	-36.9	41	209	5.6
350	28	7,977	-43.3		211	8.0
300	27	9,003	-49.0		205	6.2
250	27	10,191	-51.4		187	5.2
200	27	11,657	-46.5		147	5.2
175	27	12,545	-45.8		127	5.8
150	27	13,572	-45.8		127	5.4
125	27	14,785	-46.1		128	5.2
100	26	16,269	-45.9		121	5.4
80	26	17,753	-45.5		110	5.2
70	26	18,643	-45.2		106	6.0
60	26	19,672	-44.7		104	6.6
50	25	20,889	-44.2		96	7.6
40	25	22,387	-43.4		91	9.9
30	25	24,326	-42.4		91	12.2
25	25	25,560	-41.5		88	14.4
20	25	27,079	-39.7		93	15.3
15	24	29,057	-36.6		89	15.7
10	22	31,891	-31.9		88	18.6
7	12	34,455	-27.1		90	22.7

BARTER IS., ALASKA
1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	15	-1.6	93	85	10.7
1000	30	117	-.8	88	88	13.0
950	30	529	.9	85	100	16.5
900	30	965	2.4	66	107	13.6
850	30	1,426	1.4	63	118	8.0
800	30	1,913	-.5	57	145	3.3
750	30	2,424	-3.4	58	199	1.9
700	30	2,969	-6.9	57	205	1.7
650	30	3,540	-10.5	54	245	3.3
600	30	4,155	-14.5	50	230	4.3
550	30	4,807	-18.9	48	241	6.4
500	30	5,512	-23.7	45	253	7.6
450	30	6,271	-29.1	45	261	8.9
400	30	7,106	-35.2	43	260	9.7
350	30	8,024	-41.5	43	257	12.0
300	30	9,055	-48.0		254	14.0
250	30	10,246	-50.9		246	13.0
200	30	11,710	-46.6		232	6.0
175	30	12,598	-45.8		212	5.4
150	30	13,625	-45.7		199	5.1
125	30	14,839	-45.8		176	4.1
100	30	16,325	-45.8		157	4.3
80	30	17,811	-45.6		138	3.9
70	30	18,700	-45.3		125	4.7
60	29	19,730	-44.8		107	5.8
50	29	20,950	-44.2		100	7.6
40	29	22,448	-43.3		95	9.1
30	29	24,389	-42.1		90	12.4
25	28	25,628	-40.7		93	13.2
20	27	27,150	-39.0		93	14.8
15	20	29,113	-36.2		94	17.3
10	7	31,950	-32.6			
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BETHEL, ALASKA
1004 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	39	6.4	87	172	1.0
1000	30	68			239	2.3
950	30	483	5.2	72	149	4.3
900	30	928	2.1	72	142	6.6
850	30	1,387	-1.0	74	137	8.5
800	30	1,869	-4.0	72	134	9.7
750	30	2,378	-7.0	70	129	10.9
700	30	2,911	-10.1	66	125	11.7
650	30	3,476	-13.5	58	125	11.7
600	30	4,083	-17.5	52	126	10.5
550	30	4,726	-21.8	46	125	10.9
500	30	5,425	-26.4	47	126	10.9
450	30	6,172	-31.4	44	127	9.3
400	30	7,003	-37.4	40	132	11.1
350	30	7,912	-44.0		132	11.8
300	30	8,934	-49.4		140	10.7
250	30	10,124	-49.7		145	8.0
200	30	11,597	-46.0		144	8.4
175	30	12,486	-46.0		137	7.6
150	30	13,511	-46.1		136	8.2
125	30	14,723	-46.2		132	7.2
100	30	16,204	-46.7		127	7.8
80	30	17,683	-46.5		122	7.6
70	30	18,569	-46.6		115	6.8
60	30	19,591	-46.6		107	8.2
50	30	20,800	-46.6		101	8.4
40	30	22,280	-46.3		101	9.7
30	30	24,194	-45.0		89	11.5
25	30	25,415	-43.7		88	14.0
20	29	26,918	-42.1		89	16.7
15	23	28,874	-39.1		86	18.6
10	7	31,641	-36.5			
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BISMARCK, N. DAK.
954 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	505	12.4	82	134	3.3
1000	30	106				
950	30	541			149	5.1
900	30	995	14.4	61	189	9.9
850	30	1,477	12.2	59	215	7.4
800	30	1,982	9.5	58	224	7.4
750	30	2,507	6.4	56	233	9.1
700	30	3,078	2.9	59	241	10.9
650	30	3,665	-.7	58	243	13.6
600	30	4,310	-4.8	57	254	19.0
550	30	4,980	-8.8	53	254	20.4
500	30	5,723	-13.2	50	252	21.4
450	30	6,506	-18.3	46	252	23.3
400	30	7,388	-24.3	42	250	23.9
350	30	8,348	-31.3	40	246	27.4
300	30	9,420	-39.8	42	244	31.5
250	30	10,640	-49.1		242	39.6
200	30	12,077	-56.0		248	46.4
175	29	12,928	-56.5		252	37.5
150	29	13,906	-56.3		251	29.7
125	29	15,064	-56.3		257	21.0
100	29	16,476	-57.8		252	12.6
80	29	17,884	-57.4		254	6.2
70	29	18,729	-56.2		285	1.7
60	29	19,714	-54.5		65	3.3
50	29	20,886	-52.9		66	6.8
40	29	22,331	-51.2		84	9.5
30	23	24,209	-48.6		78	11.1
25	22	25,411	-46.7		81	13.6
20	20	26,901	-43.6		82	15.3
15	12	28,811	-41.6		89	20.4
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BOISE, IDAHO
913 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	868	12.1	66	164	2.7
1000	30	89				
950	30	527				
900	30	985	13.8	56	201	1.7
850	30	1,468	14.1	46	319	5.1
800	30	1,976	11.0	47	323	6.4
750	30	2,507	7.2	47	299	5.6
700	30	3,075	3.2	48	278	6.6
650	30	3,669	-.6	46	265	8.0
600	30	4,307	-4.9	46	257	9.3
550	30	4,978	-9.4	40	253	10.9
500	30	5,716	-14.6	39	251	9.9
450	30	6,499	-20.4	37	249	8.7
400	30	7,368	-27.0	37	246	7.4
350	28	8,310	-34.5	R32	240	8.0
300	28	9,369	-42.7	R24	242	8.9
250	28	10,577	-50.8		262	9.5
200	28	12,012	-54.8		258	10.9
175	28	12,865	-55.3		244	12.8
150	28	13,849	-54.7		244	14.8
125	28	15,014	-55.4		238	13.4
100	28	16,433	-56.6		238	10.3
80	28	17,847	-57.0		212	4.7
70	28	18,692	-56.5		174	2.5
60	28	19,671	-55.4		107	3.3
50	28	20,838	-53.8		102	7.6
40	28	22,280	-51.7		91	9.7
30	26	24,157	-49.0		91	11.7
25	26	25,358	-47.3		79	13.2
20	24	26,842	-44.8		83	16.7
15	22	28,778	-41.2		84	18.5
10	7	31,611	-35.5			
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* BOOTHVILLE, LA.
1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	1	23.7	91	120	2.1
1000	30	140	24.4	86	146	3.1
950	30	590	21.5	77	174	6.0
900	30	1,057	18.7	69	163	6.6
850	30	1,546	15.8	65	163	5.8
800	30	2,059	13.0	60	186	4.5
750	30	2,599	10.3	49	205	3.3
700	30	3,170	7.3	44	287	2.5
650	30	3,776	3.9	40	317	4.3
600	30	4,423	-.2	38	328	4.5
550	30	5,112	-4.1	34	327	4.1
500	30	5,862	-8.4	25	317	4.5
450	30	6,670	-13.6	25	305	5.2
400	30	7,558	-19.8	25	311	5.8
350	30	8,534	-26.8	26	311	7.0
300	30	9,628	-35.1	23	315	7.6
250	30	10,874	-44.5		307	10.5
200	30	12,333	-55.0		313	13.6
175	30	13,177	-59.7		312	15.0
150	30	14,129	-64.3		316	16.7
125	30	15,232	-68.3		323	13.2
100	30	16,564	-69.7		350	4.1
80	28	17,897	-67.1		47	7.2
70	28	18,707	-64.0		68	12.4
60	28	19,656	-61.0		80	17.3
50	28	20,799	-57.3		84	20.4
40	28	22,222	-53.8		88	23.7
30	28	24,083	-50.7		90	26.4
25	28	25,277	-48.3		84	28.7
20	27	26,758	-45.5		86	30.1
15	27	28,691	-42.1		93	29.9
10	23	31,441	-38.4		88	31.3
7	10	33,954	-33.6			
5	6	36,326	-28.9			

* BROWNSVILLE, TEXAS
1012 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	7	24.1	89	140	6.8
1000	30	108	24.5	87	144	10.9
950	30	557	22.1	83	155	21.0
900	30	1,028	20.2	62	159	20.2
850	30	1,521	18.4	50	159	17.3
800	30	2,038	16.1	41	154	13.0
750	30	2,584	13.0	36	141	9.5
700	30	3,161	9.4	35	122	6.4
650	30	3,769	5.5	31	85	4.1
600	30	4,422	1.6	26	61	4.7
550	30	5,112	-2.8	27	15	4.5
500	30	5,867	-7.4	21	351	5.6
450	30	6,676	-12.9	23	346	5.4
400	30	7,568	-19.2	27	332	7.4
350	30	8,547	-26.3	28	317	10.3
300	30	9,643	-34.7	28	307	13.6
250	30	10,891	-44.2		298	18.1
200	30	12,351	-55.0		296	24.3
175	30	13,193	-60.4		300	20.4
150	30	14,140	-66.4		295	16.1
125	30	15,228	-71.8		305	10.9
100	30	16,534	-74.3		32	4.7
80	30	17,846	-69.7		81	12.6
70	30	18,648	-65.8		85	17.3
60	29	19,592	-62.8		87	20.8
50	28	20,727	-58.8		87	25.1
40	27	22,138	-55.4		91	25.4
30	27	23,991	-50.9		86	32.1
25	27	25,183	-48.9		86	33.8
20	25	26,652	-46.5		83	35.2
15	25	28,576	-43.1		86	35.5
10	23	31,338	-38.2		86	45.3
7	7	33,798	-35.4			
5						

BUFFALO, N. Y.
993 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	218	14.5	81	228	4.3
1000	30	155				
950	30	592	14.5	61	253	8.9
900	30	1,045	12.2	57	281	10.7
850	30	1,522	9.2	59	290	11.1
800	30	2,022	6.5	55	291	12.8
750	30	2,549	4.0	48	285	15.3
700	30	3,109	1.3	42	286	18.3
650	30	3,704	-1.4	38	287	21.0
600	30	4,336	-4.9	36	290	23.9
550	30	5,013	-8.8	33	290	26.4
500	30	5,748	-13.6	30	286	29.1
450	30	6,537	-19.0	31	287	31.5
400	30	7,410	-24.7	30	287	34.8
350	30	8,369	-31.4	29	288	40.0
300	30	9,444	-39.1	28	285	45.8
250	30	10,672	-47.6		287	49.5
200	29	12,118	-56.0		290	47.2
175	29	12,962	-58.0		290	41.8
150	29	13,933	-58.1		290	36.3
125	29	15,081	-58.7		289	29.7
100	29	16,480	-58.9		297	19.6
80	28	17,885	-57.7		310	9.3
70	27	18,726	-56.5		327	5.6
60	27	19,706	-54.8		29	4.5
50	27	20,877	-52.6		62	6.0
40	25	22,321	-50.7		70	8.7
30	23	24,202	-48.2		78	9.5
25	23	25,406	-46.7		81	10.7
20	18	26,894	-44.1		92	12.4
15	8	28,844	-40.8			
10						
7						
5						

*CANTON IS., PACIFIC AREA
+ 1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	4	30.1	68	80	7.6
1000	30	92	28.5	67	78	9.5
950	30	540	23.2	70	88	10.3
900	30	1,014	20.1	63	97	11.8
850	30	1,506	17.8	55	96	12.0
800	30	2,022	15.3	51	98	12.8
750	30	2,565	12.7	44	94	13.4
700	30	3,144	10.1	36	90	14.2
650	30	3,753	6.7	32	92	14.4
600	30	4,409	2.8	32	95	14.8
550	30	5,103	-1.2	31	96	15.5
500	30	5,962	-5.5	29	91	14.4
450	30	6,681	-10.1	25	95	15.9
400	30	7,580	-15.6	24	111	13.6
350	30	8,574	-22.7	22	127	10.1
300	30	9,685	-31.3	23	147	6.2
250	30	10,948	-41.7		201	5.1
200	30	12,421	-53.8		289	.6
175	30	13,265	-60.8		292	1.9
150	30	14,206	-68.1		247	4.7
125	30	15,281	-75.2		235	6.0
100	30	16,559	-78.3		265	13.0
80	30	17,845	-73.4		266	28.7
70	30	18,632	-69.2		267	35.5
60	30	19,559	-65.9		267	34.2
50	30	20,675	-62.7		252	8.9
40	30	22,052	-61.4		86	33.2
30	29	23,857	-56.0		90	53.8
25	29	25,025	-52.9		91	57.9
20	28	26,477	-48.7		92	61.2
15	23	28,393	-44.6		92	64.5
10	13	31,156	-38.7		90	67.0
7	5	33,647	-31.0			
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	* CAPE HATTERAS, N. C. 1017 MB						*1/ CARIBOU, ME. 991 MB						CHARLESTON, S. C. 1017 MB						* COLD BAY, ALASKA 1001 MB						COLUMBIA, MO. 988 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed					Direction	Speed					Direction	Speed					Direction	Speed					Direction	Speed
SURFACE	30	4	21.4	87	226	1.9	29	191	12.5	76	265	2.5	30	13	21.0	88	256	1.7	30	30	5.5	86	164	5.8	30	238	18.9	80	154	3.9
1000	30	155	21.0	80	235	5.2	29	117					30	157	21.5	82	226	3.7	30	42			219	4.5	30	129				
950	30	599	18.7	73	252	9.3	29	550	12.5	62	304	8.2	30	601	20.1	73	235	6.6	30	458	2.8	89	153	8.9	30	568	19.6	67	189	8.7
900	30	1,061	16.1	71	263	9.3	29	999	10.6	58	307	11.5	30	1,068	17.6	71	249	6.8	30	895	.5	91	149	8.5	30	1,037	17.4	65	223	11.3
850	30	1,546	13.2	69	264	9.1	29	1,473	7.7	59	310	12.8	30	1,554	14.5	70	252	7.2	30	1,353	-1.2	87	151	7.8	30	1,524	14.8	65	241	11.7
800	30	2,054	10.3	64	267	9.9	29	1,970	4.2	62	304	13.4	30	2,065	11.3	71	256	7.0	30	1,835	-3.3	84	156	6.4	30	2,036	12.4	53	250	11.8
750	30	2,587	7.8	55	260	12.6	29	2,493	1.0	62	299	15.5	30	2,603	8.1	67	261	7.6	30	2,341	-6.1	85	177	5.1	30	2,568	9.5	47	255	11.3
700	30	3,156	4.9	49	264	13.4	29	3,045	-2.2	60	297	16.5	30	3,170	5.4	54	249	8.5	30	2,881	-9.2	81	178	5.8	30	3,144	5.9	47	262	10.7
650	30	3,752	1.9	44	262	14.0	29	3,626	-5.5	55	297	17.5	30	3,769	2.7	48	244	9.3	30	3,447	-12.7	79	182	6.4	30	3,742	2.0	45	264	9.5
600	30	4,399	-1.5	37	260	15.2	29	4,255	-9.1	48	297	18.5	30	4,417	-1.0	46	250	8.5	30	4,058	-16.4	72	177	8.4	30	4,389	-2.0	48	270	11.5
550	30	5,077	-5.6	33	262	14.6	29	4,918	-12.9	45	291	21.0	30	5,104	-4.6	42	254	8.4	30	4,702	-20.6	62	195	6.8	30	5,071	-6.1	39	266	13.0
500	29	5,833	-9.6	30	262	15.3	29	5,645	-17.4	41	292	26.0	30	5,853	-9.0	37	266	7.4	30	5,406	-25.3	58	219	7.0	30	5,816	-10.5	29	266	14.4
450	29	6,632	-14.8	30	264	15.7	29	6,426	-22.7	37	289	26.6	30	6,659	-14.1	33	273	7.6	30	6,155	-30.7	56	231	7.8	30	6,613	-15.3	27	263	15.5
400	29	7,522	-20.9	32	269	16.3	29	7,282	-28.6	35	285	23.0	30	7,548	-20.2	R32	285	8.0	30	6,989	-36.7	52	218	8.0	30	7,501	-21.1	32	265	16.9
350	29	8,496	-27.9	27	272	17.9	29	8,226	-35.3	33	285	28.4	30	8,525	-27.0	R30	298	8.2	30	7,901	-42.9	48	235	8.2	30	8,473	-27.9	31	273	18.3
300	28	9,585	-36.1	26	277	17.5	29	9,285	-42.1	32	282	32.8	30	9,617	-35.5	R27	303	10.5	30	8,930	-46.7		238	11.3	30	9,563	-36.0	33	278	21.6
250	28	10,825	-45.8		290	18.3	29	10,501	-48.0		278	35.9	30	10,860	-45.5		309	12.8	30	10,135	-47.5		244	13.0	30	10,803	-45.9		271	28.6
200	27	12,278	-56.9		302	22.3	29	11,960	-51.3		283	31.9	30	12,310	-56.7		314	17.1	30	11,611	-47.2		242	12.6	30	12,251	-57.0		271	33.8
175	27	13,113	-62.1		307	22.3	29	12,824	-53.1		281	29.7	30	13,147	-61.5		315	20.4	30	12,496	-46.5		237	12.0	30	13,088	-60.8		276	33.2
150	27	14,060	-64.5		304	20.2	29	13,816	-53.8		275	27.8	30	14,096	-64.4		320	18.6	30	13,518	-46.6		242	11.3	30	14,042	-62.8		279	32.2
125	27	15,173	-65.0		303	15.3	29	14,985	-54.3		276	20.8	30	15,204	-66.1		323	14.8	30	14,725	-47.3		225	8.5	30	15,161	-64.5		276	23.9
100	27	16,533	-64.9		309	11.8	29	16,413	-55.3		277	13.6	30	16,554	-66.5		324	9.5	30	16,200	-47.6		207	5.4	30	16,521	-65.1		285	14.0
80	26	17,898	-62.6		1	5.8	29	17,836	-54.7		289	7.6	30	17,909	-64.2		22	7.8	30	17,672	-47.6		177	3.5	30	17,886	-63.2		332	4.9
70	26	18,726	-60.2		49	6.4	29	18,692	-53.6		302	5.2	30	18,730	-61.6		55	8.5	30	18,554	-47.6		163	4.7	30	18,711	-61.1		46	4.9
60	26	19,691	-58.0		76	10.5	29	19,684	-52.8		322	1.4	30	19,689	-59.3		78	13.0	30	19,571	-47.9		131	4.9	30	19,672	-58.8		74	8.5
50	26	20,946	-55.4		85	15.5	29	20,864	-51.3		66	4.1	30	20,837	-56.3		88	17.7	30	20,772	-48.0		121	6.8	30	20,828	-55.3		80	11.5
40	25	22,279	-52.0		92	17.3	29	22,318	-49.6		86	6.4	29	22,264	-52.8		92	20.2	29	22,242	-47.8		104	8.2	28	22,254	-52.6		89	13.4
30	23	24,150	-48.8		90	16.7	29	24,209	-47.4		83	8.7	24	24,136	-48.6		93	19.8	29	24,140	-47.4		96	12.6	26	24,127	-49.7		83	12.6
25	23	25,352	-47.1		92	18.6	28	25,414	-45.9		82	11.8	22	25,336	-47.4		89	19.6	29	25,348	-46.1		94	13.2	25	25,323	-48.2		81	14.4
20	22	26,832	-45.1		86	19.8	27	26,905	-43.5		87	15.5	19	26,816	-45.3		89	24.1	29	26,836	-44.1		92	15.2	21	26,794	-46.0		81	15.5
15	20	28,764	-42.2		85	20.4	25	28,851	-39.8		90	18.6	14	28,764	-41.8		94	25.6	26	28,764	-42.0		94	17.1	11	28,710	-43.3			
10	12	31,554	-36.6				15	31,682	-34.5		97	22.5							23	31,538	-37.1		88	21.2						
7																			10	34,016	-34.2									

Standard pressure surface (mb)	DAYTON, OHIO 983 MB						DEL RIO, TEXAS 976 MB						DENVER, COLO. 837 MB						DODGE CITY, KANS. 923 MB						EL PASO, TEXAS 881 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed					Direction	Speed					Direction	Speed					Direction	Speed					Direction	Speed
SURFACE	30	297	16.3	83	109	1.7	30	314	23.0	82	116	8.5	30	1,611	12.3	76	231	2.9	30	792	16.8	91	146	3.5	30	1,193	19.2	42	253	.6
1000	30	150					30	103					30	88					30	101					30	77				
950	30	590	17.0	70	233	3.9	30	553	21.9	81	132	16.9	30	529					30	544					30	528				
900	30	1,050	15.4	66	273	7.8	30	1,021	19.8	79	162	24.1	30	992					30	1,007	18.1	78	178	8.9	30	1,004				
850	30	1,533	12.4	66	277	9.3	30	1,514	18.0	72	168	22.5	30	1,479					30	1,497	17.4	65	212	18.1	30	1,496	21.0	33	240	2.1
800	30	2,040	9.7	61	277	9.9	30	2,032	16.0	58	167	20.4	30	1,990	13.5	60	257	4.1	30	2,014	15.7	54	218	17.1	30	2,017	17.7	33	254	8.2
750	30	2,570	7.0	54	276	11.3	30	2,577	13.6	48	171	15.2	30	2,533	10.8	56	243	5.4	30	2,555	12.5	51	226	14.8	30	2,562	13.9	33	241	12.0
700	30	3,139	4.3	48	274	13.6	30	3,158	10.5	43	176	8.0	30	3,104	7.2	52	240	6.0	30	3,135	8.4	51	227	13.4	30	3,142	9.5	36	235	13.0
650	30	3,735	1.2	42	275	15.2	30	3,766	6.2	40	212	2.3	30	3,709	3.4	44	235	7.4	30	3,739	3.9	48	233	13.6	30	3,745	4.8	38	224	13.0
600	30	4,380	-2.4	38	278	16.7	30	4,422	1.5	37	264	3.1	30	4,353	-1.8	46	238	11.3	30	4,388	-.9	46	233	14.0	30	4,400	.0	38	216	14.0
550	30	5,060	-6.4	39	281	17.7	30	5,108	-3.5	35	276	4.3	30	5,036	-7.0	46	240	15.7	30	5,068	-6.1	47	229	12.6	30	5,079	-5.0	35	217	15.3
500	30	5,805	-11.0	32	280	20.0	30	5,863	-8.8	33	260	6.0	30	5,775	-12.3	45	237	21.0	30	5,816	-10.8	41	235	15.7	30	5,834	-10.0	R25	227	18.3
450	30	6,603	-16.1	30	281	19.8	30	6,666	-13.8	R25	263	8.2	30	6,568	-17.7	41	236	23.5	30	6,611	-15.9	36	240	20.0	30	6,634	-15.7	R24	240	21.8
400	30	7,486	-22.1	30	282	24.3	30	7,559	-19.8	R26	267	12.0	30	7,444	-23.8	37	233	26.6	30	7,497	-21.9	37	236	23.1	30	7,518	-22.2	R25	243	26.2
350	30	8,454	-29.1	30	284	24.3	30	8,536	-26.8	R25	256	17.1	30	8,406	-30.8	36	232	30.7	30	8,466	-29.3	36	234	24.7	30	8,486	-28.9	R24	243	31.1
300	30	9,537	-37.3	27	285	28.0	30	9,631	-35.1	R25	269	21.2	30	9,482	-39.1	31	227	36.3	30	9,549	-37.3	35	236	28.2	30	9,571	-37.0	R25	244	36.5
250	30	10,771	-46.8		284	35.4	30	10,877	-44.7		269	26.0	30	10,707	-48.5		224	41.2	30	10,785	-46.5		237	29.3	30	10,808	-46.0		244	40.6
200	30	12,214	-57.4		289	38.9	30	12,336	-54.8		267	31.1	30	12,148	-56.0		228	44.7	30	12,232	-56.0		242	34.2	30	12,262	-55.3		248	45.3
175	30	13,051	-61.0		293	38.9	30	13,180	-59.6		268	29.3	30	12,995	-57.0		228	40.4	30	13,074	-59.6		245	36.3	30	13,106	-59.1		247	44.7
150	30	14,005	-62.0		291	35.5	30	14,133	-64.7		266	24.9	30	13,969	-58.1		231	34.2	30	14,032	-62.0		247	33.8	30	14,064	-62.9		241	38.5
125	30	15,128	-63.4		294	27.6	30	15,233	-69.3		253	16.9	30	15,113	-59.9		231	26.2	30	15,156	-63.6		246	23.7	30	15,176	-66.6		241	29.1
100	30	16,497	-63.5		301	18.1	30	16,555	-71.7		228	6.4	30	16,498	-62.5		228	14.6	30	16,518	-65.6		248	14.8	30	16,516	-69.0		232	16.9
80	30	17,872	-61.2		332	7.6	30	17,879	-68.2		89	6.6	30	17,882	-60.8		204	6.2	30	17,880	-63.3		207	2.1	30	17,858	-65.7		161	2.5
70	30	18,704	-59.4		356	5.2	30	18,688	-64.1		89	13.4	30	18,715	-59.1		130	3.3	30	18,703	-61.1		103	4.5	30	18,674	-62.7		97	6.4
60	30	19,672	-57.4		47	6.0	30	19,638	-60.9		93	17.3	30	19,690	-56.8		91	6.2	30	19,666	-58.2		86	8.0	29	19,628	-60.0		92	11.8
50	30	20,830	-55.0		75	9.9	30	20,778	-58.2		91	20.0	30	20,854	-54.3		82	8.4	30	20,821	-55.8		94	11.3	29	20,774	-56.8		85	18.8
40	30	22,264	-52.4		81	11.3	30	22,196	-54.4		95	23.1	30	22,292	-52.3		88	11.5	30	22,250	-53.0		91	13.0	29	22,196	-54.1		91	22.3
30	30	24,133	-49.6		84	13.0	29	24,058	-50.7		85	27.0	30	24,168	-49.5		87	13.8	29	24,118	-50.1		86	13.6	28	24,056	-50.6		87	23.3
25	30	25,331	-47.6		78	13.4	29	25,252	-48.1		84	28.6	30	25,368	-47.8		84	14.6	28	25,313	-48.3		89	12.8	28	25,250	-48.6		85	24.5
20	28	26,809	-44.8		83	14.2	24	26,733	-45.1		89	28.7	30	26,853	-45.0		87	14.0	25	26,792	-46.0		86	14.0	27	26,722	-45.9		81	25.8
15	12	28,736	-41.9				22	28,663	-42.3		87	29.1	23	28,795	-42.6		95	15.7	22	28,715	-43.1		93	17.3	21	28,652	-41.9		88	28.4
10							14	31,428	-36.4		88	31.5							11	31,480	-37.7				16	31,447	-36.6		90	29.5
7							6	33,912	-34.3																15	33,929	-32.7		99	29.5
5																									9	36,322	-28.3			

Standard pressure surface (mb)	ELY, NEV. 807 MB						* FAIRBANKS, ALASKA 993 MB						FLINT, MICH. 991 MB						FORT WORTH, TEXAS 994 MB						GLASGOW, MONT. 931 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed					Direction	Speed					Direction	Speed					Direction	Speed					Direction	Speed
SURFACE	30	1,908	5.5	64	184	5.6	30	135	9.0	78	339	2.1	30	234	14.9	75	188	1.0	30	180	22.1	88	177	5.2	30	696	11.6	79	114	2.3
1000	30	108					30	72					30	153					30	126					30	92				
950	30	542					30	498	9.6	61	238	3.3	30	588	15.1	60	244	2.7	30	575	21.4	80	193	16.1	30	523				
900	30	1,000					30	945	6.9	62	228	4.7	30	1,045	12.9	58	263	7.0	30	1,041	19.7	71	201	17.7	30	980	12.9	65	217	3.9
850	30	1,476					30	1,412	3.6	69	220	3.7	30	1,523	10.5	53	284	9.7	30	1,533	17.7	59	203	14.4	30	1,459	11.2	58	259	7.6
800	30	1,979	9.2	53	177	4.9	30	1,902	-.1	74	202	4.5	30	2,026	8.2	47	279	12.8	30	2,050	15.3	49	204	11.1	30	1,963	8.2	57	268	8.7
750	30	2,516	8.8	45	178	1.2	30	2,413	-3.5	77	186	4.5	30	2,554	5.6	46	284	14.0	30	2,595	12.1	46	210	8.9	30	2,489	4.7	56	263	9.3
700	30	3,082	5.1	44	243	3.7	30	2,957	-7.2	80	171	5.2	30	3,119	2.9	39	284	15.5	30	3,169	8.3	44	217	7.6	30	3,053	1.2	53	251	10.9
650	30	3,680	.6	47	236	4.1	30	3,527	-10.6	75	150	6.4	30	3,713	-.4	35	281	18.6	30	3,775	4.3	40	228	6.2	30	3,640	-2.6	52	244	12.8
600	30	4,319	-4.6	51	219	6.8	30	4,143	-14.6	70	158	7.2	30	4,351	-4.0	35	284	20.2	30	4,424	.1	37	239	5.1	30	4,276	-6.2	49	246	15.2
550	30	4,992	-9.7	51	218	7.6	30	4,790	-19.1	63	150	8.2	30	5,028	-7.8	30	283	23.9	30	5,109	-4.6	35	230	6.6	30	4,942	-10.2	42	249	18.5
500	30	5,727	-14.6	39	221	9.5	30	5,498	-24.1	59	144	10.1	30	5,769	-12.4	28	286	27.2	30	5,859	-9.3	29	243	7.6	30	5,680	-15.1	43	248	19.2
450	30	6,511	-20.2	33	222	10.5	30	6,252	-29.6	54	144	11.7	30	6,559	-17.8	28	288	29.5	30	6,663	-14.5	27	259	10.3	30	6,459	-20.3	39	248	22.0
400	30	7,379	-26.8	R33	217	12.0	30	7,089	-35.7	48	137	14.6	30	7,438	-23.8	29	290	33.4	30	7,549	-20.4	25	265	13.0	30	7,331	-26.4	34	247	25.1
350	30	8,328	-34.5	R32	219	12.8	30	8,005	-42.3	50	139	14.4	30	8,399	-30.8	30	290	35.5	30	8,525	-27.4	27	268	15.2	30	8,281	-33.9	34	243	26.4
300	30	9,387	-42.5		221	15.3	30	9,030	-49.5		139	14.2	30	9,475	-38.7	26	290	39.6	30	9,615	-35.8	29	279	18.6	30	9,342	-42.0	35	240	29.9
250	30	10,597	-50.3		233	19.4	30	10,213	-52.6		156	13.6	30	10,703	-47.7		289	45.5	30	10,857	-45.4		277	22.3	30	10,552	-50.7		239	33.0
200	30	12,036	-54.6		240	19.4	30	11,669	-48.4		165	12.0	30	12,145	-56.5		289	49.5	30	12,313	-55.2		270	24.9	29	11,984	-54.6		236	30.5
175	29	12,887	-54.9		243	21.6	30	12,552	-46.7		163	11.7	30	12,986	-58.7		290	47.4	30	13,156	-59.5		272	27.0	29	12,839	-54.3		244	27.2
150	29	13,870	-56.1		246	18.5	30	13,575	-46.5		165	11.3	30	13,952	-59.2		291	39.6	30	14,112	-63.4		273	24.7	29	13,827	-53.9		247	19.4
125	29	15,025	-57.6		241	17.5	30	14,783	-46.9		158	9.7	30	15,093	-59.6		291	31.9	30	15,220	-67.5		272	15.9	29	14,994	-55.3		241	16.1
100	29	16,428	-59.0		228	10.5	30	16,261	-46.7		147	8.5	30	16,485	-60.4		295	17.7	29	16,556	-69.6		271	5.8	29	16,413	-56.2		248	8.5
80	29	17,824	-60.0		209	5.6	30	17,738	-47.0		140	8.7	30	17,881	-58.4		311	10.9	29	17,900	-65.6		79	5.4	29	17,829	-56.2		214	3.7
70	29	18,659	-58.9		131	2.5	30	18,621	-46.8		131	7.0	30	18,723	-56.9		343	5.6	29	18,715	-62.9		82	10.5	29	18,678	-55.2		151	2.5
60	28	19,630	-57.5		94	6.0	30	19,643	-46.3		109	7.2	30	19,703	-55.3		21	4.7	29	19,675	-59.4		90	14.0	29	19,664	-54.0		106	3.3
50	28	20,786	-55.5		82	8.7	30	20,855	-45.8		105	8.7	30	20,872	-53.2		69	6.4	29	20,824	-56.6		90	16.5	29	20,836	-52.8		91	4.9
40	28	22,215	-53.4		89	13.0	30	22,341	-45.3		102	10.5	30	22,317	-50.9		79	9.1	29	22,251	-53.3		90	18.6	29	22,280	-51.2		85	7.4
30	27	24,080	-50.3		79	14.0	30	24,263	-44.1		94	15.2	29	24,197	-48.6		77	11.1	29	24,117	-49.9		88	21.6	28	24,156	-48.8		85	10.1
25	27	25,275	-48.2		82	15.2	30	25,488	-43.0		92	16.3	29	25,402	-46.4		83	11.8	28	25,316	-47.9		84	23.1	27	25,355	-46.7		88	10.7
20	27	26,754	-45.2		90	17.3	28	26,991	-41.2		92	17.1	29	26,893	-43.8		81	12.6	26	26,796	-45.6		89	23.5	26	26,839	-44.0		88	12.4
15	24	28,677	-42.3		85	17.1	26	28,963	-37.7		95	20.0	25	28,828	-40.8		84	14.8	17	28,723	-42.4		87	26.8	19	28,786	-40.5		91	15.7
10	17	31,463	-36.1		90	22.1	18	31,794	-32.5		84	23.7	14	31,594	-37.1															
7	8	33,974	-31.5																											

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb.)	* GRAND JUNCTION, COLO. 850 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	1,474	15.0	51	119	5.2
1000	30	65				
950	30	510				
900	30	977				
850	30	1,468			125	5.1
800	30	1,983	14.7	40	147	8.5
750	30	2,524	11.6	39	204	5.2
700	30	3,099	7.5	41	234	8.7
650	30	3,700	2.7	46	233	11.3
600	30	4,346	-2.7	50	231	14.2
550	30	5,021	-8.1	54	226	19.6
500	30	5,763	-13.2	47	230	22.9
450	30	6,550	-18.8	39	224	25.3
400	30	7,425	-24.9	41	226	27.0
350	30	8,381	-32.2	41	227	30.1
300	30	9,449	-40.6	32	225	36.1
250	30	10,666	-49.2		227	36.5
200	30	12,106	-54.8		234	34.8
175	29	12,955	-56.2		231	30.5
150	29	13,930	-57.8		227	31.1
125	29	15,074	-59.3		234	24.9
100	29	16,467	-61.1		229	13.0
80	29	17,850	-60.6		204	6.2
70	29	18,683	-59.4		179	3.3
60	29	19,652	-57.6		88	3.9
50	29	20,810	-55.3		93	8.4
40	29	22,241	-53.0		98	9.7
30	29	24,106	-50.4		86	11.8
25	28	25,302	-48.4		86	13.4
20	28	26,779	-45.8		91	14.6
15	27	28,707	-43.3		89	16.7
10	25	31,466	-37.8		89	21.4
7	12	33,995	-33.1			

Standard pressure surface (mb.)	* GREAT FALLS, MONT. 885 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	1,123	10.5	70	231	5.1
1000	30	89				
950	30	525				
900	30	989				
850	30	1,460	10.7	55	236	8.9
800	30	1,963	8.0	57	261	8.2
750	30	2,492	4.3	60	275	8.0
700	30	3,051	.3	62	269	10.5
650	30	3,642	-3.2	55	262	13.8
600	30	4,272	-6.5	48	262	17.5
550	30	4,946	-10.7	49	259	20.2
500	30	5,675	-15.6	46	256	20.8
450	30	6,460	-21.1	44	251	22.5
400	30	7,322	-27.2	42	249	23.7
350	30	8,270	-34.6	40	248	26.6
300	30	9,329	-42.7	39	251	28.2
250	30	10,536	-50.8		246	26.2
200	30	11,974	-54.2		244	23.3
175	30	12,830	-54.0		239	22.7
150	30	13,821	-53.7		238	17.3
125	30	14,990	-54.4		234	13.6
100	30	16,413	-56.0		232	9.1
80	30	17,831	-56.0		230	4.7
70	30	18,681	-55.0		183	1.4
60	30	19,668	-53.7		113	3.5
50	29	20,842	-52.3		94	5.2
40	29	22,288	-51.3		84	8.9
30	28	24,166	-48.9		80	11.7
25	28	25,369	-47.2		85	12.8
20	27	26,851	-44.8		79	15.7
15	27	28,792	-41.0		87	19.6
10	17	31,589	-35.2		92	21.4
7						

Standard pressure surface (mb.)	GREEN BAY, WIS. 992 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	210	13.1	76	234	1.4
1000	30	144				
950	30	581	14.5	59	228	4.5
900	30	1,033	12.8	58	252	6.4
850	30	1,511	10.1	59	275	9.7
800	30	2,013	7.5	52	280	12.2
750	30	2,539	4.9	45	273	14.0
700	30	3,103	2.3	40	273	17.1
650	30	3,699	-.5	37	278	20.6
600	30	4,334	-4.2	36	279	23.5
550	30	5,011	-8.3	34	279	24.7
500	30	5,749	-12.5	31	282	28.2
450	30	6,539	-17.9	R29	281	28.4
400	30	7,416	-23.9	R27	283	33.0
350	30	8,377	-31.1	R27	285	35.7
300	30	9,452	-39.0	R29	284	42.2
250	30	10,678	-48.2		283	50.1
200	30	12,116	-56.8		286	56.1
175	29	12,960	-58.5		290	49.9
150	29	13,929	-58.5		288	40.8
125	29	15,073	-59.4		290	31.7
100	29	16,468	-59.9		294	20.2
80	29	17,866	-58.5		312	12.6
70	29	18,707	-57.3		341	7.8
60	29	19,686	-55.3		29	6.2
50	29	20,855	-53.2		63	8.0
40	29	22,298	-51.3		77	12.2
30	29	24,179	-48.3		85	13.0
25	29	25,385	-46.2		85	15.3
20	27	26,879	-43.4		86	17.3
15	13	28,837	-39.6			
10						
7						

Standard pressure surface (mb.)	GREENSBORO, N. C. 987 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	273	18.4	88	333	.6
1000	30	162				
950	30	603	17.9	75	293	3.9
900	30	1,065	16.0	70	311	4.3
850	30	1,550	13.5	72	290	5.2
800	30	2,059	10.4	74	280	7.0
750	30	2,593	7.3	69	274	8.9
700	30	3,161	4.8	54	273	10.1
650	30	3,761	1.9	46	270	10.9
600	30	4,406	-1.4	40	270	11.1
550	30	5,092	-5.0	37	269	12.0
500	30	5,839	-9.5	34	275	12.2
450	30	6,643	-14.7	34	282	12.6
400	30	7,529	-20.8	34	287	13.6
350	30	8,503	-27.9	31	285	16.9
300	30	9,592	-36.4	30	285	18.3
250	30	10,831	-46.3		286	21.2
200	30	12,277	-57.3		295	23.9
175	29	13,107	-62.0		298	27.6
150	29	14,055	-64.1		303	24.5
125	29	15,169	-64.8		301	18.3
100	28	16,531	-65.0		311	12.4
80	28	17,897	-62.6		348	7.0
70	28	18,723	-60.7		47	6.4
60	28	19,688	-58.2		71	8.2
50	28	20,843	-55.4		80	13.2
40	28	22,276	-52.1		89	14.8
30	28	24,149	-49.5		84	15.2
25	26	25,341	-48.0		86	16.9
20	22	26,814	-45.4		85	18.5
15	8	28,736	-41.9			
10						
7						

Standard pressure surface (mb.)	GUAM, MARIANA IS. 1000 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	111	25.1	89	96	6.6
1000	30	107				
950	30	559	22.8	88	95	18.8
900	30	1,029	20.4	76	100	18.1
850	30	1,521	17.9	71	100	15.3
800	30	2,038	15.6	58	99	14.6
750	30	2,580	12.9	55	98	14.0
700	30	3,161	9.9	48	96	14.8
650	30	3,772	6.4	42	96	13.8
600	30	4,425	2.5	39	99	13.6
550	30	5,123	-1.9	40	100	13.8
500	30	5,874	-6.2	36	100	13.2
450	30	6,691	-11.1	34	98	13.8
400	30	7,586	-17.0	33	102	9.9
350	30	8,574	-23.9	30	112	5.4
300	30	9,681	-32.1	29	168	5.2
250	30	10,941	-42.2		192	7.2
200	30	12,409	-54.7		199	9.5
175	30	13,249	-61.7		200	8.0
150	30	14,187	-68.8		183	4.7
125	28	15,259	-75.3		91	5.2
100	27	16,538	-78.4		84	12.6
80	26	17,823	-73.8		82	16.7
70	25	18,613	-69.6		86	18.1
60	24	19,539	-66.4		82	21.6
50	23	20,656	-62.1		85	28.6
40	23	22,049	-58.3		90	34.0
30	23	23,879	-53.9		87	49.1
25	23	25,059	-50.8		88	55.4
20	22	26,520	-48.1		89	61.8
15	20	28,428	-45.3		90	64.9
10	13	31,162	-41.3		87	78.1
7	5	33,556	-38.5			

Standard pressure surface (mb.)	HILO, HAWAII 1017 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	29	11	20.6	87	247	5.6
1000	29	156	21.9	78	248	3.7
950	29	599	18.5	83	80	4.9
900	29	1,063	15.1	85	80	8.5
850	29	1,546	12.2	84	76	8.2
800	29	2,052	9.9	73	70	8.4
750	29	2,595	9.4	45	78	10.5
700	29	3,159	7.8	25	79	9.3
650	29	3,768	5.0	19	82	6.4
600	29	4,415	1.2	17	94	5.4
550	29	5,106	-3.1	17	97	3.1
500	29	5,857	-7.9	17	239	.8
450	29	6,665	-13.1	18	278	4.1
400	29	7,555	-19.6	19	268	8.9
350	29	8,533	-27.0	22	265	15.0
300	29	9,624	-35.7	22	265	21.6
250	29	10,865	-45.7		260	30.9
200	29	12,317	-55.9		256	43.1
175	29	13,157	-61.2		255	44.9
150	28	14,105	-66.7		252	41.8
125	27	15,201	-70.7		254	27.4
100	27	16,519	-71.6		244	5.1
80	26	17,841	-69.0		94	13.6
70	26	18,643	-66.5		91	18.8
60	26	19,582	-63.3		89	23.7
50	26	20,712	-59.8		90	28.0
40	26	22,117	-56.6		91	34.6
30	26	23,959	-52.4		89	40.4
25	24	25,144	-50.3		86	43.9
20	23	26,614	-47.4		89	50.3
15	21	28,533	-43.9		88	53.6
10	7	31,280	-40.3			
7						

Standard pressure surface (mb.)	HUNTINGTON, W. VA. 989 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	246	17.3	87	173	2.1
1000	30	153				
950	30	595	18.5	70	244	5.4
900	30	1,056	16.2	69	266	8.9
850	30	1,541	13.1	68	278	10.3
800	30	2,049	10.4	58	282	11.1
750	30	2,583	7.8	51	278	11.1
700	30	3,152	5.1	44	274	12.4
650	30	3,748	1.9	43	273	12.4
600	30	4,396	-1.8	37	277	12.2
550	30	5,077	-5.6	29	284	15.3
500	30	5,826	-9.9	27	284	16.1
450	30	6,630	-15.1	27	286	17.5
400	30	7,513	-21.5	31	286	20.2
350	30	8,484	-28.5	28	284	20.8
300	30	9,570	-36.6	26	281	23.5
250	30	10,808	-46.2		284	27.0
200	30	12,255	-56.8		290	31.5
175	30	13,093	-61.1		295	31.1
150	30	14,045	-63.0		297	28.4
125	30	15,166	-63.6		300	23.9
100	30	16,533	-63.6		305	16.7
80	29	17,909	-61.5		334	7.6
70	29	18,740	-59.4		28	4.7
60	29	19,713	-56.7		61	6.6
50	28	20,874	-54.2		75	10.5
40	28	22,314	-51.4		86	12.8
30	26	24,197	-48.4		86	13.0
25	24	25,407	-46.5		88	14.8
20	23	26,894	-44.5		85	16.5
15	12	28,811	-41.5			
10						
7						

Standard pressure surface (mb.)	* INTERNAT. FALLS, MINN. 973 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	360	9.9	73	163	3.1
1000	30	128				
950	30	557	12.1	63	194	6.0
900	30	1,010	11.3	56	226	7.6
850	30	1,486	9.0	55	256	8.4
800	30	1,985	6.3	56	270	9.3
750	30	2,510	3.4	56	283	11.3
700	30	3,069	.5	48	279	13.6
650	30	3,657	-2.9	45	283	15.3
600	30	4,291	-6.4	43	283	19.4
550	30	4,957	-10.3	39	280	20.6
500	30	5,695	-14.8	37	285	23.9
450	30	6,473	-20.1	32	283	29.1
400	30	7,349	-25.8	31	282	32.6
350	30	8,303	-32.9	31	280	36.1
300	30	9,369	-40.9	31	282	41.2
250	30	10,586	-49.4		281	47.2
200	30	12,026	-55.1		279	46.0
175	30	12,877	-55.8		283	39.0
150	30	13,859	-55.3		281	30.9
125	30	15,018	-56.5		284	22.5
100	30	16,431	-57.2		290	15.2
80	30	17,846	-56.2		302	9.3
70	30	18,695	-55.2		323	4.9
60	30	19,683	-53.9		354	4.5
50	30	20,858	-52.3		50	5.4
40	29	22,305	-50.5		72	9.3
30	29	24,190	-48.3		84	11.3
25	29	25,396	-46.5		85	12.8
20	29	26,884	-44.2		86	14.2
15	28	28,827	-40.5		85	16.1
10	22	31,615	-36.0		88	22.1
7	6	34,148	-30.0			

Standard pressure surface (mb.)	JACKSON, MISS. 1005 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	94	20.8	92	156	1.7
1000	30	141			170	2.9
950	30	583	21.3	75	205	6.8
900	30	1,055	18.8	69	218	6.2
850	30	1,544	15.7	69	227	5.8
800	30	2,057	12.7	67	234	4.9
750	30	2,592	9.9	58	253	4.7
700	30	3,168	7.0	50	286	4.3
650	29	3,765	3.5	46	307	3.9
600	29	4,419	-.4	40	304	3.9
550	29	5,099	-4.6	36	306	4.7
500	29	5,854	-9.2	31	301	7.0
450	29	6,652	-14.3	R26	309	6.8
400	29	7,547	-20.1	R27	315	8.2
350	29	8,523	-27.0	R29	304	9.3
300	29	9,615	-35.3	R29	307	8.7
250	29	10,859	-45.2		311	11.5
200	29	12,312	-55.6		312	13.8
175	29	13,154	-60.2		314	17.5
150	29	14,106	-64.1		316	20.2
125	29	15,213	-67.2		316	15.0
100	29	16,551	-69.1		329	7.0
80	29	17,892	-66.3		36	6.2
70	29	18,704	-63.8		65	10.5
60	29	19,658	-60.3		83	14.2
50	28	20,802	-57.3		88	17.9
40	28	22,226	-53.6		94	19.6
30	28	24,089	-50.2		87	22.0
25	26	25,285	-48.2		86	24.3
20	25	26,761	-45.7		88	25.1
15	22	28,686	-43.2		88	24.5
10	10	31,400	-41.1			
7						

Standard pressure surface (mb.)	* 2/ JACKSONVILLE, FLA. 1019 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	5	22.0	92	213	1.0
1000	30	168	22.3	83	198	3.7
950	30	609	20.4	74	208	6.6
900	30	1,079	17.5	70	214	5.1
850	30	1,566	14.5	67	216	4.7
800	30	2,076	11.2	65	234	4.5
750	30	2,610	8.3	56	240	5.6
700	30	3,180	5.5	50	238	8.0
650	30	3,780	2.4	45	237	9.1
600	30	4,425	-1.1	43	237	10.1
550	30	5,105	-4.8	37	242	9.1
500	30	5,859	-9.1	37	257	7.2
450	30	6,659	-14.2	34	273	6.6
400	30	7,550	-20.1	30	284	6.0
350	30	8,526	-27.3	28	296	6.8
300	30	9,618	-35.8	28	312	8.[illegible]
250	30	10,859	-45.7		313	10.3
200	30	12,309	-57.0		315	16.5
175	30	13,144	-61.8		322	19.8
150	30	14,090	-65.5		322	16.5
125	30	15,190	-68.6		333	13.4
100	30	16,525	-68.3		358	8.4
80	30	17,871	-65.8		44	9.5
70	30	18,686	-63.2		70	12.0
60	30	19,639	-60.7		83	18.3
50	30	20,781	-57.4		85	22.1
40	30	22,203	-53.7		92	25.1
30	30	24,066	-50.4		93	24.5
25	30	25,260	-48.7		86	25.4
20	30	26,732	-46.6		85	29.7
15	28	28,661	-42.3		91	32.4
10	25	31,436	-37.0		92	33.8
7	12	33,904	-34.2			

Standard pressure surface (mb.)	JOHN F. KENNEDY INT. ARPT.NY 1017 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	5	17.8	73	317	4.1
1000	30	153	17.3	65	315	5.6
950	30	591	16.3	55	320	7.6
900	30	1,048	13.5	54	308	8.0
850	30	1,528	10.8	53	291	10.5
800	30	2,031	8.3	50	287	14.4
750	30	2,563	5.5	47	282	16.3
700	30	3,123	2.7	46	280	19.6
650	30	3,722	-.5	43	277	22.1
600	30	4,356	-3.5	35	280	24.7
550	30	5,034	-7.6	35	281	26.4
500	30	5,774	-12.2	33	284	29.3
450	30	6,569	-17.3	29	286	34.4
400	30	7,444	-23.5	28	284	37.1
350	30	8,407	-30.4	28	282	40.8
300	30	9,485	-38.3	27	282	45.1
250	30	10,715	-47.5		285	49.0
200	30	12,156	-56.9		288	49.7
175	30	12,995	-60.0		287	43.1
150	30	13,957	-60.3		289	35.4
125	30	15,093	-60.6		287	26.8
100	30	16,482	-60.1		290	16.1
80	30	17,877	-58.3		302	7.6
70	30	18,719	-57.1		344	2.9
60	30	19,698	-55.2		58	3.3
50	29	20,866	-53.4		84	7.6
40	26	22,303	-51.3		94	10.5
30	26	24,184	-48.3		86	11.8
25	24	25,392	-46.3		93	14.4
20	17	26,892	-44.5		86	14.2
15	5	28,830	-41.9			
10						

Standard pressure surface (mb.)	JOHNSTON IS., PACIFIC AREA 1016 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	3	25.7	77	104	14.8
1000	30	141	24.6	77	92	16.9
950	30	589	21.1	82	84	19.2
900	30	1,058	17.9	74	87	21.4
850	30	1,546	15.2	72	85	20.6
800	30	2,058	12.6	65	84	17.5
750	30	2,598	10.7	49	82	14.8
700	30	3,172	8.6	33	81	12.4
650	30	3,781	5.9	25	74	11.5
600	30	4,434	2.1	20	72	9.9
550	30	5,126	-2.0	19	59	8.0
500	30	5,883	-6.4	17	38	7.8
450	30	6,692	-11.8	17	29	8.7
400	30	7,592	-18.0	16	19	9.7
350	30	8,576	-25.3	16	6	11.1
300	30	9,676	-34.1	18	348	10.7
250	30	10,925	-44.4		323	10.3
200	30	12,381	-56.3		286	15.9
175	30	13,217	-62.6		277	18.8
150	30	14,154	-68.8		275	21.2
125	30	15,230	-74.1		283	16.7
100	30	16,525	-74.7		356	5.6
80	30	17,832	-71.1		75	13.0
70	29	18,627	-67.7		84	18.3
60	29	19,562	-64.2		88	23.1
50	29	20,688	-60.3		90	28.4
40	29	22,090	-57.3		90	33.4
30	27	23,926	-53.7		88	43.3
25	27	25,105	-51.1		88	48.6
20	27	26,567	-47.9		88	54.6
15	20	28,473	-44.3		87	58.1
10						

Standard pressure surface (mb.)	KING SALMON, ALASKA 1006 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	15	4.8	87	137	4.1
1000	30	64			160	4.9
950	30	486	3.9	75	150	8.4
900	30	920	1.6	75	148	7.6
850	30	1,379	-1.3	77	141	8.7
800	30	1,860	-4.1	74	145	10.7
750	30	2,368	-7.1	73	146	9.5
700	30	2,901	-10.3	66	144	9.9
650	30	3,470	-13.5	61	148	10.3
600	30	4,073	-17.3	58	155	10.3
550	30	4,721	-21.1	53	155	10.1
500	30	5,417	-25.6	51	157	10.5
450	30	6,172	-30.7	49	175	10.9
400	30	6,999	-36.6	48	184	11.3
350	30	7,911	-43.2	56	195	13.0
300	30	8,936	-49.0		194	13.8
250	30	10,127	-49.5		204	14.2
200	29	11,602	-46.8		205	11.3
175	29	12,489	-46.4		199	11.3
150	29	13,512	-46.5		189	8.7
125	29	14,722	-46.8		179	8.0
100	29	16,199	-47.2		164	6.8
80	29	17,674	-47.3		146	7.2
70	29	18,556	-47.4		139	6.2
60	29	19,575	-47.5		129	6.6
50	29	20,779	-47.4		113	7.8
40	27	22,248	-47.1		99	9.5
30	25	24,152	-46.0		97	10.5
25	24	25,367	-44.5		93	13.6
20	20	26,867	-42.8		99	16.9
15	10	28,838	-40.1			
10						

Standard pressure surface (mb.)	KOROR, CAROLINE IS. + 1008 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	30	26.9	86	211	.8
1000	30	98	26.1	81	251	1.9
950	30	546	22.9	74	258	5.8
900	30	1,020	20.4	70	250	6.8
850	29	1,512	17.7	66	265	4.7
800	29	2,029	15.0	62	266	2.7
750	29	2,570	12.0	61	274	2.1
700	29	3,149	8.8	61	290	1.6
650	29	3,755	5.4	61	67	1.4
600	29	4,410	1.6	65	87	5.1
550	29	5,105	-2.1	60	96	6.2
500	29	5,859	-6.1	55	88	6.6
450	29	6,674	-10.6	49	87	8.5
400	29	7,576	-16.0	42	77	9.1
350	29	8,568	-22.8	33	72	9.5
300	29	9,680	-31.1	29	79	9.5
250	29	10,945	-41.5		80	10.7
200	29	12,417	-54.1		66	11.7
175	29	13,259	-61.4		64	13.8
150	29	14,198	-68.9		58	16.3
125	29	15,269	-75.6		61	16.1
100	29	16,547	-77.7		66	12.2
80	29	17,839	-73.3		66	8.7
70	29	18,626	-69.6		76	9.9
60	29	19,550	-66.7		83	12.0
50	29	20,662	-63.1		90	20.6
40	29	22,045	-60.0		92	40.0
30	29	23,861	-55.4		90	58.5
25	28	25,030	-53.1		93	63.3
20	24	26,484	-49.3		92	72.1
15	15	28,384	-45.9		91	77.1
10						

Standard pressure surface (mb.)	KOTZEBUE, ALASKA 1008 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	5	5.0	85	313	2.3
1000	30	74	5.3	78	316	2.1
950	30	495	6.1	67	132	1.9
900	30	937	3.8	66	138	4.5
850	30	1,399	.9	68	162	6.8
800	30	1,884	-2.3	72	158	8.5
750	30	2,397	-5.5	73	158	9.5
700	30	2,933	-9.0	69	154	10.7
650	30	3,505	-12.3	64	153	12.0
600	30	4,111	-16.1	60	151	12.6
550	30	4,761	-20.[illegible]	54	152	13.2
500	30	5,460	-25.2	54	153	14.0
450	30	6,213	-30.7	53	146	15.0
400	30	7,045	-36.5	51	145	16.1
350	30	7,957	-43.0	66	144	14.6
300	30	8,983	-48.7		140	14.4
250	30	10,170	-51.7		138	12.0
200	30	11,632	-47.0		131	10.3
175	30	12,519	-46.0		125	9.7
150	30	13,545	-46.0		119	9.3
125	30	14,756	-46.5		119	8.7
100	30	16,238	-46.2		106	8.7
80	30	17,721	-46.2		112	8.9
70	30	18,608	-46.0		107	8.9
60	30	19,635	-45.8		99	8.7
50	30	20,851	-45.3		101	9.1
40	30	22,342	-44.6		92	11.3
30	29	24,275	-43.4		89	14.0
25	29	25,505	-42.4		91	15.2
20	29	27,019	-40.7		89	16.9
15	26	28,986	-37.5		91	19.4
10	13	31,800	-32.6			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

KWAJALEIN, MARSHALL IS.
1012 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	27	4	26.8	80	70	10.7
1000	27	107	26.1	81	74	12.4
950	27	559	22.9	89	77	15.7
900	27	1,030	20.2	82	85	16.3
850	27	1,523	17.9	77	88	15.2
800	27	2,041	15.4	71	90	14.8
750	27	2,587	12.7	65	90	14.6
700	27	3,164	9.5	64	93	14.2
650	27	3,776	5.7	70	93	13.6
600	27	4,428	1.9	69	94	13.2
550	27	5,126	-1.7	65	91	12.6
500	27	5,879	-6.0	56	93	13.0
450	27	6,697	-11.2	55	90	12.2
400	27	7,591	-16.6	52	98	10.9
350	27	8,584	-22.5	52	109	8.5
300	27	9,697	-31.2	44	125	4.3
250	27	10,961	-41.5	38	179	4.7
200	27	12,434	-54.2	35	200	6.0
175	27	13,275	-61.7	35	224	4.9
150	27	14,212	-69.6	35	269	7.6
125	27	15,280	-76.1		267	8.0
100	22	16,552	-78.5		314	2.1
80	22	17,938	-74.2		114	4.1
70	22	18,622	-70.8		72	7.4
60	22	19,544	-67.0		79	10.9
50	22	20,654	-63.7		83	21.4
40	22	22,030	-61.4		84	35.5
30	22	23,836	-55.8		87	55.9
25	21	25,005	-52.7		89	62.5
20	20	26,456	-49.0		90	65.1
15	20	28,361	-45.2		90	70.9
10	19	31,097	-40.5		87	78.9
7	14	33,557	-36.7		92	53.6
5	10	35,239	-32.3			

LAKE CHARLES, LA.
1015 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	5	21.2	91	86	3.5
1000	30	133	23.8	84	128	6.0
950	30	582	22.1	76	173	10.1
900	30	1,052	19.3	69	178	9.5
850	30	1,542	16.8	59	182	7.8
800	30	2,057	14.3	47	197	6.0
750	30	2,600	11.4	41	229	3.7
700	30	3,179	8.1	38	280	2.3
650	30	3,776	4.3	40	318	3.1
600	30	4,428	.0	42	334	3.9
550	30	5,115	-4.4	34	338	4.3
500	30	5,865	-8.6	27	333	4.5
450	30	6,672	-13.6	R26	324	5.8
400	30	7,562	-19.6	R26	322	8.0
350	30	8,539	-26.6	R23	315	11.1
300	30	9,634	-35.0	R25	306	13.4
250	30	10,881	-44.5		308	17.5
200	30	12,341	-54.5		309	20.2
175	30	13,188	-58.9		308	21.4
150	30	14,144	-63.6		311	19.6
125	30	15,251	-68.3		316	12.6
100	30	16,580	-70.2		336	3.9
80	30	17,915	-66.9		54	8.0
70	30	18,726	-64.0		72	13.6
60	30	19,679	-61.2		86	18.1
50	30	20,820	-57.5		88	20.8
40	30	22,245	-53.4		94	22.9
30	30	24,114	-49.8		84	25.8
25	30	25,313	-47.6		86	27.6
20	30	26,799	-44.5		88	28.6
15	24	28,741	-41.6		87	29.9
10						
7						
5						

LANDER, WYO.
828 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	29	1,696	10.1	66	255	1.7
1000	29	89				
950	29	526				
900	29	988				
850	29	1,471				
800	29	1,978	11.2	51	271	2.1
750	29	2,513	8.2	49	284	3.7
700	29	3,082	4.7	48	284	5.2
650	29	3,677	.4	50	247	7.4
600	29	4,320	-4.0	45	246	11.1
550	29	4,993	-8.6	43	243	15.2
500	29	5,734	-13.8	44	245	17.3
450	29	6,521	-19.4	41	234	16.3
400	28	7,395	-25.6	38	234	19.6
350	28	8,348	-33.2	R34	227	23.3
300	28	9,413	-41.4	31	223	24.7
250	28	10,626	-50.2		219	30.7
200	28	12,058	-56.2		217	35.0
175	28	12,908	-55.6		226	29.3
150	28	13,889	-56.1		231	29.5
125	28	15,046	-56.8		235	20.4
100	28	16,453	-58.4		241	9.5
80	28	17,855	-58.5		207	2.5
70	28	18,696	-57.4		111	2.7
60	28	19,673	-55.9		109	5.8
50	28	20,838	-53.8		89	8.4
40	28	22,278	-51.9		79	10.9
30	27	24,153	-49.1		83	13.0
25	25	25,358	-47.2		78	15.3
20	24	26,844	-44.7		83	17.5
15	21	28,795	-41.6		92	17.9
10	6	31,648	-35.0			
7						
5						

LAS VEGAS, NEV.
933 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	660	19.8	28	223	6.6
1000	30	51				
950	30	497				
900	30	969	21.4	26	212	5.6
850	30	1,461	18.7	28	211	4.5
800	30	1,977	14.6	31	187	4.1
750	30	2,512	10.2	34	191	4.7
700	30	3,087	5.5	38	188	5.4
650	30	3,682	1.0	39	192	6.0
600	30	4,326	-3.8	36	214	7.0
550	30	4,997	-8.6	R34	232	9.3
500	30	5,739	-13.6	R29	239	14.0
450	30	6,524	-19.2	R26	242	17.9
400	30	7,397	-26.0	R27	243	21.0
350	30	8,350	-33.0	R29	248	27.0
300	30	9,417	-40.6	R26	246	31.1
250	29	10,642	-48.0		248	35.7
200	29	12,095	-53.3		249	38.3
175	29	12,951	-55.0		249	36.5
150	29	13,932	-56.6		247	32.4
125	29	15,079	-59.6		243	23.5
100	29	16,471	-60.6		240	14.8
80	29	17,957	-60.9		217	2.3
70	29	18,688	-59.7		123	3.7
60	29	19,653	-58.0		97	6.2
50	29	20,808	-55.6		96	10.7
40	29	22,239	-52.6		85	13.4
30	28	24,106	-49.8		86	16.7
25	28	25,304	-47.7		87	19.6
20	27	26,784	-45.3		87	18.8
15	25	28,717	-41.9		86	20.4
10	9	31,467	-37.5			
7						
5						

* LIHUE, HAWAII
1015 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	36	23.3	75	57	10.3
1000	30	165	22.6	77	61	13.0
950	30	607	18.9	86	67	16.5
900	30	1,074	15.4	87	71	17.5
850	30	1,557	12.5	84	72	17.1
800	30	2,066	11.3	66	75	15.9
750	30	2,603	9.6	33	75	14.6
700	30	3,175	8.1	25	76	12.4
650	30	3,779	4.9	22	73	10.9
600	30	4,431	.9	22	69	9.3
550	30	5,122	-3.5	24	61	8.5
500	30	5,872	-8.4	25	52	7.4
450	30	6,677	-13.9	24	38	5.6
400	30	7,566	-20.3	24	9	5.4
350	30	8,541	-27.9	31	356	6.8
300	30	9,628	-36.7	29	348	9.7
250	30	10,864	-46.7		329	10.7
200	30	12,309	-57.4		299	15.2
175	30	13,143	-62.3		291	16.5
150	30	14,083	-66.8		288	14.6
125	30	15,177	-70.0		283	9.7
100	30	16,501	-70.8		355	2.5
80	30	17,828	-68.7		89	11.7
70	30	18,631	-66.1		91	16.5
60	30	19,573	-63.3		89	21.8
50	30	20,702	-59.9		91	26.0
40	30	22,105	-57.1		91	31.7
30	30	23,942	-53.5		88	36.7
25	30	25,121	-51.2		88	41.2
20	30	26,581	-48.2		88	45.3
15	29	28,490	-44.8		91	47.4
10	25	31,227	-41.0		87	51.7
7	10	33,658	-37.6			
5						

LITTLE ROCK, ARK.
1007 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	79	20.5	87	210	1.0
1000	30	138	21.0	82	208	3.5
950	30	584	21.2	69	225	10.5
900	30	1,052	18.5	68	224	11.5
850	30	1,541	15.5	65	226	9.9
800	30	2,054	13.1	55	235	7.2
750	30	2,592	10.6	50	244	6.4
700	30	3,168	7.2	48	266	6.2
650	30	3,770	3.4	47	274	5.8
600	30	4,419	-.7	43	281	6.6
550	30	5,103	-4.8	36	279	6.2
500	30	5,855	-9.5	35	275	8.2
450	30	6,658	-14.4	R30	284	10.1
400	30	7,548	-20.0	R28	281	11.7
350	30	8,524	-27.0	R26	280	12.6
300	30	9,618	-35.1	R24	285	13.4
250	30	10,865	-44.8		290	14.2
200	28	12,323	-55.2		286	18.1
175	28	13,166	-59.9		292	20.8
150	28	14,122	-63.0		295	19.8
125	28	15,234	-66.4		300	13.2
100	28	16,580	-67.3		306	6.8
80	28	17,934	-64.8		27	3.9
70	28	18,752	-62.5		64	5.8
60	28	19,713	-58.9		77	9.9
50	28	20,865	-56.1		87	14.0
40	26	22,296	-52.9		92	15.2
30	25	24,162	-50.0		82	17.5
25	25	25,359	-47.9		85	18.5
20	18	26,829	-45.4		79	18.8
15	10	28,739	-43.0			
10						
7						

MCGRATH, ALASKA
996 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	103	8.2	81	188	1.4
1000	30	70				
950	30	495	8.5	60	200	4.1
900	30	940	5.7	62	182	3.7
850	30	1,404	2.1	69	162	4.5
800	30	1,891	-1.6	76	157	6.6
750	30	2,398	-5.2	82	151	8.0
700	30	2,941	-8.8	82	140	10.9
650	30	3,507	-12.3	76	136	10.5
600	30	4,120	-16.0	70	135	12.0
550	30	4,766	-20.4	69	131	13.4
500	30	5,470	-25.2	61	133	14.4
450	30	6,220	-30.5	55	134	16.7
400	30	7,055	-36.7	53	135	18.5
350	30	7,967	-43.3	63	132	21.2
300	30	8,990	-49.3		139	22.0
250	30	10,177	-50.8		139	19.0
200	30	11,643	-47.1		138	14.2
175	30	12,531	-45.9		142	12.4
150	30	13,556	-46.0		143	11.5
125	30	14,767	-46.3		134	10.5
100	30	16,249	-46.2		128	8.9
80	30	17,731	-46.3		129	8.2
70	30	18,617	-46.1		125	8.0
60	30	19,641	-46.0		113	8.0
50	30	20,854	-45.8		108	8.7
40	30	22,341	-45.1		94	9.5
30	30	24,266	-43.7		90	13.0
25	30	25,494	-42.5		89	15.7
20	30	27,006	-40.8		91	17.7
15	23	28,967	-37.4		90	19.8
10	8	31,798	-32.0			
7						

+ MAJURO, MARSHALL IS.
1011 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	3	28.2	81	79	8.7
1000	30	99	26.8	75	79	9.7
950	30	546	22.8	72	83	12.0
900	30	1,021	20.1	68	87	13.0
850	30	1,513	17.6	65	89	13.4
800	30	2,030	15.0	62	92	13.8
750	30	2,572	12.3	58	93	12.8
700	30	3,151	9.1	56	94	13.2
650	30	3,763	5.8	52	95	12.0
600	30	4,414	2.3	51	96	11.7
550	30	5,109	-1.3	47	99	10.9
500	30	5,867	-5.2	39	96	12.4
450	30	6,688	-9.9	36	90	12.4
400	30	7,590	-15.4	32	96	11.1
350	30	8,585	-22.2	29	94	8.7
300	30	9,700	-30.5	26	103	7.8
250	30	10,969	-40.9		113	6.8
200	30	12,446	-53.7		86	4.7
175	30	13,290	-60.8		357	2.5
150	30	14,232	-68.6		303	5.4
125	30	15,304	-75.9		281	6.6
100	29	16,577	-78.6		271	4.1
80	29	17,869	-72.1		24	3.1
70	29	18,664	-67.4		79	7.0
60	28	19,595	-65.3		92	11.3
50	27	20,715	-61.8		94	18.3
40	26	22,108	-59.1		92	39.2
30	24	23,933	-53.9		90	58.1
25	22	25,113	-50.9		91	63.1
20	17	26,585	-46.2		91	65.9
15	8	28,523	-42.9			
10						
7						

+ MARCUS IS., N. PACIFIC
1015 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	9	28.6	66	135	6.0
1000	30	140	25.7	66	128	6.8
950	30	585	21.5	68	127	6.8
900	30	1,057	18.9	61	123	5.4
850	30	1,546	16.7	52	109	4.5
800	30	2,062	15.1	40	103	3.3
750	30	2,599	12.8	33	93	4.1
700	30	3,183	10.1	29	86	4.9
650	30	3,790	6.8	26	92	3.5
600	30	4,448	3.0	24	89	3.1
550	30	5,141	-1.2	24	74	2.9
500	30	5,901	-6.0	23	62	1.9
450	30	6,708	-11.4	24	83	2.1
400	30	7,612	-17.4	23	115	2.9
350	30	8,599	-24.2	22	85	3.5
300	30	9,704	-32.7	23	57	6.2
250	30	10,962	-42.6		58	6.8
200	30	12,433	-54.0		40	7.6
175	30	13,277	-60.4		36	7.0
150	30	14,223	-66.8		40	7.2
125	30	15,308	-72.3		45	7.4
100	30	16,612	-74.6		61	9.5
80	30	17,920	-70.6		81	15.0
70	30	18,719	-66.2		83	16.9
60	30	19,664	-62.2		88	20.4
50	30	20,800	-58.9		90	25.1
40	30	22,214	-54.5		93	31.3
30	29	24,077	-49.9		97	36.9
25	28	25,274	-47.7		99	37.9
20	21	26,752	-45.3		98	39.0
15	16	28,677	-42.6		90	38.9
10	6	31,427	-37.3			
7						

* MEDFORD, OREG.
969 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	401	10.4	80	289	1.9
1000	30	135				
950	30	567	12.3	66	286	2.5
900	30	1,018	11.2	63	300	3.1
850	30	1,494	9.2	65	343	2.7
800	30	1,996	7.9	52	6	3.7
750	30	2,525	5.6	47	314	3.1
700	30	3,088	2.6	41	309	4.7
650	30	3,678	-.9	34	307	6.2
600	30	4,318	-4.9	34	302	7.0
550	30	4,991	-9.4	33	310	7.4
500	30	5,726	-14.5	33	313	8.7
450	30	6,508	-20.4	31	308	9.1
400	30	7,377	-27.0	33	316	9.7
350	30	8,326	-34.3	33	318	11.5
300	30	9,387	-42.1	29	328	16.7
250	30	10,597	-50.7		323	18.8
200	30	12,028	-56.6		315	18.3
175	30	12,874	-56.6		302	17.3
150	30	13,852	-56.3		280	13.4
125	30	15,008	-57.0		268	12.0
100	30	16,420	-57.2		249	8.4
80	30	17,832	-56.9		227	5.1
70	29	18,677	-56.6		207	1.7
60	29	19,656	-55.6		109	3.3
50	27	20,822	-54.1		96	7.0
40	27	22,258	-52.4		90	10.5
30	27	24,126	-50.1		88	11.5
25	27	25,320	-48.4		89	12.2
20	27	26,797	-45.5		82	15.9
15	27	28,729	-41.9		81	18.8
10	22	31,508	-37.1		90	23.1
7	8	33,946	-32.6			

MERIDA, MEXICO
1014 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	11	23.5	95	106	6.2
1000	30	129	23.7	91	111	10.1
950	30	580	22.2	84	129	16.5
900	30	1,049	20.2	74	132	16.5
850	30	1,541	17.5	69	127	13.4
800	30	2,058	14.4	67	121	10.3
750	30	2,594	11.2	61	121	9.1
700	30	3,175	7.9	59	124	7.8
650	30	3,775	4.5	54	115	7.0
600	30	4,432	.9	51	112	5.4
550	30	5,115	-2.8	43	99	4.9
500	30	5,877	-7.0	43	71	5.2
450	30	6,686	-11.8	36	51	4.3
400	30	7,586	-18.0	R31	349	2.9
350	30	8,571	-24.9	R32	319	6.0
300	30	9,673	-33.1	R30	296	12.2
250	30	10,928	-43.1		294	18.1
200	29	12,391	-54.6		301	23.5
175	29	13,233	-60.9		302	24.3
150	29	14,176	-67.1		314	21.2
125	29	15,261	-72.5		333	13.8
100	29	16,563	-74.5		38	10.7
80	29	17,871	-70.5		77	15.2
70	29	18,667	-66.9		83	19.6
60	29	19,608	-63.3		88	23.9
50	29	20,738	-60.1		90	28.0
40	29	22,143	-56.2		93	34.2
30	29	23,994	-51.2		94	39.8
25	28	25,186	-49.0		94	41.2
20	27	26,656	-46.2		91	44.1
15	17	28,575	-43.4		92	51.3
10						
7						

* MIAMI, FLA.
1017 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	4	24.9	83	107	3.1
1000	30	151	24.7	80	107	5.2
950	30	598	21.1	82	127	10.3
900	30	1,067	18.4	74	127	8.0
850	30	1,556	15.9	63	132	6.6
800	30	2,069	13.0	57	143	6.0
750	30	2,607	10.0	51	158	5.6
700	30	3,180	6.6	48	163	4.3
650	30	3,785	2.9	50	181	4.3
600	30	4,429	-.6	45	187	3.5
550	30	5,113	-4.5	40	191	1.7
500	30	5,865	-8.9	38	73	.4
450	30	6,671	-14.0	32	322	1.7
400	30	7,559	-19.9	29	431	2.7
350	30	8,536	-27.1	25	338	5.4
300	30	9,628	-35.6	25	332	8.5
250	30	10,870	-45.6		330	14.0
200	30	12,319	-57.1		311	18.6
175	30	13,153	-62.7		318	20.0
150	30	14,093	-66.5		324	20.2
125	30	15,188	-69.6		340	15.7
100	30	16,513	-70.4		20	8.9
80	30	17,845	-67.8		69	11.3
70	30	18,652	-65.1		78	15.5
60	29	19,597	-62.4		83	20.4
50	29	20,732	-58.8		86	26.6
40	28	22,146	-55.2		94	30.3
30	28	23,999	-51.3		92	34.2
25	28	25,190	-49.0		89	36.1
20	26	26,660	-46.6		86	36.9
15	23	28,578	-43.4		90	39.0
10	17	31,322	-38.6		92	35.0
7						

* MIDLAND, TEXAS
914 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	874	20.7	77	161	9.3
1000	30	84				
950	30	534				
900	30	1,004	20.1	77	165	15.0
850	30	1,497	19.0	68	183	25.4
800	30	2,019	18.1	47	195	18.8
750	30	2,562	14.8	42	203	12.0
700	30	3,149	10.9	38	219	10.1
650	30	3,755	6.4	38	231	8.0
600	30	4,413	1.3	42	237	7.2
550	30	5,099	-4.0	46	227	8.2
500	30	5,853	-9.2	47	232	10.7
450	30	6,655	-14.2	41	241	14.4
400	30	7,544	-20.4	40	243	18.5
350	30	8,519	-27.3	38	241	22.0
300	30	9,611	-36.0	37	249	26.4
250	30	10,852	-45.5		251	33.2
200	30	12,307	-55.1		249	40.0
175	30	13,151	-59.1		256	38.9
150	30	14,108	-63.5		254	33.6
125	29	15,215	-67.4		248	23.7
100	28	16,552	-69.4		223	10.7
80	28	17,890	-66.2		109	4.7
70	28	18,704	-63.4		99	10.5
60	28	19,659	-60.3		99	14.0
50	28	20,803	-57.5		90	18.1
40	28	22,224	-54.0		92	21.6
30	28	24,083	-51.0		87	22.7
25	27	25,273	-48.9		88	24.1
20	27	26,746	-46.0		90	23.1
15	25	28,674	-43.3		86	26.6
10	23	31,425	-38.3		89	28.7
7	9	33,946	-32.9			

MONTGOMERY, ALA.
1011 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	61	20.6	93	83	1.9
1000	30	153	21.1	87	106	2.7
950	30	595	20.5	75	184	4.5
900	30	1,065	18.3	71	211	5.1
850	30	1,553	15.3	69	222	5.8
800	30	2,065	12.0	67	229	5.6
750	30	2,602	8.9	66	247	5.4
700	30	3,173	6.3	55	258	4.9
650	30	3,774	3.2	50	274	3.7
600	30	4,423	-.6	47	293	3.7
550	30	5,110	-4.2	36	293	3.5
500	30	5,860	-8.5	29	279	4.9
450	30	6,666	-13.7	25	289	6.4
400	30	7,556	-19.6	26	288	6.6
350	30	8,534	-26.6	R22	286	6.8
300	30	9,628	-35.1	R23	281	9.7
250	30	10,872	-45.0		276	10.5
200	30	12,327	-55.8		295	13.4
175	30	13,167	-60.6		309	15.2
150	30	14,118	-64.2		311	15.0
125	30	15,225	-66.9		322	13.8
100	30	16,567	-68.1		333	8.0
80	30	17,913	-65.7		34	7.0
70	30	18,729	-63.1		60	9.5
60	30	19,685	-60.1		81	12.8
50	30	20,831	-57.0		83	17.1
40	30	22,256	-53.2		91	19.0
30	29	24,126	-50.1		87	21.2
25	28	25,322	-47.8		86	23.7
20	24	26,806	-44.8		89	25.3
15	17	28,732	-41.7		88	25.6
10	7	31,496	-36.1			
7						

* 3/ NANTUCKET, MASS.
1015 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	29	14	15.0	85	253	4.7
1000	29	140	15.1	75	256	7.8
950	29	575	15.8	56	281	11.3
900	29	1,034	13.0	56	287	10.5
850	28	1,514	10.2	57	281	12.0
800	28	2,016	7.6	49	279	14.8
750	28	2,541	4.6	46	279	16.9
700	28	3,105	2.2	38	279	19.0
650	28	3,695	-.9	35	279	23.3
600	28	4,336	-4.5	33	278	27.0
550	28	5,009	-8.4	28	276	29.5
500	28	5,750	-12.8	27	272	33.2
450	28	6,537	-18.1	27	271	35.9
400	28	7,417	-24.1	27	275	40.0
350	28	8,378	-31.0	25	275	42.5
300	28	9,454	-38.9	26	274	46.3
250	28	10,682	-47.7		276	47.4
200	28	12,125	-56.6		278	46.4
175	28	12,966	-59.3		278	43.1
150	28	13,932	-59.4		277	31.5
125	28	15,072	-59.9		278	24.7
100	28	16,467	-59.6		278	17.1
80	27	17,866	-57.7		281	10.1
70	27	18,709	-56.5		297	6.2
60	27	19,690	-55.1		345	2.5
50	27	20,859	-53.0		72	7.0
40	27	22,302	-51.3		90	7.4
30	26	24,178	-49.0		85	9.7
25	26	25,378	-47.1		85	10.7
20	26	26,962	-44.8		87	11.1
15	23	28,792	-41.7		79	15.0
10	13	31,568	-35.1		89	17.1
7	5	34,040	-32.4			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JUNE 1965

*** NASHVILLE, TENN.** 997 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	177	18.8	90	119	1.6
1000	30	155				
950	30	597	19.8	70	220	6.0
900	30	1,063	17.4	69	248	7.8
850	30	1,549	14.0	74	261	7.6
800	30	2,058	10.8	70	264	6.8
750	30	2,595	8.0	59	263	6.4
700	30	3,161	5.1	54	284	6.0
650	30	3,761	2.2	48	281	6.4
600	30	4,406	- 1.5	45	281	7.0
550	30	5,089	- 5.3	44	275	7.6
500	30	5,837	- 9.6	40	283	8.9
450	30	6,639	-14.8	35	279	11.8
400	30	7,525	-20.9	35	281	15.5
350	30	8,498	-27.9	34	283	15.3
300	30	9,587	-36.0	30	285	16.9
250	30	10,827	-45.8		285	18.5
200	30	12,275	-56.7		292	23.3
175	30	13,113	-61.0		296	24.7
150	30	14,063	-63.9		300	25.4
125	30	15,177	-65.4		306	17.3
100	30	16,528	-66.2		311	10.9
80	30	17,889	-63.4		2	5.4
70	30	18,713	-61.1		45	7.6
60	30	19,675	-58.5		73	10.5
50	29	20,926	-56.1		79	13.8
40	29	22,255	-53.1		88	16.9
30	28	24,124	-49.8		87	15.3
25	28	25,320	-48.4		84	17.1
20	27	26,799	-45.7		87	20.2
15	25	28,736	-42.2		86	19.6
10	21	31,511	-37.5		86	22.1
7	9	33,984	-32.4			

NOME, ALASKA 1008 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	7	5.1	85	32	2.5
1000	30	68	5.8	78	36	1.7
950	30	486	5.2	69	106	5.1
900	30	928	2.8	71	138	5.2
850	30	1,389	.1	70	151	6.8
800	30	1,872	- 3.3	74	151	7.2
750	30	2,375	- 6.5	74	144	8.2
700	30	2,916	- 9.8	68	146	9.1
650	30	3,481	-12.9	59	143	9.1
600	30	4,090	-16.7	53	137	9.9
550	30	4,733	-21.0	54	135	11.1
500	30	5,436	-25.8	53	131	12.8
450	30	6,183	-31.2	50	126	13.4
400	30	7,016	-37.0	50	125	13.4
350	30	7,928	-43.0		115	15.9
300	30	8,954	-48.9		111	17.9
250	30	10,144	-50.3		116	16.3
200	29	11,614	-46.1		116	10.5
175	29	12,503	-45.7		115	9.7
150	29	13,530	-45.7		114	10.7
125	29	14,743	-46.2		114	9.1
100	29	16,226	-45.9		104	9.9
80	29	17,708	-46.4		111	9.1
70	29	18,594	-46.3		109	9.3
60	29	19,619	-46.1		104	8.4
50	29	20,832	-45.5		99	9.9
40	28	22,324	-44.9		95	10.9
30	28	24,250	-43.9		91	13.6
25	27	25,477	-42.9		90	15.7
20	27	26,987	-40.7		89	19.0
15	24	28,957	-37.5		91	21.0
10	14	31,805	-31.5			
7						

NORFOLK, VA. 1017 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	9	19.6	87	205	2.9
1000	30	157	19.2	77	235	4.7
950	30	596	18.5	63	281	6.4
900	30	1,060	16.0	60	296	6.6
850	30	1,544	13.2	62	293	7.0
800	30	2,053	10.4	58	277	9.3
750	30	2,582	7.2	56	273	11.3
700	30	3,152	4.4	49	270	13.6
650	30	3,747	1.6	39	271	14.8
600	30	4,394	- 1.7	32	269	16.3
550	30	5,073	- 5.4	R29	273	17.7
500	30	5,824	- 9.9	R27	272	18.3
450	30	6,621	-15.4	R28	273	18.6
400	30	7,508	-21.5	R29	275	20.2
350	30	8,479	-28.3	R28	277	22.3
300	30	9,567	-36.4	R27	284	22.5
250	30	10,805	-46.0		291	25.1
200	29	12,255	-56.9		294	29.5
175	29	13,090	-61.5		296	30.1
150	29	14,039	-63.6		297	26.6
125	29	15,156	-64.0		296	20.8
100	29	16,523	-63.8		303	14.6
80	29	17,895	-61.7		337	6.6
70	29	18,725	-59.7		31	6.2
60	29	19,695	-57.4		67	9.3
50	29	20,853	-55.0		86	12.0
40	29	22,288	-52.1		87	15.9
30	27	24,163	-48.2		88	15.0
25	26	25,371	-46.4		88	18.3
20	24	26,857	-44.6		97	20.8
15	13	28,810	-41.7		92	24.3
10						
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*** NORTH PLATTE, NEBR.** 915 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	848	14.8	91	144	4.9
1000	30	91				
950	30	535				
900	30	992	15.4	81	151	7.8
850	30	1,477	15.0	66	183	13.0
800	30	1,989	12.8	59	198	14.0
750	30	2,530	9.9	54	214	14.4
700	30	3,099	6.3	54	224	14.2
650	30	3,701	2.1	55	226	14.4
600	30	4,345	- 2.5	55	229	15.3
550	30	5,027	- 7.3	56	236	16.9
500	30	5,766	-12.0	43	245	18.5
450	30	6,561	-17.0	36	245	21.2
400	30	7,440	-22.8	33	239	24.5
350	30	8,405	-30.1	36	234	28.0
300	30	9,484	-38.4	35	232	33.8
250	30	10,712	-47.8		228	40.6
200	30	12,153	-57.0		232	44.3
175	30	12,994	-59.3		236	43.9
150	30	13,958	-59.9		245	38.7
125	30	15,093	-61.4		246	25.4
100	29	16,471	-62.4		245	14.4
80	29	17,850	-61.1		241	5.1
70	29	18,682	-59.4		12	.6
60	29	19,652	-57.5		77	5.1
50	29	20,810	-55.1		80	8.4
40	29	22,242	-53.0		86	10.3
30	28	24,108	-50.6		91	12.4
25	28	25,301	-48.7		93	13.2
20	28	26,777	-46.1		89	15.0
15	26	28,705	-42.7		89	16.5
10	22	31,475	-37.4		88	21.2
7	9	33,942	-32.1			

*** OAKLAND, CALIF.** 1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	6	13.1	80	264	5.4
1000	30	116	11.5	81	258	6.4
950	30	546	9.8	82	267	6.4
900	30	995	13.0	51	303	8.7
850	30	1,477	13.2	36	319	8.7
800	30	1,984	10.9	35	326	6.8
750	30	2,514	7.7	34	336	5.6
700	30	3,084	3.8	35	331	5.4
650	30	3,675	- .2	33	328	6.0
600	30	4,318	- 4.3	33	315	8.0
550	30	4,989	- 9.1	35	320	9.3
500	30	5,729	-14.1	29	315	11.5
450	30	6,515	-19.9	29	311	14.4
400	30	7,383	-26.3	29	316	17.1
350	30	8,335	-33.3	28	319	21.2
300	30	9,401	-41.2	25	318	24.7
250	30	10,617	-49.6		313	27.2
200	30	12,055	-55.3		301	30.3
175	29	12,902	-56.2		292	28.7
150	29	13,879	-57.3		283	26.2
125	29	15,027	-58.9		274	18.3
100	28	16,423	-59.7		269	12.6
80	28	17,818	-59.7		246	3.1
70	28	18,653	-59.0		113	3.1
60	28	19,625	-57.4		91	5.1
50	28	20,783	-55.3		95	10.3
40	27	22,215	-53.2		91	12.0
30	27	24,077	-50.9		96	14.4
25	26	25,265	-49.0		83	15.9
20	26	26,740	-46.3		84	15.7
15	24	28,660	-43.2		89	18.3
10	20	31,420	-38.4		87	22.0
7	5	33,891	-33.8			

OKLAHOMA CITY, OKLA. 969 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	392	20.5	84	158	6.6
1000	30	115				
950	30	559	20.6	80	182	13.6
900	30	1,029	19.6	70	206	21.8
850	30	1,520	17.1	61	212	18.6
800	30	2,036	14.7	55	217	15.9
750	30	2,574	11.5	51	223	13.2
700	30	3,153	7.9	50	230	13.0
650	30	3,755	3.9	47	239	12.0
600	30	4,406	- .7	48	244	10.7
550	30	5,089	- 5.3	47	246	10.5
500	30	5,837	-10.0	38	245	13.8
450	30	6,639	-15.1	37	249	16.5
400	30	7,524	-21.1	36	250	19.2
350	30	8,496	-28.1	37	251	20.6
300	30	9,584	-36.3	36	254	22.1
250	30	10,823	-45.7		257	24.1
200	30	12,275	-55.6		255	25.6
175	30	13,117	-60.0		257	29.3
150	30	14,073	-62.5		266	29.7
125	29	15,188	-66.3		259	20.6
100	29	16,532	-67.7		258	11.3
80	29	17,885	-64.5		107	2.1
70	29	18,705	-61.8		81	6.6
60	29	19,665	-59.6		89	10.5
50	29	20,814	-56.3		85	14.2
40	28	22,240	-53.5		89	16.1
30	27	24,103	-50.1		93	16.7
25	27	25,299	-48.0		84	19.4
20	23	26,781	-46.0		88	19.8
15	12	28,721	-42.8			
10						
7						

OMAHA, NEBR. 967 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	403	17.1	83	132	4.3
1000	30	117				
950	30	557	18.0	74	143	7.0
900	30	1,020	16.9	65	197	8.0
850	30	1,507	14.7	62	223	8.9
800	30	2,018	12.3	56	235	9.5
750	30	2,554	9.5	52	242	10.9
700	30	3,126	6.0	55	251	12.0
650	30	3,726	2.2	58	248	13.6
600	30	4,372	- 1.8	50	251	14.4
550	30	5,054	- 6.5	46	251	15.3
500	30	5,798	-10.9	41	254	16.1
450	30	6,600	-15.8	37	250	16.9
400	30	7,479	-21.7	35	254	19.6
350	30	8,449	-28.6	32	258	22.3
300	30	9,534	-37.1	31	261	27.4
250	30	10,768	-46.9		261	34.6
200	30	12,210	-57.3		256	44.3
175	30	13,048	-59.9		261	41.6
150	30	14,008	-61.3		263	35.2
125	29	15,134	-62.3		262	26.2
100	29	16,509	-63.1		265	16.1
80	29	17,887	-61.3		281	4.1
70	29	18,717	-59.5		309	.8
60	28	19,689	-57.1		66	4.1
50	28	20,849	-54.5		81	7.2
40	28	22,287	-52.0		91	10.5
30	28	24,160	-49.5		89	12.2
25	28	25,359	-47.7		88	13.2
20	27	26,836	-45.4		91	12.0
15	22	28,754	-42.8		80	13.4
10	7	31,490	-39.0			
7						

*** PEORIA, ILL.** 993 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	200	16.9	82	98	2.5
1000	30	143				
950	30	582	17.7	64	174	4.1
900	30	1,043	15.9	59	238	6.4
850	30	1,527	13.0	58	250	9.3
800	30	2,035	10.7	50	258	11.1
750	30	2,568	8.4	41	265	11.1
700	30	3,138	5.3	42	265	11.7
650	30	3,734	2.0	37	267	12.8
600	29	4,378	- 2.3	39	272	14.2
550	29	5,058	- 6.6	39	273	14.0
500	29	5,802	-10.9	36	272	17.5
450	29	6,601	-16.0	34	274	20.8
400	29	7,482	-21.7	35	279	22.0
350	29	8,452	-28.7	30	276	25.3
300	29	9,536	-37.1	30	276	27.4
250	29	10,771	-46.8		284	36.1
200	29	12,213	-57.4		286	44.5
175	29	13,049	-60.7		287	41.6
150	29	14,005	-61.7		285	34.8
125	29	15,130	-62.9		286	26.8
100	29	16,502	-63.1		293	16.1
80	29	17,881	-60.9		336	7.4
70	29	18,713	-59.2		16	5.1
60	29	19,685	-57.2		62	5.1
50	29	20,846	-54.5		78	8.7
40	29	22,283	-52.1		79	10.3
30	28	24,154	-49.4		86	12.6
25	28	25,353	-47.6		82	13.0
20	28	26,837	-45.0		84	13.6
15	26	28,774	-41.6		86	17.3
10	25	31,555	-36.5		88	21.2
7	11	34,042	-32.8		85	25.6

*** PITTSBURGH, PA.** 977 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	353	15.2	80	276	1.0
1000	30	164				
950	30	599	15.2	68	252	3.3
900	30	1,057	13.5	64	287	6.0
850	30	1,536	10.8	66	286	8.5
800	30	2,040	8.2	60	284	11.8
750	30	2,568	5.5	52	282	14.8
700	30	3,133	3.1	44	280	16.9
650	30	3,727	.2	41	283	19.6
600	30	4,368	- 3.2	33	285	22.9
550	30	5,043	- 7.0	30	285	23.9
500	30	5,790	-11.5	29	286	25.3
450	30	6,582	-16.8	28	283	26.8
400	30	7,465	-22.9	29	286	28.7
350	30	8,430	-29.9	29	285	33.0
300	30	9,510	-38.0	27	284	37.3
250	30	10,741	-47.3		286	41.2
200	30	12,182	-57.2		290	43.5
175	30	13,019	-60.6		293	41.2
150	30	13,976	-61.0		289	36.9
125	30	15,107	-61.9		297	28.2
100	30	16,488	-61.4		301	17.1
80	30	17,874	-59.9		328	7.4
70	30	18,711	-57.8		12	5.2
60	30	19,686	-56.1		47	5.8
50	30	20,850	-54.0		76	7.2
40	30	22,289	-51.6		78	8.2
30	30	24,166	-48.8		79	9.5
25	30	25,368	-46.9		83	11.5
20	29	26,852	-44.4		84	14.2
15	28	28,792	-41.0		90	16.5
10	26	31,582	-36.3		92	21.4
7	12	34,094	-31.8		96	25.4

PONAPE, CAROLINE IS. + 1006 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	39	28.0	81	70	5.6
1000	30	91	27.4	77	75	7.2
950	30	535	23.5	74	83	11.3
900	30	1,015	20.7	71	88	12.6
850	30	1,509	18.2	67	91	13.2
800	30	2,027	15.9	60	93	11.7
750	30	2,570	13.0	56	94	11.3
700	30	3,151	9.7	54	91	11.7
650	30	3,761	6.2	54	91	12.2
600	30	4,416	2.5	56	86	12.8
550	30	5,110	- 1.1	47	90	14.2
500	30	5,870	- 5.2	44	91	13.8
450	30	6,688	- 9.9	39	95	12.0
400	30	7,593	-15.6	36	98	8.9
350	30	8,587	-22.3	29	99	8.9
300	30	9,702	-30.7	24	107	8.7
250	30	10,970	-41.0		98	8.9
200	30	12,447	-53.6		96	6.0
175	30	13,291	-60.7		102	2.7
150	30	14,234	-68.1		73	2.9
125	30	15,309	-75.1		179	1.9
100	30	16,590	-77.9		15	2.3
80	30	17,885	-71.7		32	3.9
70	30	18,681	-67.5		75	5.8
60	30	19,614	-64.7		99	8.0
50	30	20,733	-62.4		92	16.7
40	30	22,120	-59.6		93	36.9
30	30	23,941	-54.6		90	54.6
25	29	25,117	-51.4		91	61.4
20	27	26,580	-47.3		90	65.9
15	19	28,497	-43.4		91	69.[illegible]
10	10	31,228	-40.5			
7						

PORTLAND, ME. 1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	20	15.6	78	296	3.1
1000	30	138	15.9	64	295	5.8
950	30	570	15.5	54	298	8.4
900	30	1,031	12.6	55	309	8.5
850	30	1,508	9.3	57	305	9.9
800	30	2,008	6.0	58	297	10.9
750	30	2,530	3.2	50	291	13.6
700	30	3,091	.0	45	287	17.1
650	30	3,675	- 3.5	44	285	19.8
600	30	4,309	- 7.2	42	282	23.9
550	30	4,977	-11.1	39	280	27.2
500	30	5,710	-15.5	37	281	29.9
450	30	6,490	-20.4	32	279	31.9
400	30	7,362	-26.3	33	281	35.7
350	30	8,314	-32.9	R30	279	39.6
300	30	9,382	-40.1	30	276	46.4
250	30	10,607	-47.8		277	50.7
200	30	12,059	-53.6		280	46.0
175	29	12,920	-55.8		280	39.8
150	29	13,900	-56.8		277	30.3
125	29	15,052	-57.6		277	23.5
100	28	16,464	-57.4		277	15.0
80	28	17,875	-56.6		299	5.8
70	28	18,723	-55.6		323	3.5
60	28	19,709	-54.3		9	2.5
50	28	20,883	-52.4		58	2.7
40	27	22,334	-50.5		80	5.1
30	24	24,222	-48.1		86	8.7
25	22	25,424	-46.2		92	12.4
20	16	26,921	-43.8		89	16.5
15	7	28,831	-40.8			
10						
7						

RAPID CITY, S. DAK. 903 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	966	13.3	83	349	.4
1000	30	93				
950	30	528				
900	30	991			43	1.0
850	30	1,474	13.3	67	202	4.9
800	30	1,983	11.2	61	217	7.8
750	30	2,518	8.3	58	217	9.9
700	30	3,087	5.2	58	220	11.3
650	30	3,681	1.0	58	237	12.6
600	30	4,327	- 3.6	60	244	14.6
550	30	4,997	- 8.0	56	238	17.1
500	30	5,743	-12.6	47	239	19.0
450	30	6,534	-17.7	40	239	21.2
400	30	7,410	-24.1	39	236	22.3
350	30	8,370	-31.3	R36	234	24.3
300	30	9,443	-39.7	R34	231	29.5
250	30	10,665	-48.9		229	39.6
200	30	12,103	-56.5		232	43.9
175	30	12,946	-57.7		236	41.2
150	30	13,922	-56.6		240	33.4
125	30	15,074	-58.3		243	22.5
100	30	16,477	-59.0		239	14.4
80	30	17,874	-59.1		232	5.8
70	30	18,713	-57.8		184	2.1
60	30	19,690	-55.7		91	2.7
50	30	20,856	-53.8		83	6.6
40	30	22,297	-51.8		83	10.1
30	29	24,171	-49.0		78	13.2
25	29	25,373	-47.4		85	14.8
20	29	26,856	-44.9		84	15.7
15	24	28,787	-41.7		90	19.0
10						
7						

ST. CLOUD, MINN. 978 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	316	13.6	85	185	3.5
1000	30	129				
950	30	566	15.8	67	180	6.0
900	30	1,023	14.3	57	207	9.7
850	30	1,504	11.9	52	241	8.9
800	30	2,009	8.8	51	251	9.9
750	30	2,539	6.1	44	258	10.3
700	30	3,104	3.0	43	260	13.6
650	30	3,698	- .1	40	264	16.1
600	30	4,339	- 3.8	40	264	18.3
550	30	5,014	- 7.8	36	270	20.8
500	30	5,758	-12.2	R30	274	23.5
450	30	6,548	-17.3	R28	272	26.4
400	30	7,429	-23.5	R28	269	29.3
350	30	8,392	-30.6	R27	273	34.0
300	30	9,468	-39.1	R29	275	38.9
250	30	10,693	-48.3		273	47.2
200	30	12,131	-57.0		270	52.1
175	30	12,971	-59.1		274	49.1
150	30	13,939	-58.1		276	39.0
125	30	15,087	-58.7		280	25.4
100	30	16,487	-59.2		277	15.7
80	30	17,886	-58.5		292	8.2
70	30	18,728	-56.8		313	3.9
60	30	19,709	-54.9		38	3.7
50	30	20,880	-53.0		58	8.0
40	30	22,326	-51.1		78	10.1
30	29	24,207	-48.4		87	12.2
25	27	25,415	-46.1		83	13.0
20	24	26,916	-43.8		91	13.8
15	19	28,862	-40.3		95	19.4
10	12	31,660	-34.5			
7	5	34,110	-31.6			

ST. PAUL IS., ALASKA 1005 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	29	10	3.1	96	27	4.9
1000	29	46			29	4.9
950	29	460	1.7	91	62	4.9
900	29	898	.1	88	68	4.9
850	29	1,355	- 1.6	89	64	4.3
800	29	1,836	- 3.7	80	71	4.5
750	29	2,344	- 6.6	75	54	3.1
700	29	2,881	- 9.6	74	56	3.7
650	29	3,447	-13.0	69	65	2.1
600	29	4,057	-16.8	65	89	1.4
550	29	4,702	-21.0	60	45	1.6
500	29	5,404	-25.8	54	354	2.5
450	29	6,155	-31.1	49	327	2.3
400	29	6,986	-36.8	47	299	3.7
350	29	7,899	-42.8	44	294	6.2
300	29	8,926	-47.8		301	8.7
250	29	10,125	-49.0		286	11.1
200	29	11,592	-47.9		289	8.7
175	29	12,475	-46.9		292	5.8
150	29	13,496	-46.7		293	3.9
125	29	14,704	-47.1		256	2.1
100	29	16,180	-47.4		145	1.9
80	29	17,656	-47.3		121	3.9
70	29	18,538	-47.3		115	4.3
60	29	19,558	-47.3		109	4.7
50	29	20,763	-47.4		105	6.0
40	29	22,239	-47.1		104	8.4
30	29	24,146	-46.3		92	11.1
25	28	25,357	-45.1		92	12.6
20	28	26,853	-43.2		91	15.2
15	25	28,816	-40.3		90	19.0
10	15	31,652	-35.6		92	20.0
7						

SALEM, OREG. 1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	61	8.9	91	289	.8
1000	30	144	10.3	81	343	1.9
950	30	572	10.0	71	12	5.2
900	30	1,021	9.0	64	4	4.9
850	30	1,494	7.7	58	336	5.1
800	30	1,993	6.3	47	315	6.2
750	30	2,519	4.3	39	311	7.8
700	30	3,080	1.7	36	303	8.4
650	30	3,669	- 1.8	39	299	8.9
600	30	4,306	- 5.5	36	296	9.4
550	30	4,976	- 9.9	32	291	11.7
500	30	5,712	-15.0	34	290	13.6
450	30	6,493	-20.8	34	278	13.8
400	30	7,361	-27.2	31	277	13.6
350	30	8,308	-34.4	31	290	14.2
300	30	9,367	-42.6	35	301	15.7
250	30	10,574	-50.7		300	27.8
200	30	12,003	-56.6		291	21.0
175	30	12,850	-56.5		285	17.6
150	30	13,829	-55.7		274	15.3
125	29	14,988	-55.8		260	11.7
100	29	16,407	-55.6		243	8.4
80	29	17,828	-55.7		220	5.1
70	29	18,678	-55.5		183	2.7
60	29	19,663	-54.4		118	5.2
50	29	20,834	-53.1		104	6.4
40	28	22,277	-51.5		89	8.4
30	27	24,154	-49.2		90	12.0
25	27	25,355	-47.2		87	12.4
20	27	26,839	-44.6		80	15.9
15	22	28,766	-41.3		83	18.1
10	8	31,549	-35.8			
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JUNE 1965

SALT LAKE CITY, UTAH
868 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	1,288	12.2	63	151	4.5
1000	30	81				
950	30	519				
900	30	983				
850	30	1,464	15.5	45	156	5.4
800	30	1,977	13.5	42	179	6.2
750	30	2,512	9.5	45	196	5.4
700	30	3,085	5.2	48	223	6.2
650	30	3,683	.5	53	229	8.5
600	30	4,322	- 4.4	54	237	11.5
550	30	4,999	- 9.4	54	230	13.0
500	29	5,732	-14.4	51	222	12.4
450	29	6,517	-19.9	45	223	13.6
400	29	7,386	-26.4	42	219	15.3
350	29	8,336	-33.8	41	218	17.3
300	29	9,398	-42.2	31	216	19.6
250	29	10,607	-51.2		218	25.3
200	29	12,040	-54.9		232	26.6
175	29	12,894	-55.1		231	26.4
150	29	13,877	-55.7		229	21.6
125	29	15,034	-57.3		230	19.0
100	29	16,438	-58.8		228	10.9
80	29	17,836	-59.3		195	3.9
70	29	18,673	-58.5		138	3.7
60	29	19,646	-57.1		114	4.9
50	29	20,806	-54.7		89	8.2
40	29	22,239	-52.8		86	9.3
30	28	24,109	-49.9		82	12.4
25	28	25,306	-47.8		85	14.6
20	26	26,779	-45.8		86	17.5
15	15	28,690	-43.1		98	19.2
10						
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5						

SAN ANTONIO, TEXAS
986 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	243	23.0	89	161	4.9
1000	30	121				
950	30	564	21.3	86	172	15.3
900	30	1,036	18.9	79	172	21.2
850	30	1,527	17.5	64	173	18.6
800	30	2,044	15.2	54	177	13.8
750	30	2,585	12.3	39	177	12.0
700	30	3,164	9.0	37	171	7.6
650	30	3,765	5.1	39	179	4.5
600	30	4,422	.6	42	239	1.0
550	30	5,107	- 3.7	32	300	4.1
500	30	5,863	- 8.4	R29	306	3.3
450	30	6,667	-13.9	R28	295	4.3
400	30	7,559	-20.0	R25	282	9.7
350	30	8,535	-26.8	R25	284	14.2
300	30	9,630	-35.0	R25	284	18.6
250	30	10,877	-44.6		286	22.1
200	30	12,337	-55.0		280	28.6
175	30	13,181	-59.6		276	27.6
150	30	14,133	-64.8		277	22.7
125	30	15,233	-69.4		271	14.6
100	30	16,554	-71.6		263	2.5
80	29	17,875	-68.3		77	6.2
70	29	18,682	-65.2		80	14.2
60	29	19,628	-61.6		90	17.9
50	28	20,767	-57.9		91	20.2
40	25	22,192	-54.3		89	22.0
30	24	24,049	-51.0		80	29.1
25	24	25,241	-48.4		83	30.9
20	23	26,725	-45.0		83	31.5
15	15	28,660	-42.8		84	28.7
10						
7						
5						

SAN DIEGO, CALIF.
999 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	124	14.1	84	252	2.1
1000	30			85	309	3.1
950	30	541	11.4	83	219	1.6
900	30	997	10.9	71	253	2.1
850	30	1,476	12.4	43	295	6.6
800	30	1,984	11.8	30	285	7.4
750	30	2,515	9.6	24	275	8.5
700	30	3,091	6.4	R22	271	9.5
650	30	3,688	3.3	R19	263	11.7
600	30	4,340	- 1.2	R19	264	14.8
550	30	5,017	- 5.8	R18	264	18.6
500	30	5,768	-11.1	R18	264	22.0
450	30	6,560	-17.0	R18	261	27.0
400	30	7,444	-23.5	R20	262	33.2
350	30	8,408	-30.3	R22	263	39.4
300	30	9,487	-38.3	R24	265	45.6
250	30	10,719	-46.5		264	50.5
200	30	12,176	-53.9		263	56.7
175	30	13,027	-57.3		260	52.3
150	30	13,996	-59.7		258	46.0
125	30	15,130	-61.8		256	32.8
100	30	16,503	-63.7		246	16.5
80	30	17,871	-63.0		205	2.7
70	30	18,695	-61.5		104	5.1
60	30	19,654	-59.2		95	10.3
50	30	20,803	-56.4		93	14.6
40	30	22,227	-53.6		89	18.5
30	29	24,092	-50.3		86	23.9
25	28	25,288	-48.2		89	24.7
20	25	26,763	-45.9		88	22.5
15	17	28,702	-42.3		88	24.7
10	11	31,453	-37.5		87	23.3
7	11	33,943	-32.9		86	26.8
5	6	36,321	-28.5			

* SAN JUAN, P. R.
1018 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	6	25.7	82	114	4.3
1000	30	160	24.6	79	100	11.1
950	30	603	21.2	77	101	15.5
900	30	1,076	18.3	72	108	16.3
850	30	1,564	15.5	66	105	17.1
800	30	2,077	13.1	57	103	14.4
750	30	2,615	10.4	50	102	12.6
700	30	3,190	7.7	43	104	11.3
650	30	3,793	4.2	34	114	8.4
600	30	4,445	1.0	31	114	7.2
550	30	5,134	- 3.1	26	120	7.6
500	30	5,888	- 7.7	27	138	7.2
450	30	6,694	-13.4	32	157	7.4
400	30	7,586	-19.9	32	174	6.6
350	29	8,560	-27.3	30	219	6.0
300	29	9,650	-35.8	28	233	10.3
250	29	10,891	-45.7		239	15.5
200	29	12,338	-57.4		249	21.0
175	29	13,169	-63.4		256	21.4
150	28	14,104	-68.6		256	19.4
125	28	15,191	-69.6		246	8.4
100	28	16,516	-71.6		100	2.7
80	27	17,837	-69.1		84	13.8
70	27	18,639	-66.3		84	19.2
60	26	19,579	-62.8		87	23.3
50	26	20,711	-59.6		88	28.6
40	26	22,116	-56.0		92	33.0
30	26	23,961	-52.2		93	40.2
25	25	25,150	-49.6		92	45.8
20	25	26,619	-47.0		89	52.8
15	22	28,526	-43.8		88	57.5
10	15	31,263	-38.2		93	68.0
7						
5						

SANTA MONICA, CALIF.
1008 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	38	14.7	82	242	.4
1000	30	110	14.2	83	200	1.0
950	30	541	11.5	86	119	1.7
900	30	994	11.1	67	27	1.9
850	30	1,473	12.3	47	327	4.9
800	30	1,981	11.4	35	299	6.4
750	30	2,518	9.3	27	282	6.0
700	30	3,087	5.9	27	282	5.6
650	30	3,687	2.2	27	277	8.4
600	30	4,331	- 1.9	26	269	10.7
550	30	5,013	- 6.5	24	267	14.4
500	30	5,755	-12.0	24	266	17.7
450	30	6,548	-18.1	26	267	22.1
400	30	7,421	-24.8	27	266	25.1
350	30	8,379	-32.1	27	271	31.9
300	30	9,451	-39.6	26	271	39.0
250	30	10,678	-47.0		269	44.9
200	30	12,132	-53.8		265	47.8
175	30	12,985	-56.5		264	45.3
150	30	13,956	-59.2		263	38.1
125	30	15,093	-61.3		261	26.6
100	29	16,469	-62.5		252	18.1
80	29	17,845	-62.4		240	4.3
70	29	18,671	-60.8		88	2.3
60	29	19,634	-59.0		96	7.8
50	29	20,784	-56.4		90	13.0
40	29	22,209	-53.7		87	15.5
30	27	24,069	-50.5		83	20.4
25	27	25,262	-48.7		87	22.5
20	27	26,737	-46.1		92	20.2
15	27	28,661	-43.3		87	19.8
10	21	31,409	-38.3		87	21.4
7						
5						

* SAULT STE. MARIE, MICH.
991 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	221	10.4	85	56	1.6
1000	30	147				
950	30	572	12.0	63	260	2.7
900	30	1,028	10.8	58	268	8.5
850	30	1,503	8.0	56	274	11.1
800	30	2,001	5.2	54	277	14.2
750	30	2,524	2.4	55	277	15.9
700	30	3,081	- .2	46	278	18.8
650	30	3,668	- 3.1	41	281	21.2
600	30	4,301	- 6.5	38	283	22.9
550	30	4,971	-10.4	39	286	26.2
500	30	5,704	-15.0	37	285	28.2
450	30	6,486	-20.2	34	288	32.2
400	30	7,355	-26.0	32	290	36.7
350	30	8,307	-33.2	33	286	38.9
300	30	9,373	-40.8	33	289	45.8
250	30	10,591	-48.9		287	53.4
200	30	12,035	-54.8		290	52.3
175	29	12,888	-55.7		291	44.3
150	29	13,870	-55.8		288	36.3
125	28	15,029	-56.7		291	28.0
100	28	16,441	-57.0		298	18.6
80	28	17,855	-56.5		314	9.3
70	27	18,702	-55.4		333	5.8
60	27	19,688	-54.2		5	5.6
50	27	20,863	-52.2		48	7.2
40	27	22,313	-50.5		71	8.7
30	27	24,200	-48.0		78	12.0
25	27	25,407	-46.3		81	14.0
20	26	26,902	-43.6		84	16.5
15	25	28,855	-39.8		88	19.6
10	16	31,662	-34.0		89	25.8
7						

SHEMYA, ALASKA
1005 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	38	4.9	88	339	4.9
1000	30	81			302	7.6
950	30	499	2.3	88	344	6.2
900	30	934	1.4	82	347	6.4
850	30	1,393	- .5	77	358	6.4
800	30	1,876	- 2.7	74	356	6.8
750	30	2,388	- 5.1	72	351	7.2
700	30	2,926	- 7.9	68	343	8.4
650	30	3,497	-11.2	62	340	8.5
600	30	4,110	-14.5	60	330	9.3
550	30	4,760	-18.4	56	331	9.7
500	30	5,471	-22.9	52	328	12.4
450	30	6,229	-28.0	51	327	14.0
400	30	7,072	-33.9	52	326	15.7
350	30	7,995	-40.2	56	320	17.5
300	30	9,031	-46.7		316	20.2
250	30	10,226	-51.0		311	20.2
200	30	11,673	-51.7		307	19.2
175	30	12,541	-50.6		304	18.3
150	30	13,547	-50.0		303	15.9
125	30	14,737	-50.2		303	11.8
100	30	16,191	-50.4		311	7.6
80	30	17,648	-49.8		330	4.1
70	30	18,521	-49.5		19	2.5
60	30	19,532	-49.1		59	3.9
50	30	20,728	-48.8		84	5.6
40	30	22,195	-48.3		84	8.5
30	30	24,093	-47.2		91	12.0
25	30	25,302	-46.1		88	13.6
20	29	26,797	-44.0		84	14.6
15	27	28,744	-41.2		89	19.0
10	12	31,537	-37.9			
7						

* SHREVEPORT, LA.
1006 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	79	21.1	95	151	3.5
1000	30	134	21.2	92	164	5.1
950	30	583	21.1	78	199	12.4
900	30	1,048	18.9	66	206	10.5
850	29	1,537	16.3	61	217	8.9
800	29	2,052	13.9	49	227	6.8
750	29	2,594	10.7	47	233	5.6
700	29	3,165	7.2	47	255	3.9
650	29	3,768	3.4	44	283	4.3
600	29	4,415	- .9	42	289	4.9
550	29	5,099	- 5.1	34	289	5.1
500	29	5,847	- 9.6	22	292	5.6
450	29	6,650	-14.8	22	304	7.2
400	29	7,535	-20.7	23	304	8.7
350	29	8,509	-27.8	22	301	11.7
300	29	9,597	-36.0	22	308	15.3
250	29	10,838	-45.3		305	15.0
200	29	12,292	-55.7		293	17.9
175	29	13,134	-60.2		294	22.3
150	29	14,086	-63.6		295	22.0
125	29	15,192	-68.2		293	14.0
100	29	16,525	-69.3		301	6.6
80	28	17,865	-66.4		47	5.2
70	28	18,678	-63.6		73	11.1
60	28	19,631	-60.2		88	15.3
50	27	20,777	-57.0		88	18.5
40	27	22,199	-53.7		93	19.4
30	26	24,060	-50.6		86	21.8
25	26	25,254	-48.6		86	23.7
20	26	26,730	-46.0		84	24.1
15	26	28,657	-42.8		85	25.4
10	22	31,415	-38.4		87	27.0
7	11	33,905	-34.3		96	26.2

SPOKANE, WASH.
929 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	722	9.9	69	175	3.3
1000	30	104				
950	30	535				
900	30	990	12.8	53	222	3.9
850	30	1,471	11.2	49	266	3.3
800	30	1,974	7.6	52	279	4.3
750	30	2,500	3.9	54	285	5.6
700	30	3,060	.3	50	290	6.2
650	30	3,644	- 3.0	43	281	8.4
600	30	4,281	- 6.2	36	283	12.4
550	30	4,948	-10.3	37	279	15.9
500	30	5,684	-15.4	39	280	15.9
450	30	6,463	-21.0	41	281	17.9
400	30	7,331	-27.4	38	280	19.2
350	30	8,278	-34.7	34	276	19.2
300	30	9,337	-42.9		279	17.9
250	30	10,544	-51.1		286	18.1
200	30	11,975	-55.3		267	18.8
175	30	12,829	-54.4		260	17.5
150	30	13,819	-53.6		254	15.5
125	30	14,990	-54.1		245	13.2
100	30	16,420	-54.9		239	7.6
80	30	17,845	-54.9		220	5.1
70	30	18,699	-54.1		194	3.1
60	28	19,689	-53.1		140	3.5
50	28	20,966	-52.0		97	6.4
40	28	22,316	-50.8		93	9.1
30	28	24,201	-47.9		86	11.5
25	26	25,411	-46.1		84	13.4
20	20	26,912	-43.4		84	16.3
15	13	28,874	-39.8		89	21.8
10						
7						

SWAN ISLAND, W. I.
1011 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	10	26.5	86	111	11.3
1000	30	109	25.7	85	108	13.6
950	30	560	22.6	80	114	18.6
900	30	1,030	19.9	72	120	18.5
850	30	1,522	17.4	64	120	17.3
800	30	2,039	14.9	56	121	16.1
750	30	2,580	12.3	46	123	15.7
700	30	3,159	9.0	43	130	12.4
650	30	3,768	5.4	37	137	10.1
600	30	4,419	1.3	45	140	6.6
550	30	5,110	- 2.5	41	142	3.5
500	30	5,865	- 6.7	40	134	3.5
450	30	6,679	-11.5	38	69	1.6
400	30	7,576	-17.5	38	336	4.5
350	30	8,561	-24.4	37	320	8.0
300	30	9,666	-32.8	31	317	9.9
250	30	10,922	-43.2		319	16.5
200	30	12,386	-55.3		319	21.6
175	30	13,225	-62.2		317	23.5
150	29	14,162	-68.9		327	24.3
125	29	15,239	-73.9		347	18.6
100	29	16,535	-74.5		38	13.2
80	29	17,841	-71.2		75	17.5
70	28	18,639	-67.4		88	21.6
60	28	19,577	-63.7		92	22.5
50	27	20,704	-60.5		90	28.6
40	26	22,104	-56.9		92	34.8
30	23	23,946	-51.8		94	42.3
25	18	25,134	-49.7		93	47.2
20	16	26,602	-46.3		93	50.7
15	8	28,530	-43.8			
10						
7						

TAMPA, FLA.
1017 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	8	23.0	92	89	3.7
1000	30	157	23.2	84	116	5.8
950	30	599	21.2	72	159	8.5
900	30	1,072	18.6	67	177	6.4
850	30	1,561	15.6	65	182	5.4
800	30	2,074	12.5	62	186	3.9
750	30	2,610	9.6	57	203	5.6
700	30	3,183	6.7	52	206	6.0
650	30	3,787	3.3	48	204	5.8
600	30	4,434	- .2	44	207	5.1
550	30	5,121	- 4.0	38	230	5.2
500	30	5,873	- 8.4	33	262	4.3
450	30	6,680	-13.4	32	292	2.9
400	30	7,570	-19.5	32	309	5.1
350	30	8,549	-26.5	R30	307	5.6
300	30	9,643	-34.9	R28	307	7.6
250	30	10,889	-44.7		310	11.1
200	30	12,344	-56.0		313	15.0
175	29	13,182	-61.2		321	17.9
150	29	14,129	-65.5		323	16.1
125	29	15,229	-68.5		340	11.8
100	29	16,561	-69.3		6	8.5
80	29	17,901	-66.4		53	10.1
70	29	18,714	-64.0		74	13.4
60	28	19,665	-61.3		82	18.1
50	28	20,806	-57.7		87	24.5
40	27	22,229	-53.5		92	27.0
30	26	24,097	-49.5		89	27.6
25	25	25,296	-47.5		87	29.7
20	24	26,782	-44.6		82	32.2
15	18	28,724	-41.0		90	35.4
10	11	31,503	-36.6		89	41.0
7	9	33,996	-33.2			
5	5	36,409	-31.0			

* TATOOSH IS., WASH
1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	31	9.9	91	212	5.2
1000	30	141	9.3	87	234	5.6
950	30	564	8.8	74	262	5.8
900	30	1,015	7.9	60	272	4.9
850	30	1,486	6.6	51	277	4.7
800	30	1,982	4.5	46	285	5.4
750	30	2,501	1.9	43	283	6.4
700	29	3,059	- 1.0	41	282	8.0
650	29	3,642	- 4.1	39	271	11.3
600	29	4,275	- 7.8	37	277	13.6
550	29	4,939	-12.2	39	274	15.5
500	29	5,668	-17.0	40	272	16.5
450	29	6,441	-22.7	40	269	18.1
400	29	7,305	-28.8	36	274	18.5
350	29	8,247	-35.9	35	271	19.0
300	29	9,300	-44.0		267	20.0
250	29	10,501	-51.7		263	21.2
200	28	11,932	-56.4		266	22.1
175	28	12,780	-55.5		263	21.0
150	28	13,765	-54.3		259	19.4
125	27	14,931	-54.8		249	16.1
100	27	16,358	-54.7		240	13.8
80	26	17,787	-54.5		239	10.9
70	26	18,641	-54.2		235	8.7
60	26	19,633	-53.4		201	5.2
50	25	20,809	-52.4		150	4.5
40	24	22,257	-51.0		98	8.4
30	24	24,135	-49.1		87	9.9
25	23	25,334	-47.6		86	13.4
20	20	26,798	-45.6		84	17.1
15	19	28,728	-42.1		88	19.2
10	14	31,485	-36.0		90	23.7
7						
5						

TOPEKA, KANS.
983 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	269	18.5	88	151	2.7
1000	30	121				
950	30	564	19.2	73	166	9.5
900	30	1,029	18.4	66	197	11.8
850	30	1,518	15.9	65	217	11.1
800	30	2,031	13.4	60	232	11.5
750	30	2,565	10.1	62	242	12.6
700	30	3,143	6.5	61	247	13.4
650	30	3,740	2.3	59	251	12.8
600	30	4,390	- 2.3	63	247	13.8
550	30	5,068	- 6.6	58	249	14.4
500	30	5,816	-10.7	47	249	17.1
450	30	6,615	-15.6	42	256	18.3
400	30	7,500	-21.2	37	260	17.5
350	30	8,472	-28.1	38	260	18.5
300	30	9,560	-36.6	37	257	22.5
250	30	10,796	-46.7		255	26.4
200	30	12,242	-56.7		255	31.9
175	30	13,080	-60.1		261	35.0
150	30	14,036	-62.3		264	29.7
125	30	15,155	-64.4		266	23.1
100	30	16,515	-65.4		272	12.4
80	28	17,879	-62.8		310	2.3
70	27	18,704	-61.0		71	3.9
60	27	19,669	-58.3		84	6.0
50	27	20,826	-54.9		85	9.9
40	27	22,257	-53.0		88	12.2
30	25	24,121	-50.2		92	13.8
25	23	25,314	-48.4		85	13.0
20	14	26,798	-45.7			
15						
10						
7						
5						

TRUK, CAROLINE IS.
+ 1011 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	2	27.9	79	62	5.1
1000	30	97	27.0	73	70	6.2
950	30	547	23.5	73	85	9.5
900	30	1,022	20.6	71	91	9.5
850	30	1,515	17.9	67	95	8.9
800	30	2,032	15.4	61	97	8.7
750	30	2,578	12.7	57	99	9.1
700	30	3,155	9.7	53	100	9.3
650	30	3,767	6.2	54	92	11.7
600	30	4,420	2.3	53	94	12.4
550	30	5,113	- 1.2	49	99	13.0
500	30	5,874	- 5.5	43	102	12.6
450	30	6,690	-10.0	37	103	12.4
400	30	7,595	-15.4	30	97	10.5
350	30	8,591	-22.0	27	96	9.1
300	30	9,707	-30.4	24	105	10.5
250	30	10,976	-40.8	23	123	10.5
200	30	12,454	-53.5		123	7.0
175	30	13,300	-60.7		104	5.4
150	30	14,243	-67.8		88	4.3
125	30	15,319	-75.1		73	5.6
100	30	16,601	-77.2		83	5.6
80	30	17,898	-72.1		80	4.7
70	30	18,692	-67.7		92	7.2
60	30	19,628	-65.0		98	10.7
50	30	20,747	-62.5		95	17.9
40	29	22,133	-59.6		97	36.5
30	28	23,949	-55.1		95	54.4
25	25	25,126	-51.5		96	59.2
20	20	26,589	-47.4		96	64.1
15	11	28,480	-44.5			
10						
7						
5						

* 4/ TUCSON, ARIZ.
921 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	789	17.3	32	145	6.0
1000	30	74				
950	30	514				
900	30	988	21.7	26	174	5.6
850	30	1,481	19.2	27	207	7.0
800	30	1,998	15.5	29	203	10.1
750	30	2,534	11.7	30	203	14.2
700	30	3,114	7.7	29	210	16.1
650	30	3,712	3.8	27	214	18.6
600	30	4,365	- .6	27	220	20.0
550	30	5,046	- 5.2	28	228	21.4
500	30	5,796	-10.2	25	234	25.3
450	30	6,593	-16.0	26	238	30.1
400	30	7,476	-22.5	27	241	35.0
350	30	8,442	-29.7	27	246	38.1
300	30	9,524	-37.3	26	251	43.3
250	30	10,760	-46.0		251	48.8
200	30	12,216	-54.7		251	51.5
175	30	13,063	-58.2		248	51.7
150	30	14,026	-61.4		246	44.3
125	30	15,147	-64.8		241	32.4
100	30	16,501	-66.2		240	18.3
80	30	17,857	-64.6		186	2.5
70	30	18,676	-62.1		103	6.4
60	30	19,636	-59.5		87	11.1
50	30	20,783	-57.0		89	15.9
40	30	22,207	-53.5		97	20.4
30	30	24,071	-50.5		86	21.6
25	30	25,266	-48.3		85	25.3
20	29	26,744	-45.8		86	25.3
15	29	28,673	-42.4		88	25.1
10	24	31,441	-38.0		88	26.4
7	7	33,902	-33.5			
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb.)	* VANDENBERG AFB, CALIF. 1001 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	113	11.2	96	320	5.1
1000	30	121			320	4.3
950	30	546	9.9	85	333	10.3
900	30	999	11.5	59	355	10.3
850	30	1,478	12.7	42	357	10.9
800	30	1,986	11.2	35	343	10.7
750	30	2,516	8.3	32	332	8.7
700	30	3,088	5.1	29	318	7.6
650	30	3,682	1.4	28	309	7.2
600	30	4,329	- 2.5	26	297	10.3
550	30	5,004	- 7.0	27	291	13.8
500	30	5,750	-12.3	28	286	15.9
450	30	6,539	-18.3	28	286	19.6
400	30	7,415	-24.8	29	289	23.7
350	30	8,373	-31.7	28	289	29.9
300	30	9,445	-39.8	28	284	35.7
250	30	10,670	-47.4		282	39.4
200	30	12,121	-54.3		277	46.6
175	30	12,972	-56.7		273	46.0
150	30	13,945	-58.5		270	36.9
125	30	15,085	-60.7		267	29.9
100	30	16,469	-61.7		260	16.9
80	30	17,849	-61.9		233	4.7
70	30	18,676	-60.8		123	4.5
60	30	19,639	-58.6		103	8.7
50	30	20,788	-56.8		100	14.6
40	29	22,210	-53.8		92	15.0
30	29	24,069	-51.1		86	20.2
25	29	25,260	-48.7		88	21.8
20	29	26,733	-46.7		91	19.4
15	28	28,651	-44.1		87	18.8
10	18	31,381	-38.4		91	23.5
7	5	33,926	-32.3			

Standard pressure surface (mb.)	* WAKE IS., PACIFIC AREA 1016 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	5	26.5	82	80	9.1
1000	30	145	24.9	83	82	11.8
950	30	590	20.8	88	91	14.8
900	30	1,061	18.0	81	95	14.6
850	30	1,550	15.3	75	94	14.6
800	30	2,063	14.2	48	92	13.0
750	30	2,603	12.0	38	93	13.4
700	30	3,182	9.5	30	90	12.8
650	30	3,790	6.5	24	85	11.7
600	30	4,447	2.8	22	86	12.8
550	30	5,142	- 1.3	21	85	12.8
500	30	5,900	- 6.1	21	82	12.4
450	30	6,709	-11.7	21	83	13.6
400	30	7,610	-18.1	24	85	12.8
350	30	8,593	-25.5	29	97	10.7
300	30	9,691	-34.2	29	103	9.9
250	30	10,941	-44.4		125	5.8
200	30	12,398	-55.7		193	1.9
175	30	13,238	-61.7		214	.6
150	30	14,178	-67.9		29	2.5
125	29	15,258	-73.4		60	5.2
100	29	16,553	-75.5		78	9.9
80	29	17,855	-71.5		82	15.5
70	29	18,649	-68.2		84	20.0
60	27	19,583	-64.5		91	22.5
50	26	20,708	-61.0		88	25.1
40	25	22,105	-57.7		87	33.4
30	25	23,936	-53.7		87	42.2
25	25	25,115	-51.0		86	49.1
20	25	26,578	-47.9		86	50.7
15	24	28,488	-44.7		87	55.6
10	17	31,228	-40.2		90	60.4
7	7	33,644	-38.0			

Standard pressure surface (mb.)	* WALLOPS IS. VA. NASA 1019 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	19	3	17.1	89	153	1.6
1000	19	167	18.9	82	233	4.1
950	19	608	17.9	70	281	7.4
900	19	1,070	15.6	67	276	8.2
850	19	1,553	12.6	70	269	9.9
800	19	2,060	9.6	68	267	11.3
750	19	2,595	6.5	69	269	13.6
700	19	3,159	4.3	52	266	18.3
650	19	3,755	1.5	42	264	20.8
600	19	4,401	- 2.1	41	263	23.1
550	19	5,083	- 6.0	32	263	22.9
500	19	5,829	-10.5	33	263	24.3
450	19	6,628	-15.4	32	265	25.4
400	19	7,514	-21.3	35	267	27.4
350	19	8,486	-28.4	32	267	27.4
300	19	9,573	-36.7	33	270	29.7
250	19	10,809	-46.5		274	30.5
200	19	12,253	-57.8		279	35.9
175	19	13,085	-62.3		283	34.4
150	19	14,032	-63.8		289	27.8
125	19	15,153	-63.4		293	22.7
100	19	16,523	-63.1		294	15.3
80	19	17,900	-61.1		312	6.0
70	19	18,732	-59.4		360	3.9
60	19	19,701	-57.4		57	4.5
50	18	20,861	-55.1		75	9.9
40	18	22,293	-52.4		79	13.6
30	18	24,165	-49.4		77	12.8
25	18	25,364	-47.9		79	13.2
20	18	26,942	-45.6		83	16.3
15	17	28,779	-42.3		85	19.0
10	14	31,544	-37.8		93	21.0
7	8	34,016	-32.9			

Standard pressure surface (mb.)	WASHINGTON, D. C. 1009 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	84	16.1	87	327	.8
1000	30	159	16.7	81	317	1.6
950	30	598	17.2	62	316	5.8
900	30	1,058	14.6	62	317	7.2
850	30	1,540	11.9	61	302	9.1
800	30	2,045	8.8	61	285	11.7
750	30	2,576	6.0	57	275	13.6
700	30	3,139	3.5	48	278	15.7
650	30	3,732	.8	42	278	18.6
600	30	4,378	- 2.4	39	281	20.4
550	30	5,056	- 6.3	37	278	20.6
500	30	5,803	-10.7	31	282	21.6
450	30	6,603	-16.2	32	281	23.5
400	30	7,482	-22.3	29	285	25.4
350	30	8,450	-29.2	31	286	27.6
300	30	9,534	-37.4	31	285	31.1
250	30	10,767	-47.0		286	33.6
200	30	12,212	-57.1		293	37.7
175	30	13,049	-60.9		293	35.5
150	30	14,003	-62.6		289	31.1
125	29	15,123	-62.6		292	24.3
100	29	16,499	-62.6		296	15.7
80	29	17,880	-60.5		327	7.4
70	29	18,714	-58.8		21	4.9
60	29	19,588	-56.7		54	4.1
50	29	20,848	-54.6		63	5.8
40	29	22,284	-52.1		81	10.5
30	28	24,160	-48.8		83	10.7
25	27	25,362	-47.1		78	12.0
20	22	26,847	-45.4		84	15.5
15	19	28,771	-41.6		89	17.5
10	15	31,548	-36.9		90	17.1
7	11	34,021	-31.9			

Standard pressure surface (mb.)	WINNEMUCCA, NEV. 867 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	1,310	9.7	67	68	.4
1000	30	98				
950	30	532				
900	30	997				
850	30	1,472	13.4	50	22	1.7
800	30	1,981	11.4	47	349	2.5
750	30	2,513	7.7	49	323	3.7
700	30	3,082	3.5	54	295	4.7
650	30	3,674	- 1.0	55	285	5.8
600	30	4,312	- 5.4	48	261	7.6
550	30	4,980	- 9.7	38	260	7.6
500	30	5,720	-14.8	34	255	6.2
450	30	6,501	-20.4	R32	270	5.8
400	30	7,371	-26.8	R31	279	5.4
350	30	8,320	-34.1	R29	288	5.8
300	29	9,378	-42.4	R24	317	6.0
250	28	10,587	-50.5		295	3.7
200	28	12,024	-54.7		278	8.5
175	28	12,978	-54.8		260	11.3
150	28	13,864	-55.0		250	14.0
125	28	15,026	-55.9		240	13.8
100	28	16,441	-57.3		236	9.5
80	28	17,849	-58.0		199	5.1
70	28	18,690	-57.4		186	4.1
60	28	19,663	-55.9		101	4.5
50	27	20,834	-54.1		93	8.5
40	26	22,273	-52.2		93	10.1
30	25	24,144	-49.8		87	12.8
25	25	25,342	-47.9		83	14.0
20	25	26,823	-45.2		81	15.7
15	18	28,774	-41.2		87	15.7
10						
7						

Standard pressure surface (mb.)	WINSLOW, ARIZ. 849 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	1,492	11.4	42	177	4.3
1000	30	94				
950	30	534				
900	30	995				
850	30	1,481			160	1.6
800	30	1,993	14.8	30	221	9.1
750	30	2,531	10.8	34	218	12.2
700	30	3,106	6.7	36	217	15.5
650	30	3,704	2.5	34	217	16.7
600	30	4,352	- 2.3	33	215	18.8
550	30	5,027	- 7.1	35	218	21.6
500	30	5,774	-12.1	R29	226	24.7
450	30	6,557	-18.2	R27	230	28.4
400	30	7,440	-24.6	R27	234	31.3
350	30	8,399	-31.4	R25	234	35.0
300	30	9,472	-39.5	R22	238	40.4
250	30	10,698	-47.3		242	45.3
200	30	12,150	-53.9		243	49.1
175	30	13,002	-56.7		245	43.1
150	30	13,973	-59.3		240	38.9
125	30	15,108	-61.9		239	29.7
100	30	16,480	-64.2		237	15.2
80	30	17,847	-63.4		226	4.1
70	30	18,672	-61.0		107	4.1
60	29	19,631	-59.3		90	8.9
50	29	20,780	-56.8		87	12.2
40	29	22,207	-53.4		91	17.1
30	29	24,071	-50.7		84	18.3
25	29	25,265	-48.3		86	17.3
20	28	26,746	-45.9		86	18.8
15	20	28,671	-42.8		92	18.8
10						

Standard pressure surface (mb.)	YAKUTAT, ALASKA 1014 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	12	4.8	96	96	3.7
1000	30	123	6.0	88	105	5.2
950	30	537	4.4	80	135	9.5
900	30	982	1.7	82	141	12.0
850	30	1,442	- .4	73	138	12.6
800	30	1,925	- 2.9	73	147	11.7
750	30	2,432	- 5.6	73	159	11.1
700	30	2,973	- 8.7	68	168	10.5
650	30	3,543	-11.7	67	174	11.1
600	30	4,155	-15.4	65	184	11.5
550	30	4,802	-19.6	59	189	13.0
500	30	5,509	-24.2	53	191	15.7
450	30	6,265	-29.5	48	195	16.3
400	30	7,102	-35.2	48	201	17.1
350	30	8,020	-41.7	52	209	18.6
300	30	9,052	-47.4		211	18.3
250	30	10,250	-49.4		214	17.9
200	30	11,714	-48.9		205	14.0
175	30	12,593	-47.9		211	13.4
150	30	13,610	-47.8		205	12.8
125	30	14,812	-48.2		183	11.3
100	30	16,281	-48.3		179	9.3
80	30	17,749	-48.5		158	8.5
70	30	18,627	-48.4		157	7.2
60	30	19,643	-48.1		126	6.6
50	30	20,845	-47.7		116	7.2
40	30	22,320	-47.1		103	9.3
30	30	24,229	-45.7		97	13.2
25	30	25,447	-44.3		94	16.3
20	28	26,948	-42.5		97	16.5
15	26	28,908	-39.5		93	18.3
10	16	31,727	-35.0			

Standard pressure surface (mb.)	+ YAP, CAROLINE IS. 1009 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	17	27.9	82	96	2.5
1000	30	94	26.9	77	80	4.7
950	30	541	23.2	75	95	4.7
900	30	1,017	20.5	71	86	6.2
850	30	1,510	17.8	67	92	5.8
800	30	2,027	15.1	63	85	6.0
750	30	2,570	12.3	59	84	7.0
700	30	3,148	9.2	56	97	7.8
650	30	3,756	5.8	52	104	7.8
600	30	4,411	2.1	49	109	9.1
550	30	5,103	- 1.8	46	106	8.0
500	30	5,862	- 5.9	42	103	8.0
450	30	6,678	-10.6	33	97	7.4
400	30	7,578	-16.2	31	101	6.8
350	30	8,569	-23.0	26	89	7.2
300	30	9,680	-31.3	23	75	7.0
250	30	10,943	-41.7		69	7.4
200	30	12,415	-54.5		57	8.5
175	30	13,255	-61.7		53	9.5
150	30	14,192	-69.4		44	9.1
125	30	15,259	-76.4		53	11.7
100	30	16,533	-78.1		59	14.4
80	30	17,819	-73.6		71	15.9
70	29	18,609	-69.2		84	14.2
60	29	19,535	-66.2		84	16.7
50	29	20,650	-62.6		85	23.1
40	29	22,037	-59.5		87	35.5
30	27	23,956	-55.2		88	49.7
25	24	25,029	-52.4		90	55.9
20	18	26,497	-48.1		89	62.0
15	14	28,407	-44.3			
10						

Standard pressure surface (mb.)	YUCCA FLAT, NEV. 877 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	1,196	11.3	36	307	2.9
1000	30	70				
950	30	505				
900	30	968				
850	30	1,456	16.9	29	340	3.1
800	30	1,970	14.1	27	188	2.1
750	30	2,502	10.1	30	195	3.3
700	30	3,080	5.5	34	192	3.1
650	30	3,675	.6	38	150	1.9
600	30	4,318	- 4.2	40	182	1.7
550	30	4,988	- 9.1	38	239	5.6
500	30	5,728	-14.2	R33	245	9.7
450	30	6,507	-20.2	R32	251	12.8
400	30	7,381	-26.6	R30	251	15.3
350	30	8,332	-33.8	R31	250	19.2
300	29	9,396	-41.4	R30	252	24.5
250	29	10,614	-48.8		252	28.7
200	29	12,063	-53.5		250	35.9
175	29	12,919	-55.1		253	34.0
150	29	13,900	-56.6		260	27.2
125	28	15,052	-58.8		247	22.0
100	28	16,446	-60.4		241	15.5
80	28	17,934	-60.8		231	6.8
70	27	18,562	-59.8		144	1.9
60	27	19,630	-58.2		106	5.1
50	27	20,783	-56.4		87	8.4
40	27	22,209	-53.5		89	12.2
30	26	24,069	-50.9		87	16.1
25	25	25,261	-49.0		86	17.1
20	25	26,735	-46.2		90	16.7
15	23	28,660	-43.5		91	17.7
10	9	31,406	-39.7			

Standard pressure surface (mb.)	YUMA, ARIZ. 993 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	22	131	19.8	35	147	1.0
1000	22	68				
950	22	514	22.7	34	214	5.6
900	22	982	20.7	31	211	6.2
850	22	1,474	18.1	29	209	8.7
800	22	1,989	14.6	30	212	8.2
750	22	2,528	11.0	28	216	10.3
700	22	3,101	7.0	28	227	11.3
650	22	3,701	3.1	29	226	13.8
600	22	4,347	- 1.5	33	230	16.7
550	22	5,025	- 6.5	31	234	20.6
500	22	5,771	-11.5	29	236	24.5
450	22	6,559	-17.5	29	242	28.9
400	22	7,440	-24.0	29	240	39.2
350	22	8,400	-31.1	28	243	49.1
300	22	9,474	-38.8	32	245	55.9
250	22	10,703	-46.5		244	62.2
200	19	12,170	-54.1		245	62.9
175	18	13,016	-57.5		246	62.7
150	17	13,992	-60.5		240	53.8
125	12	15,106	-62.8		240	40.2
100	5	16,479	-64.7			
80						
70						
60						
50						
40						
30						
25						
20						
15						
10						

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Relative humidity averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Relative humidity data are not published for standard pressure surfaces for which less than 5 observations are available.

1/ began June 12, 1965
2/ began June 17, 1965
3/ began June 5, 1965
4/ began June 10, 1965

Relative humidity data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from lithium chloride hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature in degrees Celsius, relative humidity in percent, and resultant winds in degrees and knots.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. They were also equipped with carbon hygristors. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.C.T.

R More than half of the observations are from statistical values.

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun. JUNE 1965

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	ALBUQUERQUE, N. MEX.								
	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Jun. 1	0.67	0.78	0.94	1.08	1.41	1.19	1.00	0.86	0.77
5	.67	.72	.85	1.08	----	----	----	----	----
6	.66	.75	.93	1.13	1.39	----	----	----	----
7	.68	.78	.93	1.09	1.35	----	----	----	----
11	----	----	.84	----	----	----	----	----	----
12	----	----	----	----	1.33	.99	----	----	----
13	.81	.87	1.04	1.20	1.41	1.19	1.00	.84	.73
14	.82	.91	1.05	1.20	1.36	----	----	----	----
15	.69	.79	.95	----	----	----	----	----	----
16	.73	.87	1.02	----	1.40	----	----	.80	.73
17	.63	.72	.91	1.17	1.33	1.10	.93	.79	.68
19	.67	.77	.91	1.09	1.40	----	----	----	----
20	.76	.83	1.03	1.21	1.45	----	----	----	----
21	.78	.86	1.02	1.18	1.40	----	----	----	----
22	.76	.83	.97	1.16	1.32	----	----	----	----
23	.74	.82	.97	1.10	1.28	----	----	----	----
24	----	----	.98	----	1.41	1.01	----	----	----
25	----	----	----	----	1.41	----	----	----	----
26	.97	1.04	1.17	1.32	1.51	1.15	1.07	.97	.93
27	.92	1.00	1.14	1.29	1.48	1.26	1.13	1.00	.91
28	.93	.99	1.12	1.27	1.41	1.14	1.03	.86	.82
29	.88	.96	1.11	1.24	1.40	----	----	----	----
30	.76	.84	.95	----	----	----	----	----	----
Averages	0.77	0.85	0.99	1.18	1.39	1.13	1.03	0.87	0.80
	BLUE HILL OBS., MASS.								
	Air mass								
	4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
Jun. 1	0.58	0.71	0.87	1.06	----	----	----	----	----
4	----	----	.86	.99	1.30	1.04	0.83	0.67	----
5	.75	.82	.90	1.04	1.34	1.07	.86	.67	0.55
6	.66	.72	.82	1.00	1.30	.88	.64	----	----
11	----	----	----	1.10	1.30	----	----	----	----
12	.70	.79	.91	1.11	1.33	.98	.77	.65	.55
	Recorder inoperative remainder of month								
Averages	0.67	0.76	0.87	1.05	1.31	0.99	0.78	0.66	0.55
	OMAHA, NEBR.								
	Air mass								
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Jun. 7	----	----	----	----	HS1.24	----	----	----	----
8	----	----	----	----	----	HM0.94	HM0.71	HM0.63	HM0.43
20	----	----	----	----	----	HS1.04	HS .88	HS .77	HS .64
21	HS0.72	HS0.82	HS0.94	HS1.08	----	----	----	----	----
Averages	0.72	0.82	0.94	1.08	1.24	0.99	0.80	0.70	0.54
	GUAM, M. I.								
	Air mass								
	4.92	3.93	2.95	1.97	*	1.97	2.95	3.93	4.92
	No observations due to cloudiness								

( ) Clouds present
HS Slight haze
HM Moderate haze

S Slight haze-indeterminable
* Values corresponding to true solar noon

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	MADISON, WIS.								
	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Jun. 15	----	----	----	M 1.05	----	----	----	----	----
17	S 0.51	S 0.63	S 0.73	S 1.02	----	----	----	----	----
18	S .68	S .79	S .93	S 1.11	----	----	----	----	----
21	S .73	S .84	S 1.01	S 1.19	S 1.43	S 1.21	----	----	----
24	S .81	S .88	S 1.04	S 1.22	----	----	----	----	----
Averages	0.68	0.79	0.93	1.12	1.43	1.21	----	----	----
	TUCSON, ARIZ.								
	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Jun. 1	0.62	0.77	----	----	----	----	----	----	----
3	----	----	----	----	----	----	----	0.81	0.70
4	.61	.73	----	----	----	----	----	----	----
5	.60	.72	0.84	----	----	----	----	----	----
6	.64	.76	.89	----	----	----	----	----	.68
9	.69	.80	----	----	----	----	0.79	----	.56
10	.51	.63	.76	----	----	----	----	----	.60
11	----	.72	----	----	----	----	----	----	----
12	.56	.69	.84	1.06	----	----	----	.75	.66
13	.75	.85	.97	----	----	----	----	.89	.79
14	.70	.82	----	----	----	----	----	----	.76
16	.57	----	----	----	----	----	----	----	----
17	.72	.83	----	----	----	----	----	----	----
18	----	----	----	----	----	----	----	----	.87
19	----	----	----	----	----	----	----	----	.91
20	.84	.95	1.02	----	----	----	.67	----	----
21	.66	----	----	----	----	----	----	----	----
24	----	----	----	----	----	----	----	.95	.85
25	.90	----	----	----	----	----	----	----	.87
26	.91	1.01	1.12	----	----	----	----	----	.77
27	.82	.93	1.05	----	----	----	----	----	.83
28	.85	.96	1.08	----	----	----	----	----	.83
29	.82	.93	----	----	----	----	----	----	----
Averages	0.71	0.81	0.95	----	----	----	0.73	0.85	0.76
	MAUNA LOA OBS., HAWAII								
	Air mass								
	3.36	2.69	2.01	1.34	*	1.34	2.01	2.69	3.36
Jun. 1	----	----	(1.06)	(1.27)	----	----	----	----	----
2	(0.95)	(1.06)	----	----	----	----	----	----	----
3	(.93)	(1.03)	(1.16)	1.30	----	----	----	----	----
6	(.94)	(1.05)	(1.16)	1.31	1.50	1.35	1.22	1.11	1.03
7	----	----	----	----	1.53	1.34	1.20	1.10	1.03
8	1.05	1.13	1.25	1.38	1.51	----	----	----	----
10	1.06	1.15	1.25	1.38	----	----	----	----	----
13	----	----	----	----	1.56	----	----	----	----
14	----	----	----	----	1.55	1.38	1.26	1.15	1.07
17	1.07	1.15	1.26	1.39	----	----	----	----	----
18	1.10	1.18	1.29	1.41	1.56	----	----	----	----
19	1.06	1.14	1.23	1.37	1.53	1.35	1.24	1.13	1.05
20	1.08	1.16	1.26	1.39	----	----	----	----	----
21	1.03	1.13	1.23	1.35	----	----	----	----	----
22	1.05	1.14	1.24	1.37	----	----	----	----	----
23	1.00	1.10	1.20	1.34	----	----	(1.20)	(1.08)	(1.02)
24	1.08	1.16	1.25	1.38	----	1.37	1.26	1.15	1.06
25	1.07	1.17	1.26	1.39	----	----	----	----	----
26	1.04	1.14	1.25	1.37	1.50	(1.31)	(1.19)	(1.09)	(1.00)
27	1.06	1.15	1.25	1.38	1.54	1.39	1.24	1.14	1.06
29	----	----	----	----	1.54	1.38	1.26	1.16	1.08
30	1.09	1.17	1.28	1.40	1.56	1.39	1.28	1.18	1.11
Averages	1.06	1.15	1.25	1.37	1.53	1.37	1.25	1.14	1.06

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

JUNE 1965

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	776	---	460	624	624	721	745	---	---	484	457	597	761	659	752	747	744	641	704	726	718	646	515	604	612	788	777	753	736	661		668
AMES IOWA	176	356	202	139	419	370	549	609	460	351	579	522	550	467	555	591	630	592	492	417	638	---	707	734	623	267	441	672	325	599		484
ANNETTE ALASKA	264	266	665	197	---	804	742	662	627	181	186	602	596	705	409	369	651	431	180	423	764	427	133	557	708	164	330	271	483	497		458
APALACHICOLA FLORIDA	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	330	444	654	698	721	640		---
ARGONNE NAT. LAB.	431	207	521	649	346	575	604	445	637	670	636	707	699	694	726	710	724	740	719	493	744	545	379	739	717	720	623	595	218	747		599
ASTORIA OREGON	694	507	412	514	---	665	535	262	584	500	568	511	255	438	418	699	222	186	505	512	728	684	549	680	564	443	701	624	635	699		527
ATLANTA GEORGIA	619	692	537	545	273	540	166	288	473	320	217	423	618	501	165	---	---	526	760	727	673	---	---	397	579	437	188	517	---	657		473
BARROW ALASKA	464	526	723	760	747	479	489	532	508*	536	506	441	382	324	507	453	502	430	633	353	453	521	443	347	608	702	612	578	628	459		522*
BETHEL ALASKA	364	178	395	---	174	236	352	420	269	335	400	423	335	297	379	485	161	156	276	315	---	323	452	414	492	283	498	545	406	272		344
BISMARCK N.DAK.	410	427	659	434	337	705	393	682	723	640	608	231	362	414	445	337	597	578	645	751	651	472	731	672	495	333	248	621	396*	542		518*
BLUE HILL MASS.	611	99	253	724	751	747	589	542	474	525	729	766	252	166	585	769	778	706	582	574	691	587	678	277	689	778	745	719	376	323		570
BOISE IDAHO	739	778	757	724	755	666	777	690	761	755	700	444	651	440	260	193	653	587	759	770	748	763	639	631	673	197	801	773	770	681		651
BOSTON MASSACHUSETTS	590	74	187	690	731	708	553	563	471	522	694	738	190	130	511	762	750	641	548	534	668	554	655	285	680	754	708	694	348	271		540
BROWNSVILLE TEXAS	553	502	653	592	---	409	632	686	698	752	718	743	672	737	729	627	665	628	369	737	745	734	771	688	743	682	735	722	644	693		664
BURLINGTON VERMONT	527	652	730	729	704	559	398	427	450	338	599	519	106	216	361	490	400	403	570	567	327	622	345	494	670	737	652	586	554	344		502
CAPE HATTERAS N.C.	541	678	537	726	736	656	696	696	569	447	369	72	612	397	199	226	276	562	717	687	695	679	694	632	236	647	717	715	715	651		559
CARIBOU MAINE	402	677	624	171	302	535	627	351	627	551	547	708	96	308	618	689	621	502	672	667	553	739	215	616	753	768	661	628	349	579		539
CHARLESTON S.C.	511	681	547	229	714	---	---	---	529	383	269	467	474	485	---	331	191	613	722	654	604	676	688	560	519	189	456	496	502	657		506
CLEVELAND OHIO	497	151	727	738	596	510	312	315	542	616	707	694	754	629	578	641	599	646	719	652	393	672	388	756	728	704	630	585	654	571		590
COLUMBIA MISSOURI	167	503	472	352	556	311	703	501	350	661	674	499	265	335	---	647	665	720	671	538	507	392	278	713	694	688	722	540	615	461		524
DAVIS CALIFORNIA	652	634	675	674	666	676	665	638	677	659	685	699	695	529	706	655	494	669	651	673	658	607	674	676	698	683	702	697	691	697		662
DODGE CITY KANSAS	652	671	619	230	301	674	659	464	300	469	458	543	306	446	268	204	418	560	583	657	605	610	652	280	428	633	468	638	653	573		501
E. LANSING MICHIGAN	540	119	746	764	357	500	297	596*	613	743	713	751	768	733	719	487	650	545	735	588	599	689	397	684	728	719	615	616	482	513		600*
EL CENTRO CALIF. NPF	588	604	596	615	632	632	627	422	633	611	611	636	642	628	638	642	626	608	631	618	625	607	625	633	649	643	643	641	626	626		618
EL PASO TEXAS	843	818	775	827	747	798	796	587	555	486	797	792	816	797	810	805	763	769	783	762	722	775	539	---	740	806	829	792	751	776		754
ELY NEVADA	604	373	642	785	645	510	767	681	550	446	766	577	633	575	234	413	724	765	664	716	802	779	566	318	356	436	786	628	617	788		605
EPPLEY,NEWPORT R.I.	586	132	329	630	730	701	645	609	487	424	701	719	547	123	379	519	668	658	639	619	662	583	650	307	683	715	722	686	479	336		556
FAIRBANKS ALASKA	377	600	534	667	721	411	264	638	201	586	423	215	205	460	659	581	200	585	479	447	499	547	644	492	751	437	678	758	732	558		512
FORT WORTH TEXAS	501	421	613	592	163	697	733	666	749	720	726	735	547	586	482	694	655	689	711	720	660	473	551	502	733	630	742	646	718	733		626
FRESNO CALIFORNIA	627	585	695	693	677	682	727	316	656	699	702	771	743	706	720	695	717	680	708	708	714	702	716	694	747	728	721	715	698	732		689
GAINESVILLE FLORIDA	564	623	496	267	435	573	481	273	278	311	139	93	203	362	193	256	367	216	599	625	51	616	573	525	373	632	418	655	496	631		411
GLASGOW MONTANA	299	678	689	285	781	751	591	776	759	777	753	523	161	650	375	507	713	685	414	727	792	696	773	656	373	440	770	797	582	657		614
GRAND JUNCTION COLO.	524	602	724	413	760	679	714	542	366	374	481	639	744	686	454	303	664	740	747	784	784	758	546	621	607	647	770	781	771	319		618
GREAT FALLS MONTANA	576	570	474	360	687	649	627	707	---	---	681	477	218	387	210	52	547	433	392	616	631	680	649	584	126	195	732	666	647	607		506
GREENSBORO N.C.	559	639	321	448	554	693	500	326	361	563	284	335	698	360	104	162	313	607	707	690	650	648	624	470	527	258	397	661	580	568		487
GRIFFIN EXP.STA.GA.	713	724	600	679	428	673	235	367	502	464	267	368	545	583	153	238	286	508	813	779	712	627	649	484	575	384	302	454	648	581		511
INDIANAPOLIS INDIANA	385	454	517	742	665	277	466	660	502	404	621	798	---	771	762	633	684	---	---	715	664	622	288	772	781	787	661	479	578	582		603
INYOKERN CALIFORNIA	662	722	556	852	866	849	836	857	911	878	879	866	908	843	759	815	896	910	903	915	906	886	878	817	890	908	899	894	889	892		851
ITHACA NEW YORK	181	54	685	695	662	567	467	350	464	534	639	623	211	125	191	528	167	551	660	611	341	639	369	660	714	689	680	357	510	331		475
LAKE CHARLES LA.	616	608	654	659	557	142	589	662	613	658	648	518	658	471	617	464	630	678	650	606	585	660	643	423	598	684	410	424	559	660		578
LAKELAND FLORIDA	---	720	688	311	613	646	510	303	350	671	159	170	389	429	506	535	526	226	603	691	656	526	602	555	638	658	409	627	657	647		518
LANDER WYOMING	571	624	692	87	720	679	655	593	406	53	313	423	771	456	490	289	755	758	748	769	752	647	680	406	424	576	732	783	762	747		579
LARAMIE WYOMING	332	644	522	476	430	588	476	445	362	195	233	521	469	475	672	439	399	610	650	704	648	594	499	315	568	582	612	646	623	558		510
LAS VEGAS NEVADA	683	723	531	776	701	694	632	587	738	618	747	736	767	753	498	471	751	762	765	796	792	790	521	732	720	657	774	777	778	795		702
LITTLE ROCK ARKANSAS	581	569	598	635	536	305	653	541	619	571	472	555	434	253	342	719	642	618	735	712	602	608	452	618	547	575	643	686	700	578		570
LOS ANGELES CALIF.U	137	359	429	416	432	514	255	412	547	630	566	363	311	577	446	126	350	642	460	485	469	356	206	292	140	655	723	678	682	683		445
LOS ANGELES CALIF.WB	195	437	545	454	440	560	302	600	689	684	535	284	405	606	621	321	518	627	552	372	402	337	345	355	222	676	735	707	694	660		496
MANHATTAN KANSAS	503	498	550	331	504	622	578	332	173	461	468	485	373	---	603	584	599	582	569	523	438	412	518	238	318	252	368	488	525	328		456
MAUNA LOA OB.HAWAII	580	---	519	538	---	862	849	843	852	856	---	843	870	845	850	860	792	858	870	629	803	585	881	881	650	858	870	875	858	878		795
MEDFORD OREGON	757	762	759	765	739	737	639	437	747	665	508	674	368	447	661	394	273	660	783	781	768*	767	554	515	182	691	784	778	650	425		622*
MIAMI FLORIDA	482	442	---	---	713	566	538	196	456	461	458	351	315	526	568	442	354	505	324	518	561	450	497	532	480	377	397	490	538	523		466
MIDLAND TEXAS	711	605	645	521	741	588	727	708	498	265	405	714	720	725	715	711	706	625	659	664	385	675	670	586	676	717	689	719	---	---		635
NASHVILLE TENNESSEE	699	718	724	508	662	343	356	783	597	513	---	337	764	375	137	173	776	792	798	776	734	609	385	472	813	745	600	598	598	433		580
NEW YORK N.Y.U	542	138	765	776	728	703	631	505	361	614	755	741	768	291	299	323	524	358	538	728	625	519	492	274	754	740	696	656	564	239		555
NORTH OMAHA NEBRASKA	371	671	713	230	529	649	701	780	314	304	746	489	217	647	761	741	604	668	674	717	655	590	764	690	406	403	604	655	596	747		588

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys. JUNE 1965

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
OAK RIDGE TENNESSEE	522	506	396	366	248	483	189	560	415	435	242	360	587	296	102	273	350	562	523	577	563	515	492	146	598	564	498	433	397	469		422
OKLAHOMA CITY OKLA.	528	570	515	336	496	625	599	536	589	555	547	523	459	549	314	494	591	523	592	626	474	488	568	421	334	474	637	629	649	625		529
PHOENIX ARIZONA	674	282	665	668	655	661	663	421	681	658	618	674	677	677	668	692	698	685	686	690	490	675	310	687	700	695	691	686	680	652		635
PORTLAND MAINE	650	92	119	408	723	703	534	542	355	592	671	718	71	192	589	707	708	505	644	674	632	716	681	469	675	726	721	690	521	293		544
PROSSER WASHINGTON	720	732	735	729	720	738	758	747	728	675	363	723	756	347	369	539	112	716	752	732	758	749	690	695*	767	782	—	717	761	696		666*
RAPID CITY S.DAK.	392	536	676	237	560	691	324	573	551	101	298	478	586	630	316	219	333	568	663	585	581	591	386	534	506	567	538	506	399	537		482
SAINT CLOUD MINN.	470	83	608	241	130	292	613	766	661	734	662	755	628	658	672	629	748	737	541	510	719	429	785	712	322	318	425	788	446	741		561
SALT LAKE CITY UTAH	534	662	709	803	796	727	764	528	381	570	707	496	810	689	394	558	608	843	805	815	800	781	733	220	386	325	732	809	798	836		654
SAN ANTONIO TEXAS	630	440	608	604	146	400	489	601	663	659	619	714	691	710	717	646	581	641	570	570	593	348	585	598	648	646	616	556	568	651		584
SANTA MARIA CALIF.	380	—	523	552	450	432	—	553	708	658	639	614	743	730	732	641	617	643	537	239	362	434	323	366	613	723	704	694	646	530		564
SAULT STE MARIE MICH	298	725	694	687	469	448	570	317	472	809	748	820	800	679	405	—	527	729	760	439	756	272	289	742	771	654	640	684	355	789		598
SEATTLE WASH. UNIV.	704	684	709	696	704	664	719	416	430	535	133	473	543	478	236	707	581	493	706	457	700	552	629	682	422	124	553	613	716	710		559
SEATTLE TACOMA WASH.	726	726	749	734	751	632	750	365	418	598	170	473	577	418	303	699	510	626	659	533	748	601	635	682	646	450	673	706	765	743*		602*
SPOKANE WASHINGTON	761	772	815	797	791	808	836	826	799	783	567	613	774	490	489	539	108	495	716	583	822	815	732	509	796	754	666	289	778	812		678
STATE COLLEGE PENN.	625	193	851	868	818	662	610	597	472	438	800	799	830	659	288	474	180	437	617	690	595	723	435	421	787	817	811	659	670	371		607
STERLING VIRGINA	647	442	325	743	668	651	635	535	381	527	621	457	744	623	155	94	167	529	606	706	652	519	585	160	722	648	697	652	514	224		521
STILLWATER OKLAHOMA	536	680	622	483	527	677	701	631	643	576	553	673	477	653	437	592	606	596	650	671	236	398	702	379	334	523	704	695	685	671		577
SWAN ISLAND W.I.	666	713	705	748	732	759	583	618	364	642	471	686	606	669	704	747	631	748	640	725	268	149	360	666	639	536	457	577	595*	655		602*
TAMPA FLORIDA	730	717	656	529	601	653	584	310	359	307	120	208	500	629	516	567	682	413	644	718	724	—	—	547	711	458	491	683	671	661		550
TUCSON ARIZONA	737	534	354	—	—	636	730	335	719	720	678	716	728	—	—	—	—	—	—	—	515	674	355	699	762	755	749	741	—	554		—
WAKE ISLAND,PACIFIC	547	460	584	563	475	513	565	423	554	557	361	380	414	570	508	507	534	587	426	562	565	346	478	573	587*	555	572	433	557	547		510*

Note. --Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (midnight to midnight) at Huntley, Mont.

JUNE 1965

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	**Avg.**
Langleys. . .	234	388	376	202	442	403	149	439	365	439	330	310	---	104	103	78	389	399	373	436	---	448	378	378	151	169	436	434	336	362		---

The measurement is made with a Beckman and Whitley net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Huntley Exp. Station. **The instrument with which they were measured has not been checked by the Weather Bureau.**

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λ S Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3
															Data will be delayed																	

The spectrophotometer measures the total amount of ozone in the atmosphere, i. e., the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e. g., 350 milli-atmo-cm ozone implies an ozone layer 0.350 centimeter thick. The code λ S designates the type of measurement made.

RAWINSONDE DATA

Average monthly values

DELAYED DATA

CHIHUAHUA, MEXICO 6/
855 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,428	7.0	33	209	2.5
1000	31	117				
950	31	546				
900	31	1,002				
850	31	1,480	8.2	32	215	2.5
800	31	1,981	8.0	32	245	7.4
750	31	2,506	4.9	33	250	14.8
700	31	3,070	2.4	27	255	24.1
650	31	3,659	- 1.0	R21	257	27.6
600	31	4,299	- 5.1	R20	260	29.5
550	31	4,970	- 9.4	R22	261	35.5
500	31	5,707	-14.3	R25	264	39.8
450	31	6,490	-20.1	R27	267	47.4
400	31	7,361	-26.3	R26	262	53.2
350	31	8,312	-33.5	R27	262	60.6
300	31	9,376	-41.3	R33	261	67.2
250	31	10,590	-49.9		260	74.2
200	31	12,023	-57.0		262	72.7
175	31	12,864	-59.1			
150	31	13,823	-62.3			
125	31	14,939	-66.0			
100	31	16,282	-68.7			
80	30	17,618	-68.5		260	42.7
70	28	18,421	-67.3			
60	26	19,354	-65.4			
50	20	20,484	-62.0			
40	19	21,874	-57.5		269	16.3
30	16	23,722	-54.0			
25	15	24,884	-54.4			
20	14	26,322	-52.4			
15	11	28,189	-49.1			
10						
7						
5						

CORPUS CHRISTI, TEXAS 8/
1011 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	27	6	24.4	86	130	9.1
1000	27	101	23.8	87	137	11.1
950	27	542	20.7	90	153	16.5
900	27	1,016	18.7	78	163	19.0
850	27	1,506	17.0	69	173	19.2
800	27	2,022	15.0	59	187	15.7
750	27	2,562	12.7	61	198	14.2
700	27	3,144	9.9	56	215	12.6
650	27	3,749	6.1	55	232	13.2
600	27	4,408	1.4	56	245	12.8
550	27	5,089	- 3.5	61	249	15.0
500	27	5,848	- 8.7	60	253	16.5
450	27	6,647	-14.1	52	254	20.6
400	27	7,541	-20.3	53	260	25.4
350	27	8,515	-27.8	54	262	30.9
300	27	9,604	-36.4	53	260	36.3
250	27	10,842	-46.2		261	43.3
200	27	12,288	-57.1		265	50.7
175	27	13,123	-61.9		265	56.1
150	27	14,067	-66.0		266	49.3
125	26	15,173	-67.5		263	39.4
100	25	16,506	-70.5		258	22.7
80	23	17,829	-70.1		253	10.7
70	23	18,626	-68.1		243	2.9
60	23	19,559	-64.8		72	5.8
50	23	20,687	-59.4		83	10.7
40	22	22,100	-55.4		82	11.5
30	21	23,953	-51.8		81	13.0
25	20	25,143	-49.0		81	17.9
20	20	26,615	-46.7		81	15.9
15	17	28,534	-41.4		87	14.6
10	9	31,260	-39.0			
7						
5						

EMPALME, MEXICO 6/
1013 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	12	11.5	62	332	3.5
1000	31	117	15.8	50	327	4.5
950	31	556	16.0	36	333	5.6
900	31	1,011	13.7	31	294	3.1
850	31	1,490	11.1	R26	242	5.4
800	31	1,993	8.8	R19	240	9.3
750	31	2,520	6.0	R18	246	13.2
700	31	3,086	2.9	R19	253	16.1
650	31	3,679	- .9	R20	256	21.0
600	31	4,316	- 5.1	R23	257	26.6
550	31	4,989	- 9.5	R26	258	32.8
500	31	5,723	-14.7	R28	258	39.2
450	31	6,505	-20.2	R29	259	48.6
400	31	7,376	-26.4	R28	258	57.7
350	31	8,327	-33.6	R28	259	64.5
300	31	9,391	-41.5	R30	256	72.8
250	31	10,603	-50.5		258	77.3
200	30	12,034	-57.4		258	85.7
175	30	12,873	-59.9		260	82.9
150	30	13,831	-62.6		259	79.4
125	30	14,948	-65.8		258	70.9
100	30	16,292	-69.2		259	57.1
80	29	17,620	-69.8		258	41.2
70	26	18,419	-67.7		259	32.8
60	26	19,353	-64.9		263	25.4
50	26	20,471	-62.4		267	20.6
40	26	21,863	-58.5		264	19.2
30	21	23,698	-55.0		258	21.6
25	19	24,867	-52.9		257	28.7
20	10	26,323	-51.3			
15	7	28,208	-45.8			
10						
7						
5						

KEY WEST, FLORIDA 8/
1017 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	27	3	24.6	71	95	6.8
1000	27	150	23.3	72	95	11.1
950	27	595	19.6	78	100	13.4
900	27	1,061	16.7	73	99	12.6
850	27	1,546	13.9	66	88	10.3
800	27	2,056	11.6	48	76	9.1
750	27	2,596	10.2	37	80	10.5
700	27	3,166	7.3	36	72	9.7
650	27	3,773	4.5	32	57	6.2
600	27	4,420	.8	31	11	5.4
550	27	5,107	- 3.6	32	351	5.8
500	27	5,861	- 8.6	32	332	8.0
450	27	6,664	-13.9	33	329	12.0
400	27	7,554	-20.4	35	319	15.9
350	27	8,528	-28.0	38	314	21.2
300	27	9,616	-36.5	35	310	25.1
250	27	10,855	-46.3		310	30.1
200	27	12,301	-57.3		308	37.5
175	27	13,135	-62.3		307	43.3
150	27	14,078	-66.4		302	40.2
125	27	15,176	-68.7		303	36.1
100	27	16,504	-71.4		308	25.8
80	27	17,823	-70.7		326	15.2
70	27	18,618	-68.1		349	10.9
60	25	19,552	-64.2		47	10.7
50	25	20,682	-59.7		78	15.0
40	24	22,092	-56.0		90	20.2
30	23	23,942	-51.5		94	22.5
25	23	25,132	-49.5		89	25.4
20	22	26,604	-46.4		88	27.2
15	22	28,533	-42.2		92	27.4
10	20	31,313	-36.5		89	26.8
7	14	33,770	-34.0			
5	7	36,139	-29.1			

KWAJALEIN, MARSHALL IS. 7/
1012 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	4	26.7	74	66	14.8
1000	30	108	25.7	73	69	16.1
950	30	558	22.1	82	72	18.5
900	30	1,027	19.0	78	78	16.3
850	30	1,517	16.5	69	88	12.0
800	30	2,033	15.8	45	93	7.8
750	30	2,579	13.5	40	92	6.8
700	30	3,157	10.5	35	91	7.4
650	30	3,770	6.7	38	89	7.4
600	30	4,423	3.0	37	89	8.9
550	30	5,122	- 1.1	30	77	11.3
500	30	5,876	- 5.8	31	81	10.3
450	30	6,693	-11.1	31	68	8.7
400	30	7,588	-16.6	29	60	8.5
350	30	8,581	-22.1	30	31	4.7
300	30	9,694	-30.9	34	294	4.5
250	30	10,960	-41.3	32	239	9.3
200	30	12,434	-53.7	34	229	13.6
175	30	13,278	-61.0	33	232	14.6
150	29	14,217	-69.0	29	250	12.4
125	29	15,286	-76.5		286	13.2
100	25	16,554	-81.2		289	9.1
80	19	17,819	-76.4		268	12.4
70	19	18,593	-74.2		270	15.3
60	18	19,500	-70.3		268	18.8
50	17	20,593	-66.5		275	15.9
40	16	21,961	-61.7		165	1.2
30	16	23,766	-56.5		89	31.5
25	16	24,930	-53.6		88	44.7
20	15	26,376	-49.9		86	54.2
15	14	28,283	-44.2		87	61.6
10	12	31,028	-40.0		89	67.4
7	9	33,509	-33.9			
5						

MERIDA, MEXICO 3/
1016 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	11	19.0	96	82	6.0
1000	30	152	21.3	86	87	11.3
950	30	594	19.5	80	105	14.4
900	30	1,061	17.2	75	112	11.8
850	30	1,548	14.9	63	123	8.9
800	30	2,060	12.4	59	129	6.8
750	30	2,593	9.6	54	143	6.8
700	30	3,170	6.5	51	155	6.0
650	30	3,769	3.0	46	161	5.1
600	30	4,419	- .9	46	187	5.4
550	30	5,097	- 5.2	40	200	6.0
500	30	5,852	- 9.9	31	205	6.4
450	30	6,649	-15.5	31	221	8.2
400	30	7,538	-21.9		232	9.1
350	30	8,506	-29.2		240	13.8
300	30	9,589	-37.7		242	18.6
250	30	10,819	-47.7		241	23.9
200	30	12,256	-58.4		237	27.8
175	30	13,087	-62.9		239	27.0
150	30	14,027	-67.1		239	25.8
125	30	15,118	-70.4		247	23.7
100	30	16,433	-73.8		243	15.9
80	29	17,719	-74.7		215	6.4
70	29	18,497	-72.8		139	3.1
60	28	19,412	-69.8		107	6.4
50	27	20,518	-62.7		99	8.5
40	27	21,911	-57.4		80	7.8
30	27	23,754	-51.7		89	7.4
25	27	24,943	-49.4		71	8.4
20	26	26,409	-47.5		83	10.9
15	17	28,313	-43.6		100	16.7
10	5	31,023	-43.2			

MERIDA, MEXICO 4/
1018 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	11	17.7	93	60	6.2
1000	31	164	20.2	83	87	9.7
950	31	601	18.1	81	104	10.9
900	31	1,069	15.5	76	112	9.3
850	31	1,552	12.5	77	109	5.6
800	31	2,060	10.0	67	133	2.9
750	31	2,591	8.2	50	171	2.5
700	31	3,164	5.9	38	220	2.1
650	31	3,762	2.7	28	249	4.1
600	31	4,412	- .8	R23	242	5.4
550	31	5,091	- 5.1	R21	241	9.5
500	31	5,844	-10.4	R22	233	12.2
450	30	6,638	-16.4	R22	241	15.3
400	30	7,524	-22.9	R24	244	17.9
350	29	8,489	-30.3	R24	246	21.2
300	28	9,566	-37.4	R23	246	21.6
250	28	10,795	-47.7		251	21.8
200	28	12,237	-57.0		257	27.0
175	27	13,078	-60.6		245	33.0
150	24	14,024	-65.1		243	32.2
125	21	15,118	-70.1		244	28.7
100	20	16,425	-75.3		233	16.1
80	19	17,721	-74.9		201	7.8
70	18	18,497	-73.0		176	5.1
60	18	19,412	-69.4		120	3.9
50	18	20,518	-62.8		81	4.5
40	18	21,910	-57.4		70	7.2
30	17	23,748	-53.4		81	6.2
25	17	24,927	-51.2		80	7.0
20	16	26,380	-49.3		90	8.5
15	11	28,262	-45.0			
10						

MERIDA, MEXICO 5/
1015 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	28	11	19.5	94	101	6.4
1000	28	138	20.3	89	115	11.1
950	28	581	19.3	83	137	15.0
900	28	1,048	17.2	74	140	12.4
850	28	1,535	14.8	68	146	8.0
800	28	2,045	11.8	64	164	6.6
750	28	2,580	9.4	51	170	5.6
700	28	3,154	6.5	47	212	6.2
650	28	3,752	3.2	40	218	8.7
600	28	4,405	.1	R33	223	10.3
550	28	5,085	- 3.9	R29	232	12.4
500	28	5,844	- 8.6	R24	238	16.1
450	28	6,644	-14.2	R21	245	20.0
400	27	7,540	-21.4	R24	252	25.4
350	27	8,510	-28.6	R26	254	31.9
300	27	9,596	-36.8	R25	256	39.8
250	27	10,836	-45.2		250	49.3
200	26	12,296	-54.1		245	54.4
175	25	13,145	-59.3		248	52.6
150	25	14,096	-65.6		246	38.9
125	23	15,184	-72.1		238	30.1
100	22	16,485	-76.7		233	18.6
80	22	17,762	-77.6		242	10.7
70	22	18,532	-73.4		243	5.1
60	22	19,448	-67.9		241	3.7
50	21	20,563	-62.1		62	1.9
40	20	21,964	-56.6		38	7.2
30	20	23,807	-52.2		73	7.4
25	19	24,990	-50.9		56	6.8
20	18	26,447	-49.5		31	5.4
15	10	28,359	-45.1			
10						

MERIDA, MEXICO 6/
1015 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	11	18.9	95	108	5.8
1000	31	140	20.3	87	121	11.3
950	31	581	19.5	76	137	14.6
900	31	1,050	17.9	62	136	8.2
850	31	1,538	15.8	51	140	3.9
800	31	2,051	13.5	42	172	4.1
750	31	2,588	11.4	R32	196	4.9
700	31	3,167	8.6	R28	217	6.2
650	31	3,769	5.7	R20	229	7.0
600	31	4,427	1.8	R17	238	8.5
550	31	5,113	- 2.2	R16	248	10.9
500	31	5,876	- 7.0	R17	253	16.5
450	31	6,679	-13.0	R17	248	20.2
400	31	7,578	-19.7	R18	243	22.3
350	31	8,555	-26.9	R19	247	24.9
300	31	9,647	-35.8	R21	258	29.7
250	31	10,887	-45.7		263	32.6
200	31	12,340	-55.9		263	36.7
175	31	13,179	-61.1		259	35.0
150	31	14,126	-65.7		259	31.5
125	31	15,221	-70.7		255	27.2
100	31	16,527	-76.2		246	23.7
80	31	17,806	-77.6		249	14.4
70	31	18,573	-74.7		247	10.3
60	31	19,483	-69.5		252	6.4
50	31	20,588	-62.9		237	.4
40	31	21,985	-56.6		101	4.7
30	30	23,825	-53.1		86	13.2
25	28	25,006	-50.6		85	13.6
20	27	26,469	-48.3		85	16.7
15	18	28,386	-44.9		82	15.2
10	6	31,101	-41.4			

MONTERREY, MEXICO 1/
967 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	11	423	15.8		293	3.5
1000	11	137				
950	11	575	16.1		163	3.5
900	11	1,037	15.0		151	5.1
850	11	1,521	13.5		116	3.7
800	11	2,030	11.3		313	1.7
750	11	2,573	9.2		273	3.3
700	11	3,138	6.6		301	6.2
650	11	3,743	3.9		325	8.5
600	11	4,390	- .1		338	12.2
550	11	5,077	- 4.6		334	14.8
500	11	5,826	- 9.1		322	17.3
450	11	6,632	-14.3		313	22.3
400	11	7,517	-21.0		312	26.2
350	11	8,490	-27.9		307	33.2
300	11	9,579	-36.2		306	42.7
250	11	10,818	-45.8		302	51.3
200	11	12,269	-56.3		302	57.5
175	11	13,105	-62.2		299	52.6
150	11	14,044	-67.9		289	47.6
125	11	15,134	-70.6		298	36.1
100	11	16,447	-73.7		291	27.6
80	11	17,749	-73.1		298	12.6
70	11	18,540	-68.5		307	10.1
60	11	19,474	-64.4		82	3.9
50	11	20,596	-61.9		116	10.5
40	11	21,989	-58.6		89	10.5
30	11	23,816	-53.9		53	4.5
25	11	24,994	-51.3		82	5.4
20	11	26,452	-49.1		47	3.3
15						
10						

MONTERREY, MEXICO 2/
966 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	27	423	15.5	76	340	2.5
1000	27	125				
950	27	565	15.6	73	348	6.6
900	27	1,022	15.0	67	18	5.6
850	27	1,506	13.7	62	15	1.7
800	27	2,016	12.1	51	216	3.7
750	27	2,553	10.2	45	242	7.8
700	27	3,126	6.9	43	266	11.8
650	27	3,726	3.2	40	258	14.6
600	27	4,376	- .9	38	241	16.1
550	27	5,061	- 4.9	R32	241	19.2
500	27	5,809	- 9.8	R24	242	22.7
450	27	6,608	-15.5	R26	245	23.5
400	27	7,493	-22.1	R27	250	28.0
350	26	8,460	-29.3	R29	255	27.2
300	26	9,543	-37.5	R28	249	33.8
250	26	10,775	-47.2		253	40.8
200	25	12,215	-58.0		253	48.8
175	25	13,046	-63.1		253	49.5
150	24	13,982	-67.5		253	49.5
125	22	15,068	-71.3		254	43.5
100	22	16,382	-72.9		250	40.8
80	21	17,695	-73.0		255	25.8
70	21	18,481	-70.2		256	26.6
60	21	19,409	-66.3		251	11.5
50	20	20,521	-62.8		244	5.8
40	19	21,904	-59.7		223	3.9
30	19	23,722	-54.9		233	10.3
25	19	24,895	-52.9		237	11.5
20	16	26,348	-50.2			
15	14	28,251	-46.5			
10						
7						

SAN NICOLAS, CALIF. 3/
997 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	174	11.2	81	315	8.9
1000	31	149			345	3.7
950	31	581	13.2	51	311	10.5
900	31	1,034	10.9	46	309	11.8
850	31	1,509	8.5	45	309	12.8
800	31	2,008	6.4	41	309	15.9
750	31	2,535	4.0	39	304	19.4
700	31	3,092	.4	37	299	22.9
650	31	3,683	- 3.3	35	299	25.1
600	31	4,311	- 7.5	36	296	27.6
550	31	4,983	-11.6	36	293	31.3
500	31	5,707	-16.3	39	291	34.6
450	31	6,492	-21.2	38	289	38.3
400	31	7,352	-26.9	39	287	41.2
350	31	8,300	-34.5	38	283	45.1
300	31	9,359	-43.0	41	282	47.0
250	31	10,565	-51.6	41	281	50.7
200	31	11,989	-58.1	37	282	54.4
175	31	12,825	-60.4	33	283	54.0
150	31	13,782	-62.2		282	49.5
125	31	14,900	-65.5		287	44.9
100	31	16,247	-68.3		284	34.0
80	31	17,584	-68.1		290	21.8
70	31	18,387	-67.1		295	22.0
60	31	19,333	-64.3		296	13.2
50	31	20,456	-61.6		299	10.3
40	30	21,844	-59.4		306	8.0
30	29	23,663	-55.4		288	9.5
25	29	24,831	-53.5		283	6.2
20	29	26,273	-51.2		279	14.0
15	27	28,157	-48.1		270	17.7
10	23	30,808	-46.4		273	25.1
7	8	33,151	-43.6		252	65.3

SAN NICOLAS, CALIF. 8/
993 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	28	174	10.9	84	318	10.9
1000	28	110				
950	28	542	13.8	53	322	13.4
900	28	999	14.7	31	324	11.7
850	28	1,479	12.1	25	325	10.7
800	28	1,984	9.0	26	321	9.9
750	28	2,515	5.6	25	312	10.7
700	28	3,076	2.5	23	311	13.0
650	28	3,671	- .9	21	303	16.3
600	28	4,305	- 4.8	20	299	17.7
550	28	4,983	- 9.5	22	297	20.4
500	28	5,711	-14.9	25	294	22.7
450	28	6,500	-20.1	25	291	25.1
400	28	7,363	-26.3	27	291	28.6
350	28	8,314	-34.0	27	288	29.9
300	28	9,375	-42.2	27	287	35.7
250	28	10,585	-50.2	27	283	38.3
200	28	12,018	-57.3	27	280	39.8
175	28	12,858	-59.0	26	278	40.6
150	28	13,824	-59.4	21	274	36.3
125	28	14,961	-60.9		269	28.6
100	28	16,345	-61.8		267	19.8
80	27	17,726	-61.4		251	6.0
70	27	18,556	-60.5		230	3.7
60	26	19,518	-59.1		135	3.3
50	26	20,668	-56.7		101	4.5
40	26	22,087	-54.9		74	5.6
30	25	23,940	-51.7		79	10.9
25	25	25,127	-49.6		94	9.9
20	24	26,594	-47.1		69	10.5
15	24	28,514	-43.4		81	5.4
10	20	31,272	-37.9		39	1.7
7	13	33,732	-33.6		210	1.0

1/ October 1964
2/ November 1964
3/ December 1964
4/ January 1965
5/ February 1965
6/ March 1965
7/ April 1965
8/ May 1965

Also see reference notes with current data

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun.

DELAYED DATA

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
MAUNA LOA OBS., HAWAII									
	Air mass								
	3.36	2.69	2.01	1.34	*	1.34	2.01	2.69	3.36
May 1965									
2-----	(0.99)	(1.07)	(1.17)	(1.33)	----	----	----	----	----
9-----	.97	1.07	1.18	1.32	----	----	----	----	----
11----	1.00	1.10	1.21	1.34	----	----	----	----	----
13----	----	----	----	----	1.49	----	----	----	----
14----	1.00	1.09	1.20	----	----	----	----	----	----
16----	----	----	----	1.31	----	----	----	----	----
17----	1.03	1.09	1.20	1.32	----	----	----	----	----
19----	----	----	----	----	1.49	----	----	----	----
21----	----	----	----	----	(1.50)	----	----	----	----
22----	1.10	1.18	1.28	1.39	----	----	----	----	----
27----	----	----	----	1.39	----	----	----	----	----
Averages	1.02	1.11	1.21	1.35	1.49	----	----	----	----

See reference notes with current data

CORRECTIONS

Month:	January 1962-December 1964
New Orleans(701 Loyola), La.	Elevation should be 53 ft., 16 meters.
Month:	1963 Annual
page 45: Williston, N. Dak.	Data is for the airport station in the Normals, Means, and Extremes Table.
Month:	1964 Annual
page 6: Text - Excessive Precipitation	Fourth line first column should read: Stations are at airport locations unless otherwise shown.
page 11: New Orleans, Audubon, La.	The asterisk (*) for the 10 minute value on June 20, should be deleted.
page 45: Charlotte, N. C.	Seasonal mean total, Snow and Sleet, should be 4.2.
page 43: Washington (U), D. C.	Record highest temperature should be 106°F.
Month:	January 1965
page 35: Manhattan, Kans.	See corrected data on page 342 of this issue.
Month:	February 1965
page 91: Manhattan, Kans.	See corrected data on page 343 of this issue.
Month:	April 1965
page 216: Flood Stage Data	"Mississippi System" should precede "Ohio Basin" in lower left column. In top of right column substitute "Mississippi System (Cont'd.)" for "East Gulf of Mexico Drainage (Cont'd.)".
page 217: Flood Stage Data	Substitute "Mississippi System (Cont'd.)" for "East Gulf of Mexico Drainage (Cont'd.)".

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
MAY 1963																																
PULLMAN WASHINGTON	---	---	---	---	---	321	264	429	496	645	813	458	533	780	765	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
FEBRUARY 1964																																
PULLMAN WASHINGTON	---	---	139	262	256	317	115	100	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			---
MARCH 1964																																
PULLMAN WASHINGTON	---	---	22*	113	226	247	325	86	387	201	110	349	345	116	448	232	183	259	465	255	184	214	407	411	127	152	422	499	503	464	256	279*
APRIL 1964																																
PULLMAN WASHINGTON	191	434	551	265	178	538	549	441	394	427	362	299	325	485	232	---	---	---	---	---	525	616	599	462	527	182	---	608	155	338		403
MAY 1964																																
PULLMAN WASHINGTON	399	429	169	311	381	512	612	615	452	281	697	575	679	482	685	639	690	610	625	595	644	298	749	565	763	753	655	144	399	651	656	539
JUNE 1964																																
PULLMAN WASHINGTON	480	537	686	491	433	270	377	150	486	616	299	745	716	436	646	364	350	458	492	584	648	742	730	---	---	---	---	---	---	---		510
SEPTEMBER 1964																																
PULLMAN WASHINGTON	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	310	187	76		---
OCTOBER 1964																																
PULLMAN WASHINGTON	376	166	400	400	385	374	357	214	134	249	331	353	318	129	133	266	319	322	324	314	289	305	291	194	103	207	59	241	94	152	134	256
NOVEMBER 1964																																
ITHACA NEW YORK	289	212	237	270	35	14	103	198	148	180	136	189	236	174	212	36	---	184	---	94	108	171	215	179	42	18	45	92	150	52		144
PAGE ARIZONA	291	285	346	340	338	305	317	322	226	167	345	282	193	292	114	303	308	252	284	280	274	243	272	230	259	182	246	253	249	254		268
PULLMAN WASHINGTON	50	200	81	156	194	197	176	60	70	56	79	76	83	239	58	207	102	37	23	177	194	70	68	19	75	99	148	136	39	30		107
DECEMBER 1964																																
FLAMING GORGE UTAH	107	---	249	251	67	206	277	246	139	202	241	252	264	241	259	254	256	50	83	179	178	224	178	196	203	204	194	212	247	249	161	202
ITHACA NEW YORK	166	117	108	68	23	157	175	119	82	209	40	34	133	201	122	179	58	74	179	68	137	70	73	31	24	57	23	38	99	38	33	95
PAGE ARIZONA	189	---	126	223	149	228	261	111	125	231	90	245	242	173	230	149	249	241	131	197	94	107	27	95	66	211	62	105	271	241	228	170
PULLMAN WASHINGTON	41	58	41	143	158	195	159	31	75	20	67	49	81	42	78	159	156	68	66	69	59	18	62	42	196	65	75	108	141	113	135	89
JANUARY 1965																																
EPPLEY NEWPORT R.I.	211	58	177	187	196	205	204	37	114	47	174	153	101	234	238	46	99	115	232	128	250	218	62	53	130	198	209	210	224	136	228	157
FLAMING GORGE UTAH	---	---	---	---	135	127	114	268	169	177	127	270	183	197	258	96	137	126	224	258	193	274	174	106	206	228	219	173	213	147	161	184
MANHATTAN KANSAS #	25	280	284	180	213	74	195	95	197	304	163	202	259	235	157	305	287	317	194	283	248	36	39	330	157	293	337	224	128	313	271	214
PULLMAN WASHINGTON	133	99	84	114	62	40	157	86	189	90	75	148	95	100	179	156	70	89	103	54	103	78	58	106	112	74	52	26	57	47	229	99
SEATTLE WASH. UNIV.	22	77	68	47	54	71	48	92	109	31	91	33	123	57	48	49	74	46	38	106	87	18	148	42	45	9	44	111	155	---	---	67

# these are corrected data
also see reference notes with current data

SOLAR RADIATION DATA

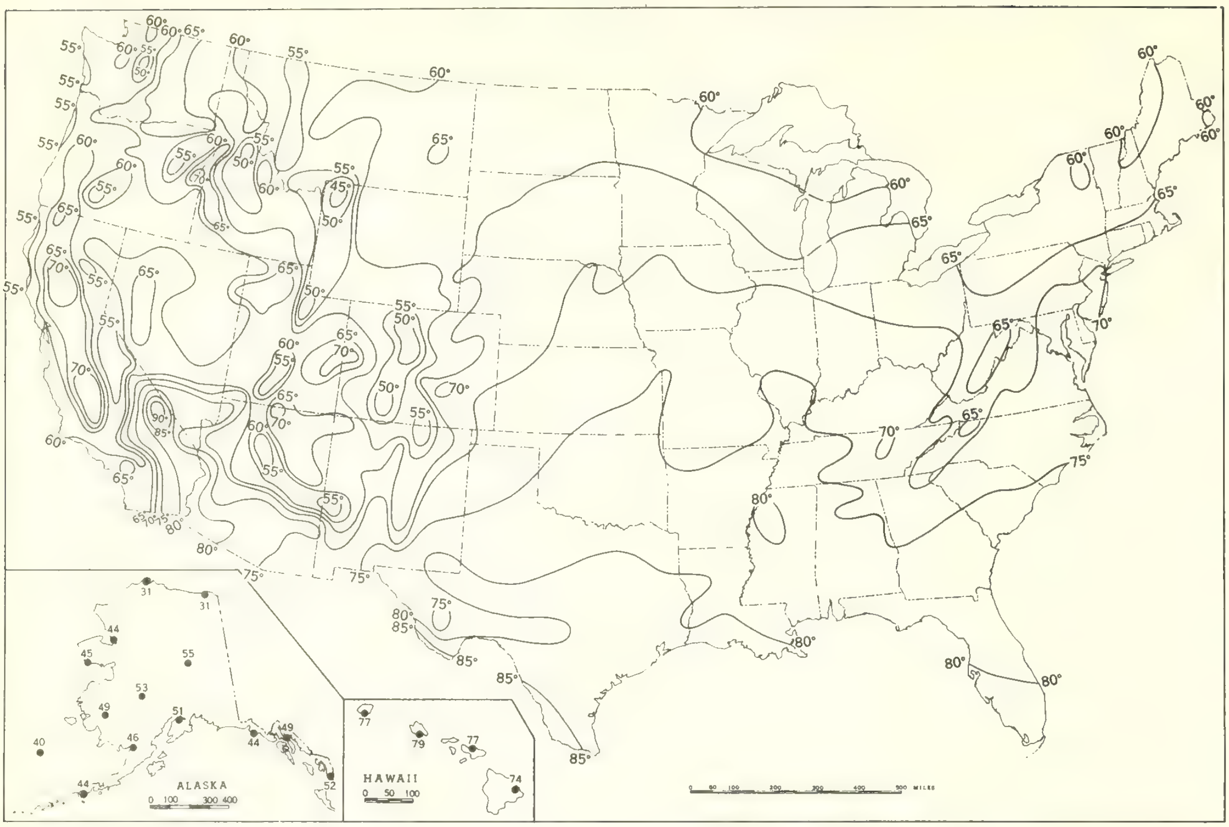
Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

DELAYED DAYA

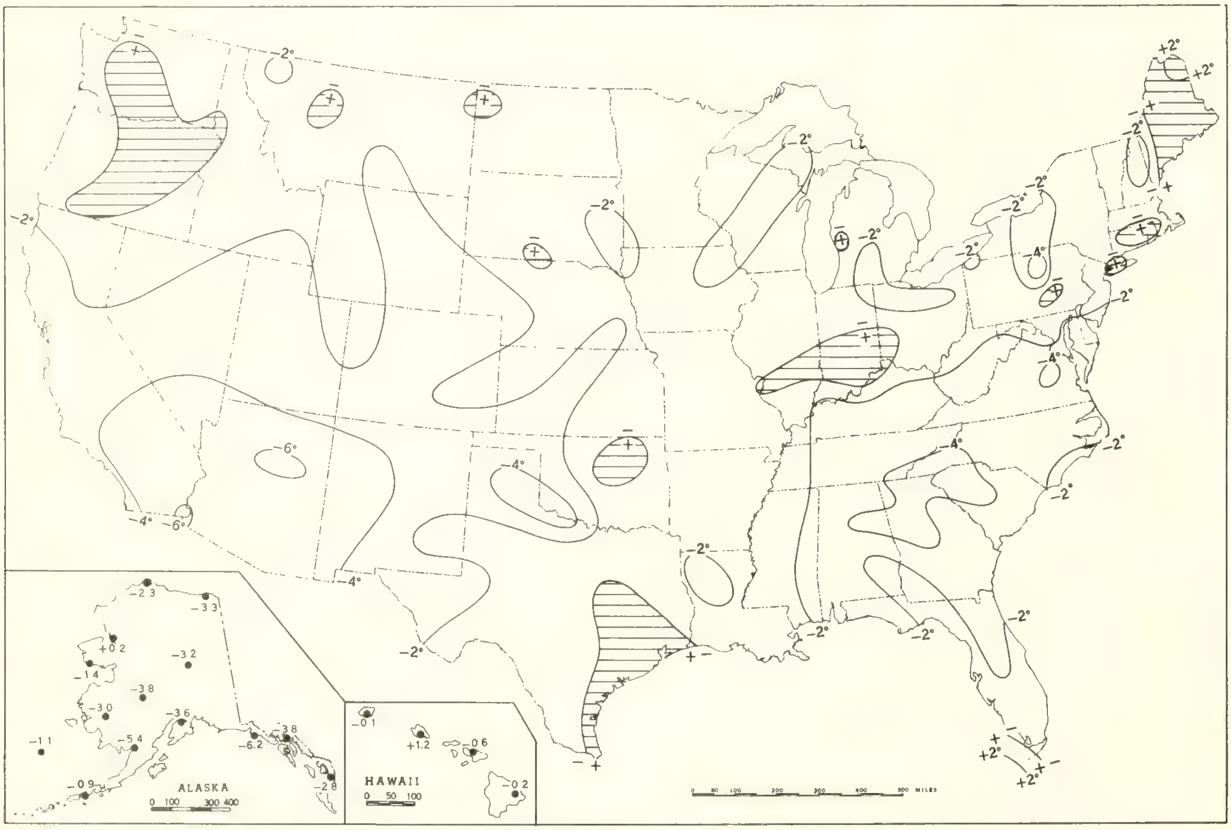
Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
FEBRUARY 1965																																
FLAMING GORGE UTAH	307	311*	176	303	190*	109	270	363	176	199	381	155	349	213	390	251	347	409	417	397	334	242	404	422	424	400	149	428				304*
INYOKERN CALIFORNIA	423	428	415	382	342	347	485	470	247	461	473	495	480	489	516	514	514	518	527	466	493	515	559	548	518	535	380	568				468
ITHACA NEW YORK	48	236	251	254	65	43	43	20	254	14	183	50	155	184	313	79	278	113	217	271	113	262	324	212	70	212	184	216				167
LOS ANGELES CALIF.U	335	288	276	333	129	236	368	396	347	440	439	435	434	417	423	436	448	447	461	410*	346*	129*	445*	430*	433	379	326	441				372*
MANHATTAN KANSAS #	363	292	357	352	331	52	30	297	48	178	151	436	438	418	112	387	433	401	414	419	455	380	145	488	490	465	457	---				326
PAGE ARIZONA	272	299	304	302	235	25	57	316	119	162	331	329	344	196	367	357	360	364	372	371	370	361	394	385	396	394	274	392				302
PULLMAN WASHINGTON	165	142	90	113	109	166	146	74	263	273	160	177	136	139	87	61	256	303	197	320	142	217	196	255	235	93	256	344				183
MARCH 1965																																
GRAND JUNCTION COLO.	297	500	482	509	503	---	259	525	476	459	341	297	293	---	---	543	400	545	585	501	592	375	88	135	645	180	339	412	577	614	592	433
LOS ANGELES CALIF.U	457	483	463	482	440	374	350	390	365	406	172	323	315	429	193	284	386	497	490	522	398	486	414	392	363	393	216	500	542	506	92	391

# these are corrected data
also see reference notes with current data
U indicates Urban sites

Chart I. A. Average Temperature (°F.) at Surface, June 1965.

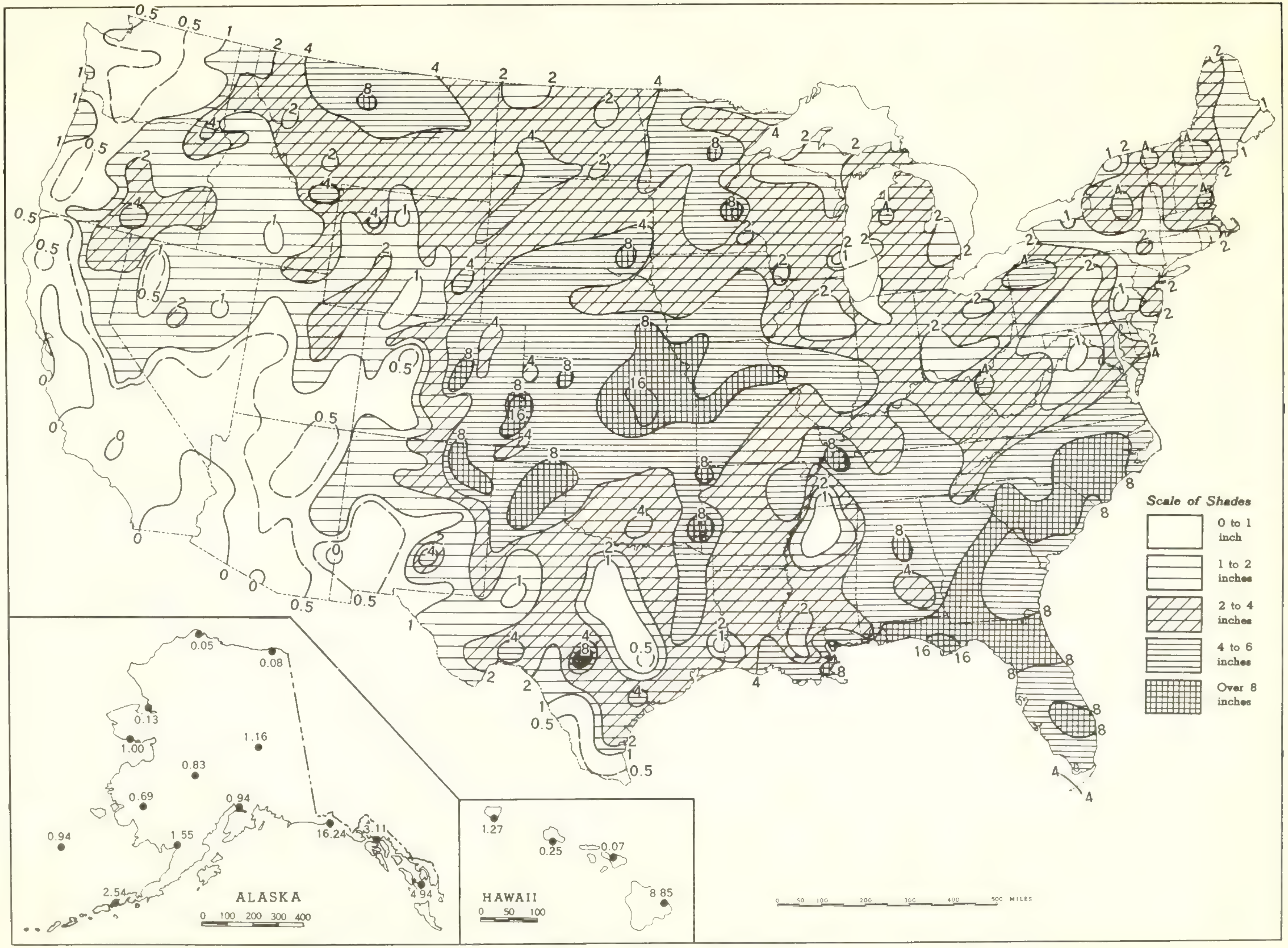


B. Departure of Average Temperature from Normal (°F.), June 1965.



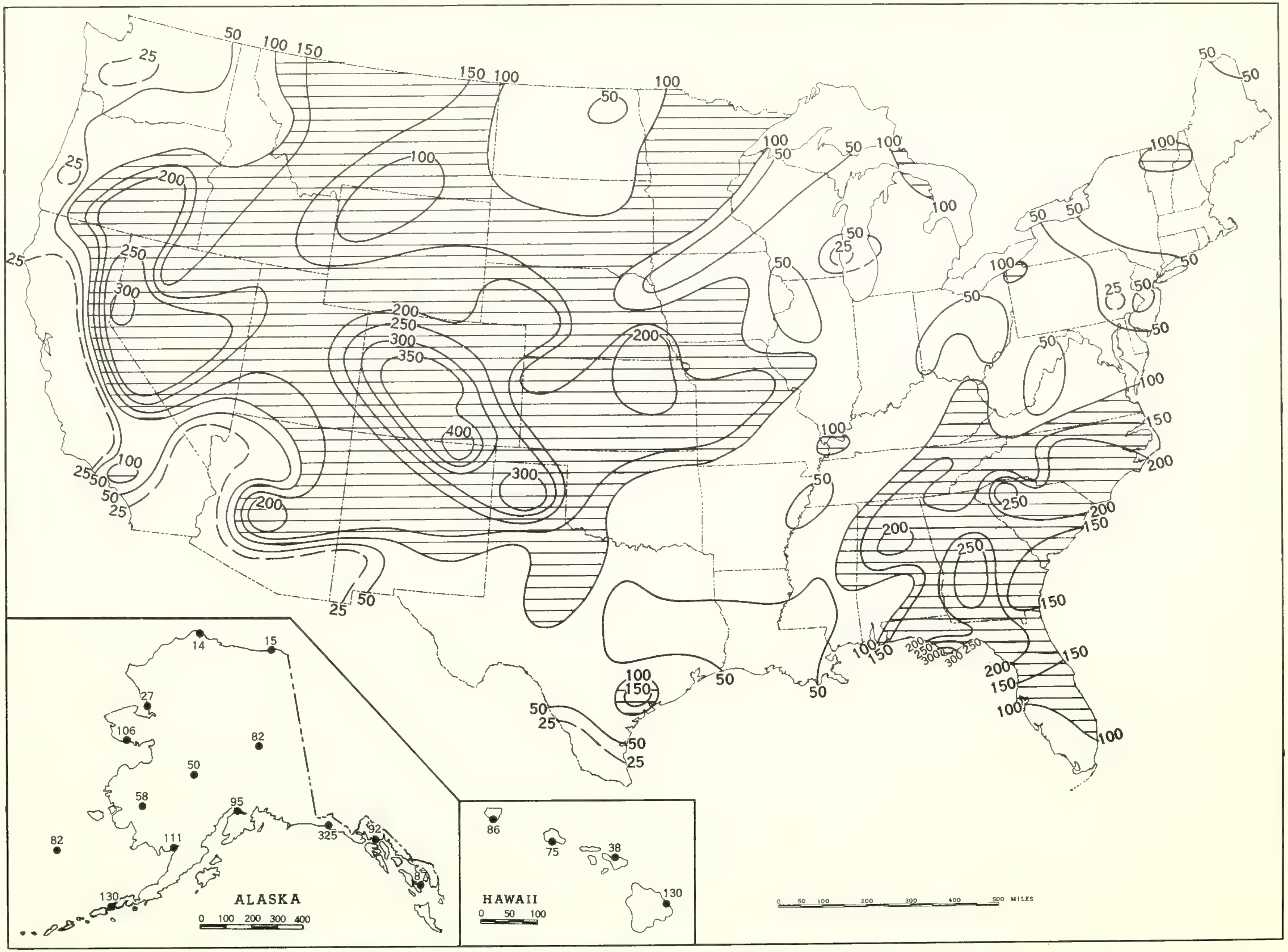
A. Based on reports from over 870 Weather Bureau and cooperative stations. The monthly average is half the sum of the monthly average maximum and monthly average minimum, which are the average of the daily maxima and daily minima, respectively.
B. Departures from normal are based on the 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart II. Total Precipitation (Inches), June 1965.



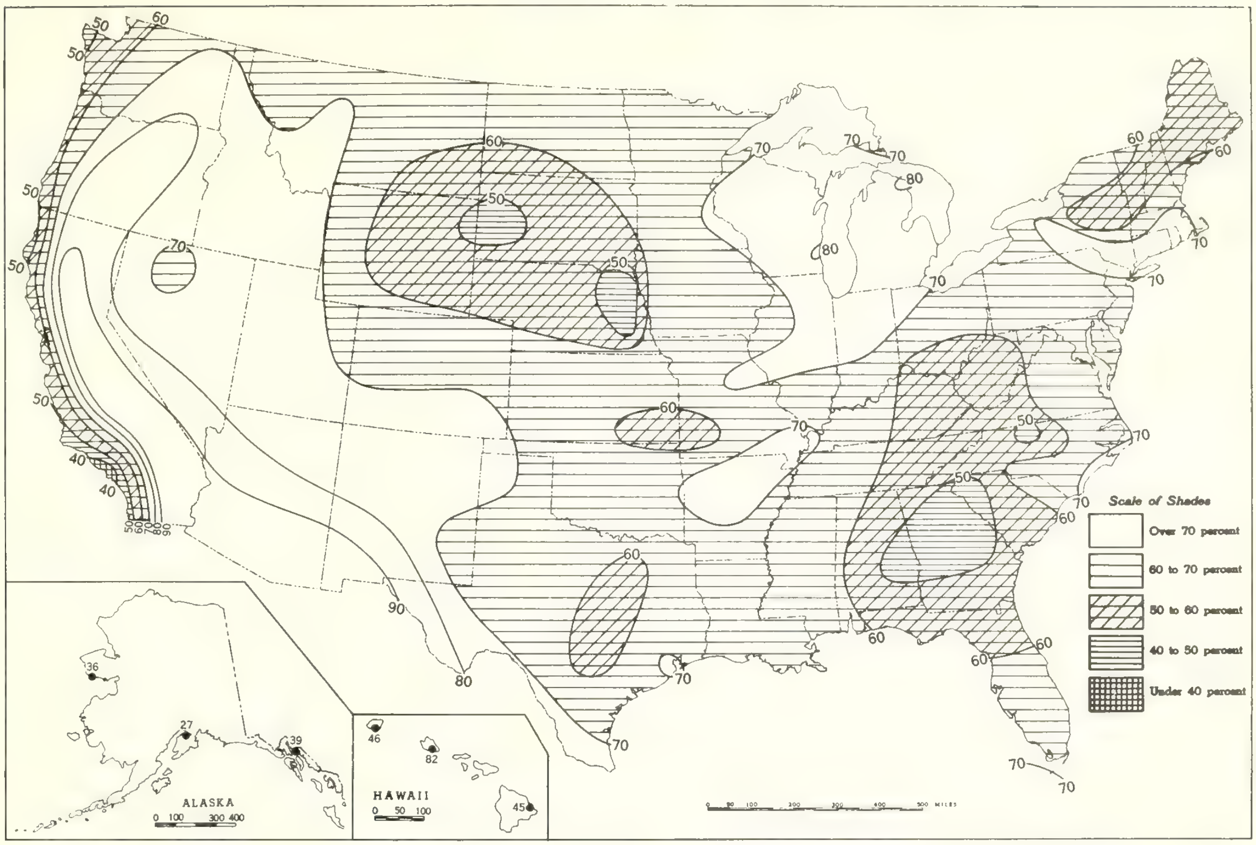
Based on daily precipitation records at about 870 Weather Bureau and cooperative stations.

Chart III. Percentage of Normal Precipitation, June 1965.

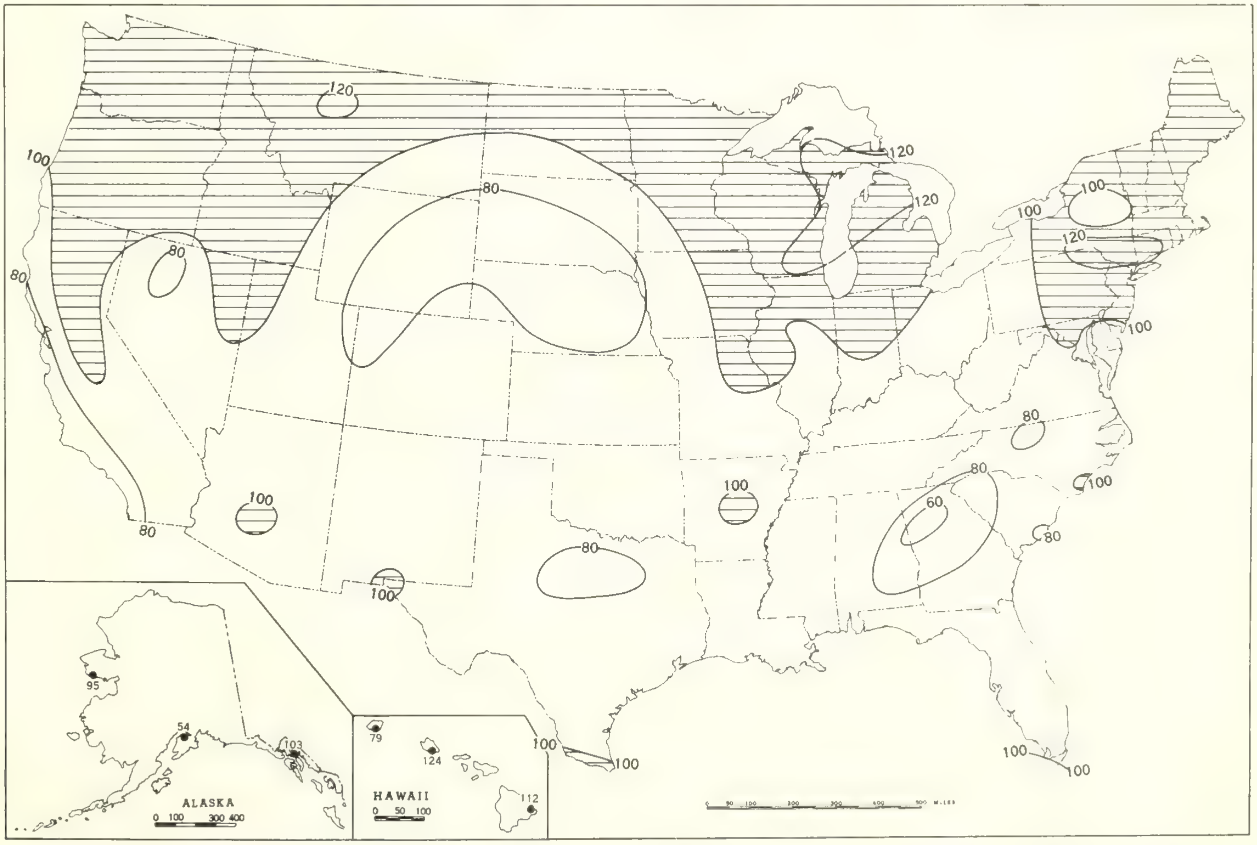


Normal monthly precipitation amounts are computed from 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart VI. A. Percentage of Possible Sunshine, June 1965.

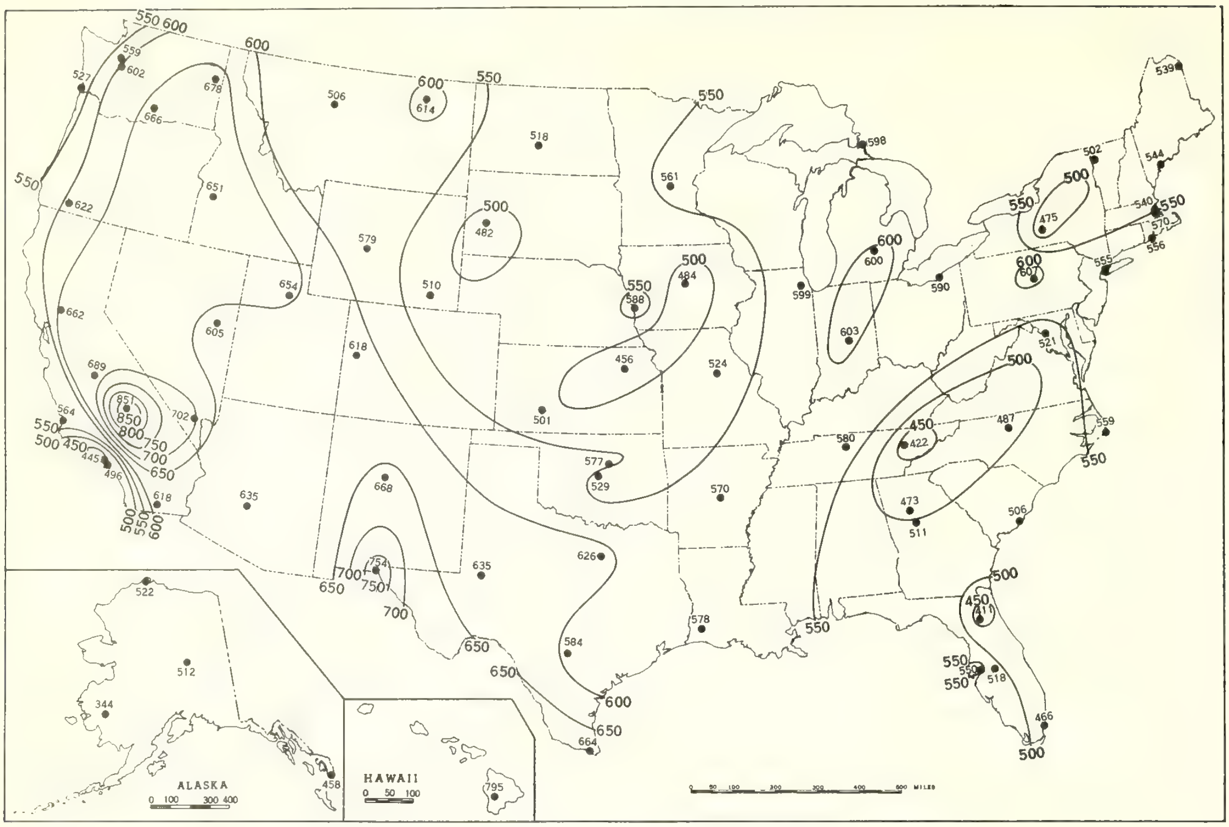


B. Percentage of Mean Monthly Sunshine, June 1965.

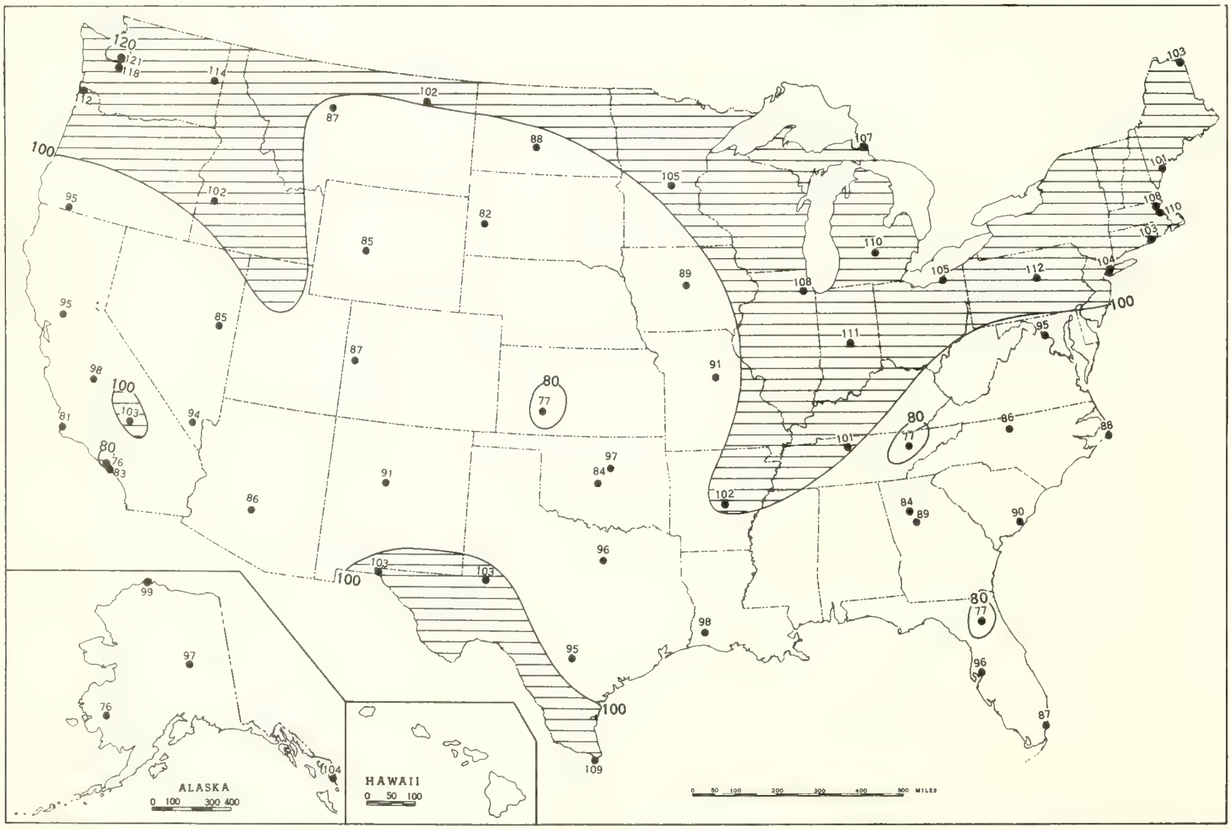


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, June 1965.

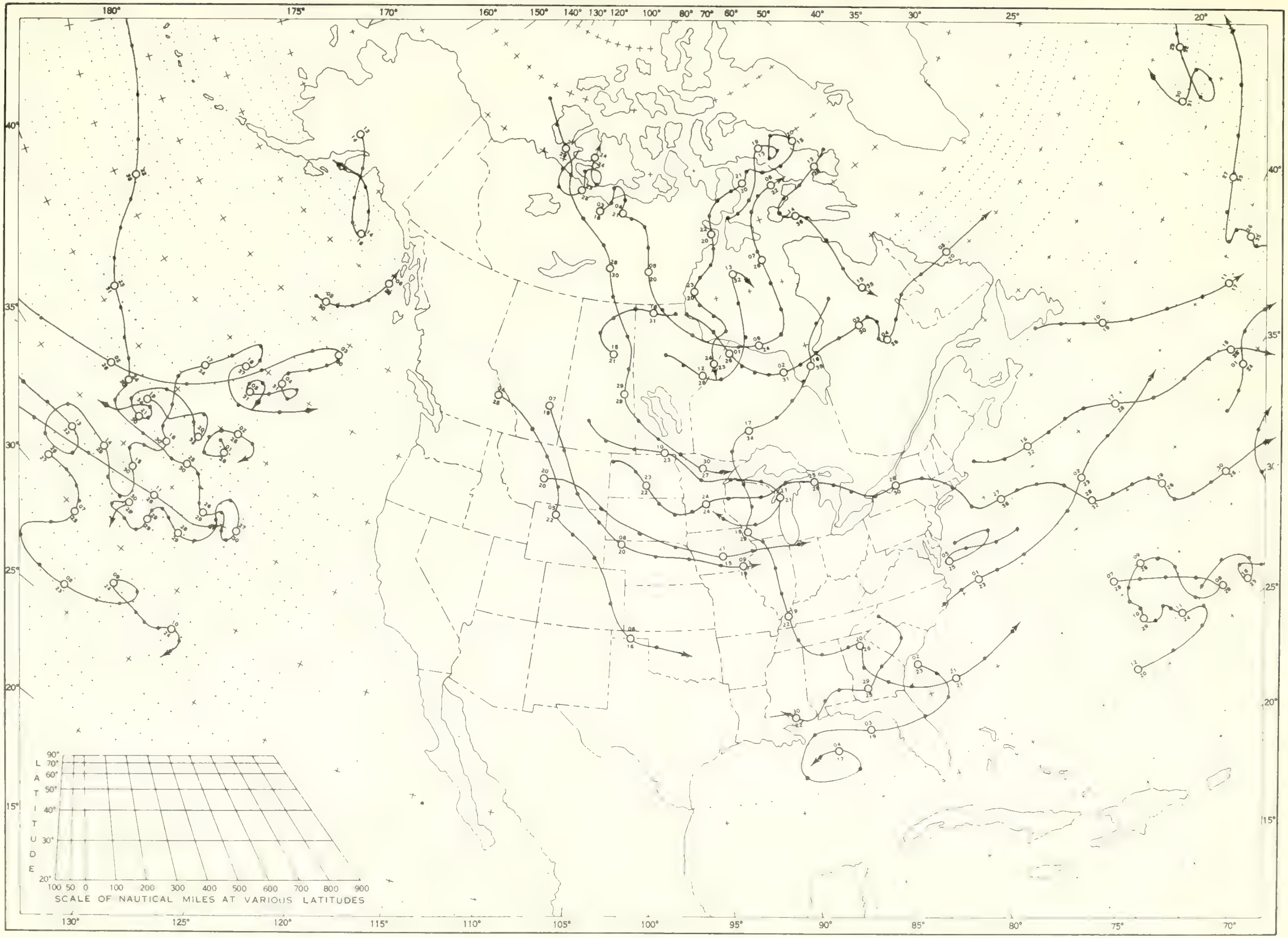


B. Percentage of Mean Daily Solar Radiation, June 1965.



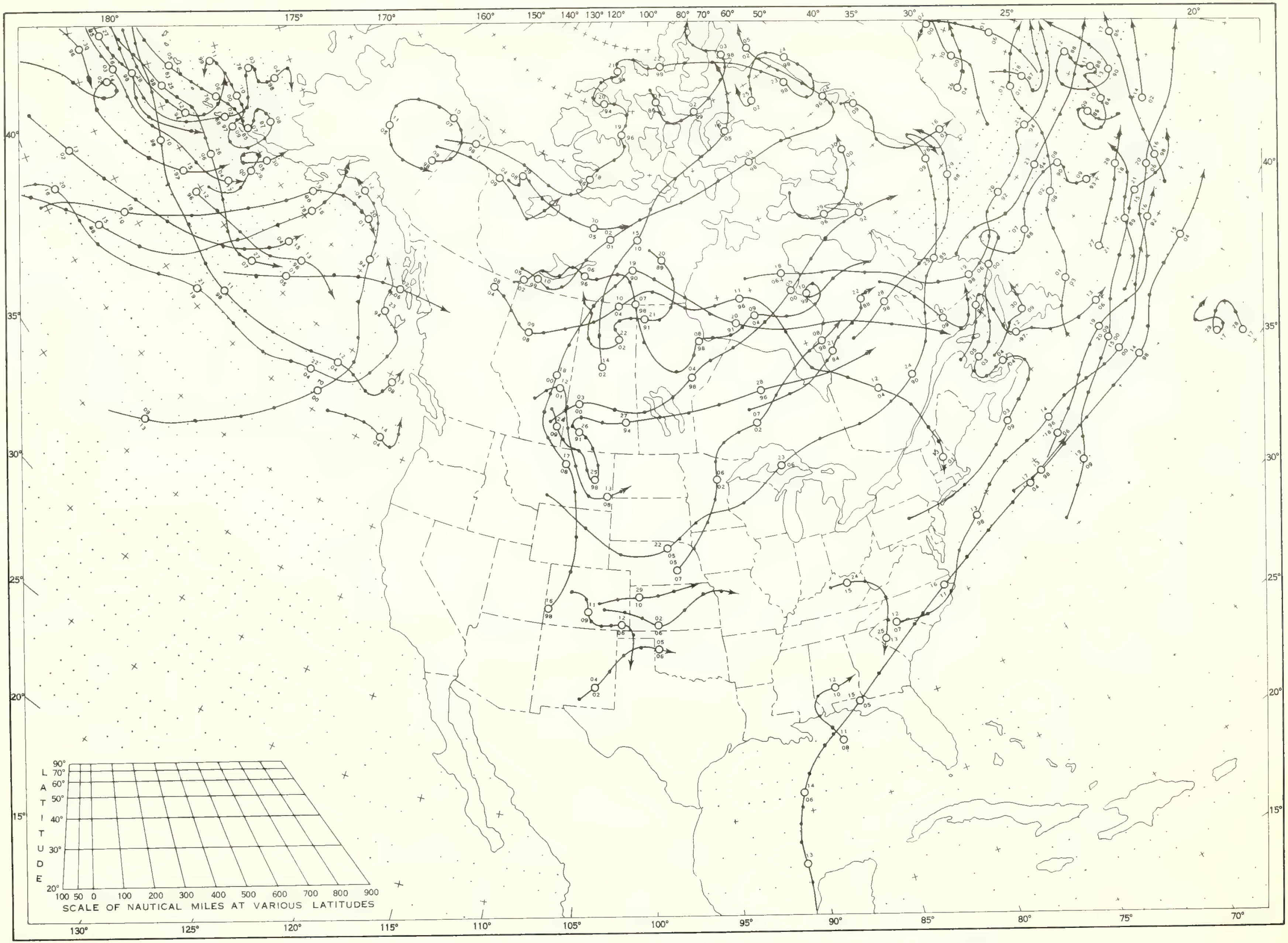
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm. $^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, June 1965.



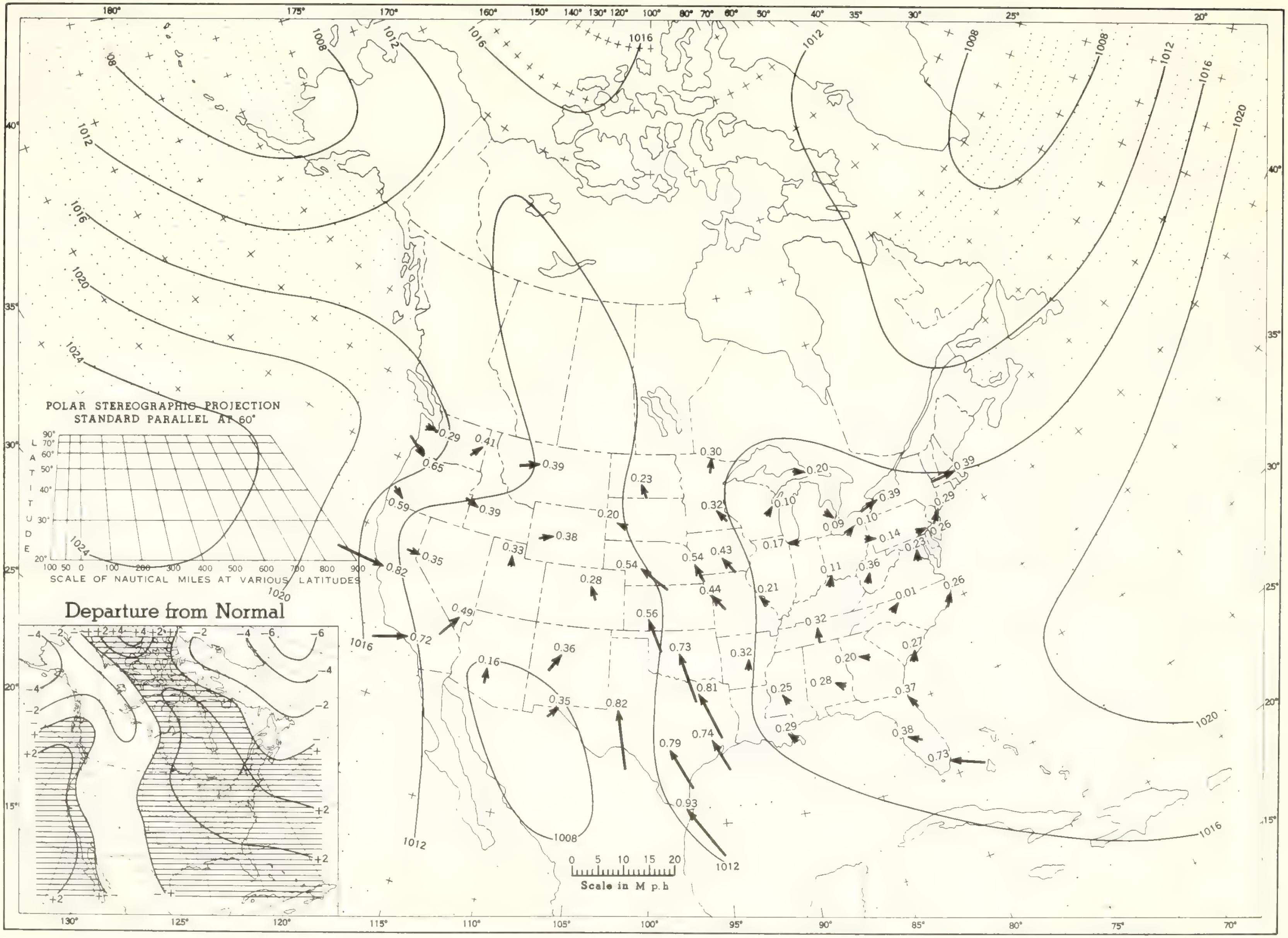
Circle indicates position of center at 7:00 a. m. E. S. T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, June 1965.



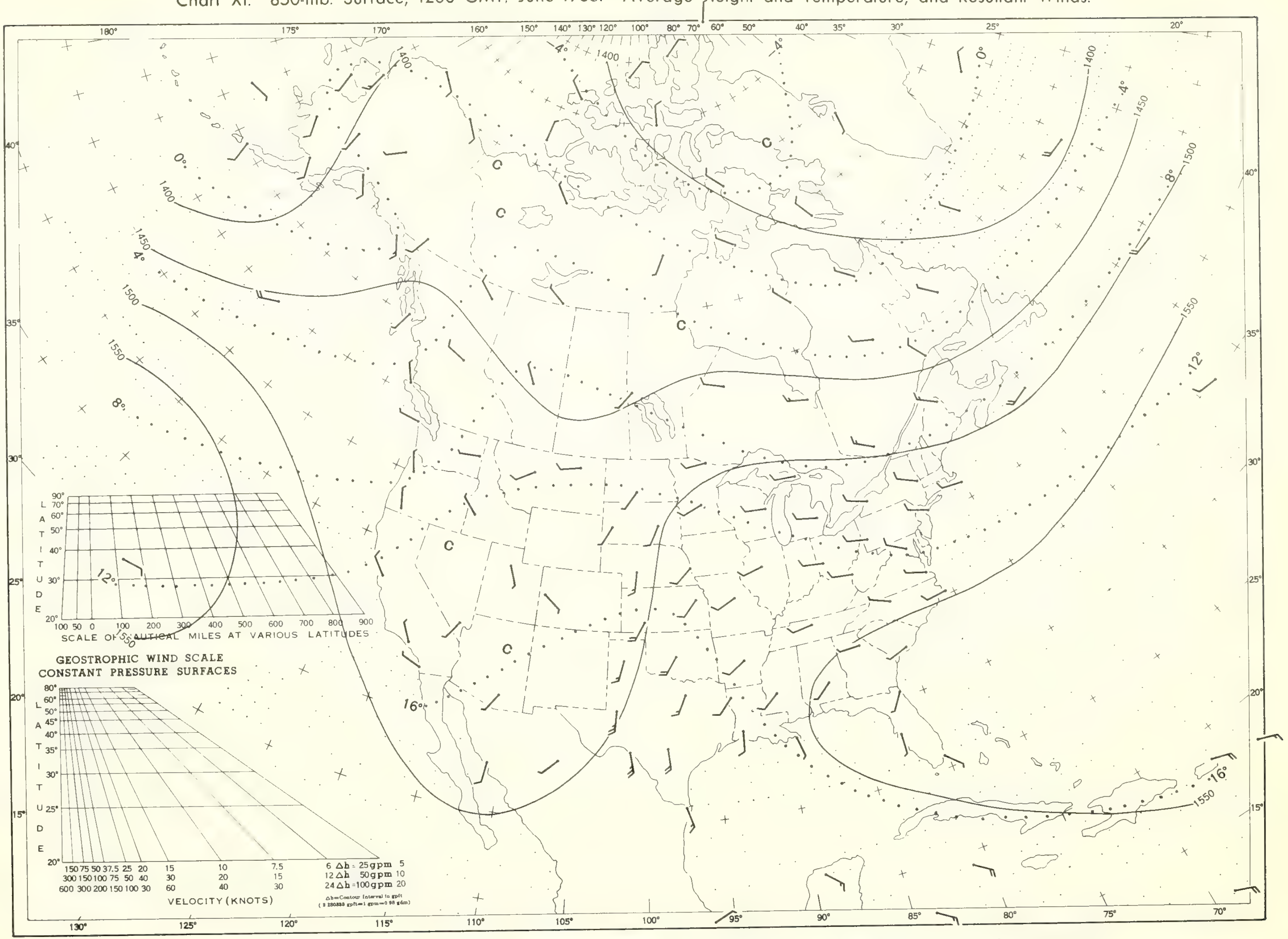
Circle indicates position of center at 7:00 a. m. E. S. T. See Chart VIII for explanation of symbols.

Chart X. Average Sea Level Pressure (mb.) and Resultant Surface Wind, June 1965. Inset: Departure of Average Pressure (mb.) from Normal, June 1965.



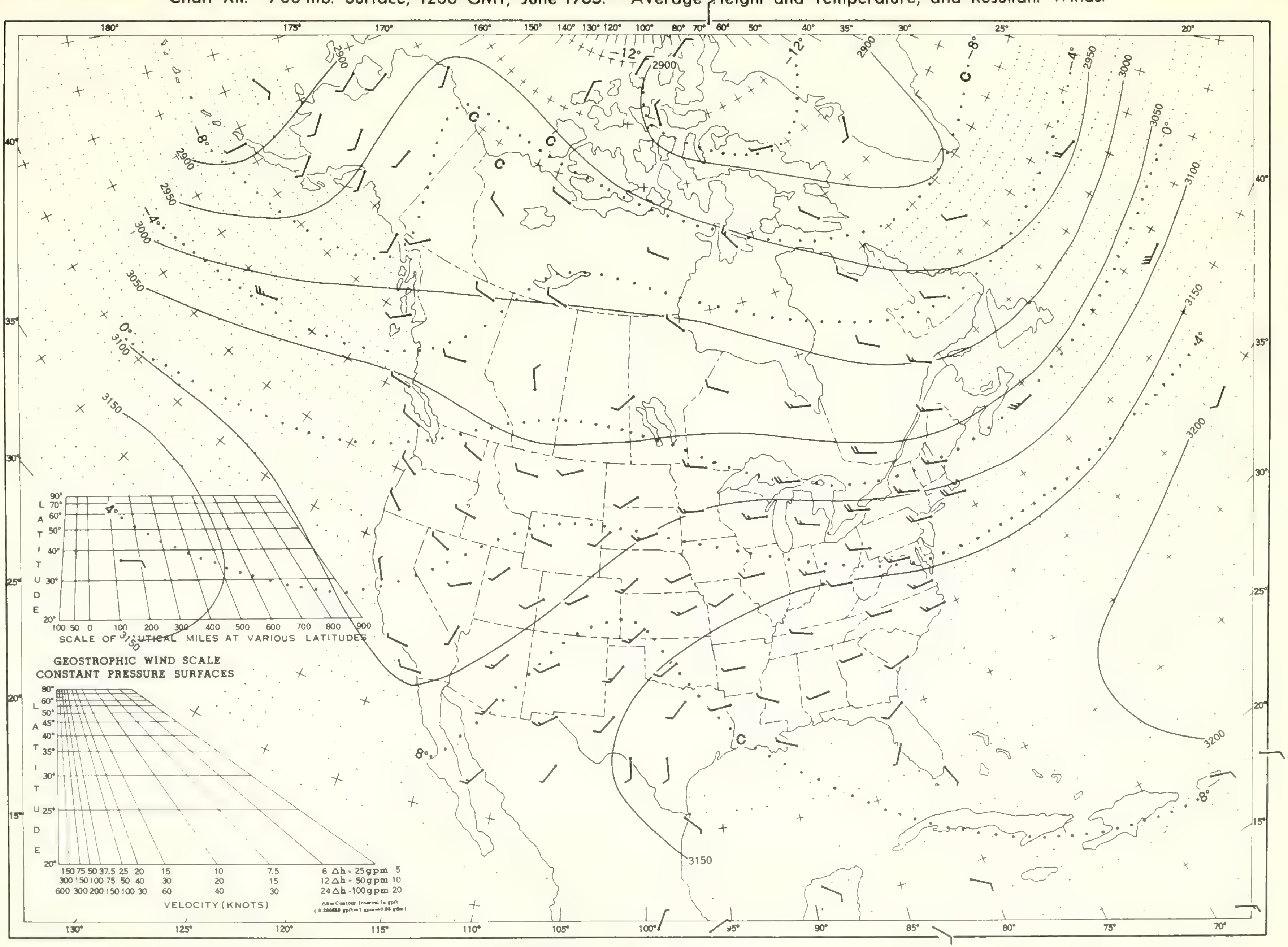
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed ÷ average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb. Surface, 1200 GMT, June 1965. Average Height and Temperature, and Resultant Winds.



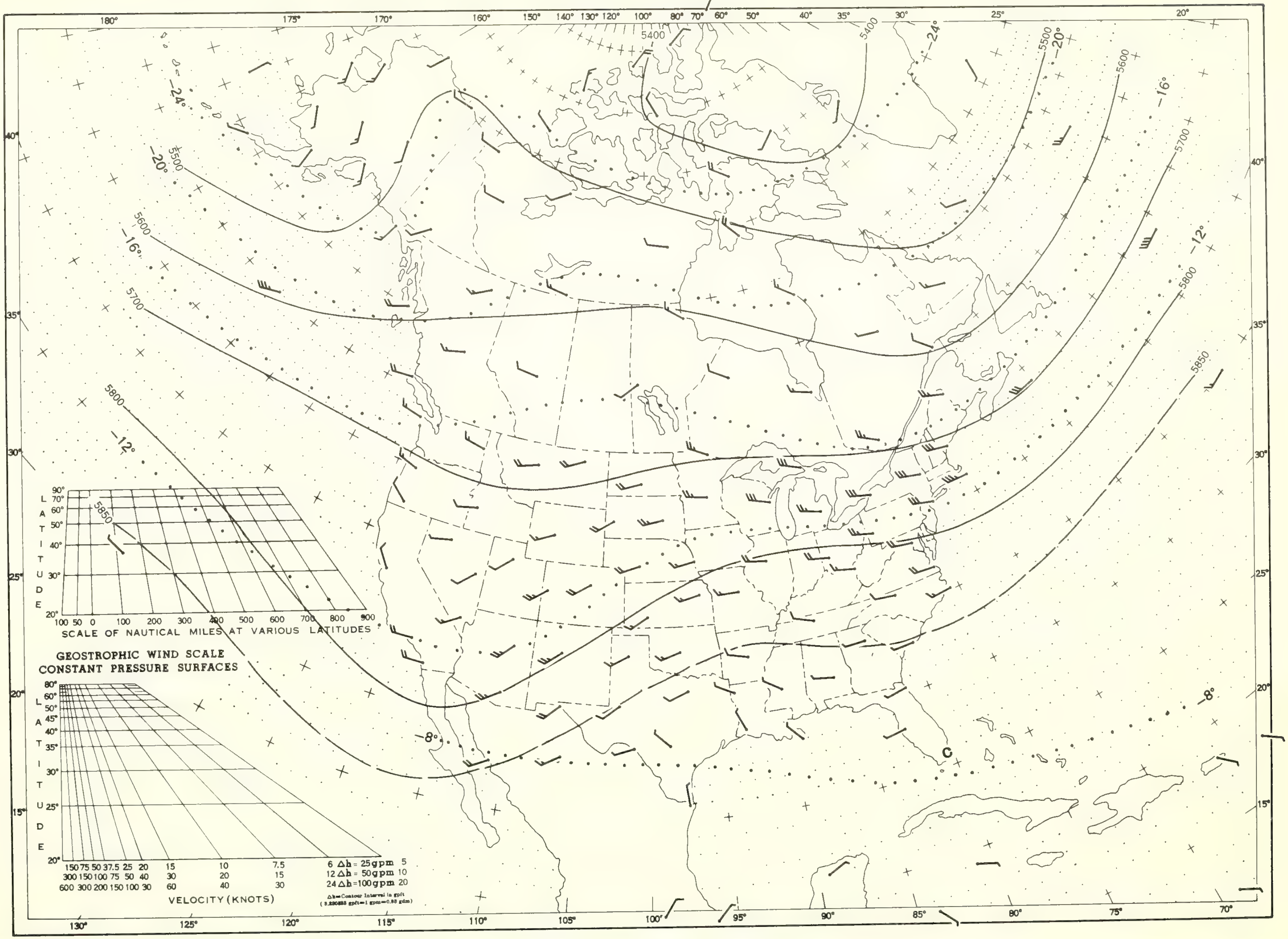
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in knots; flag represents 50 knots, full feather 10 knots, and half feather 5 knots. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, June 1965. Average Height and Temperature, and Resultant Winds.



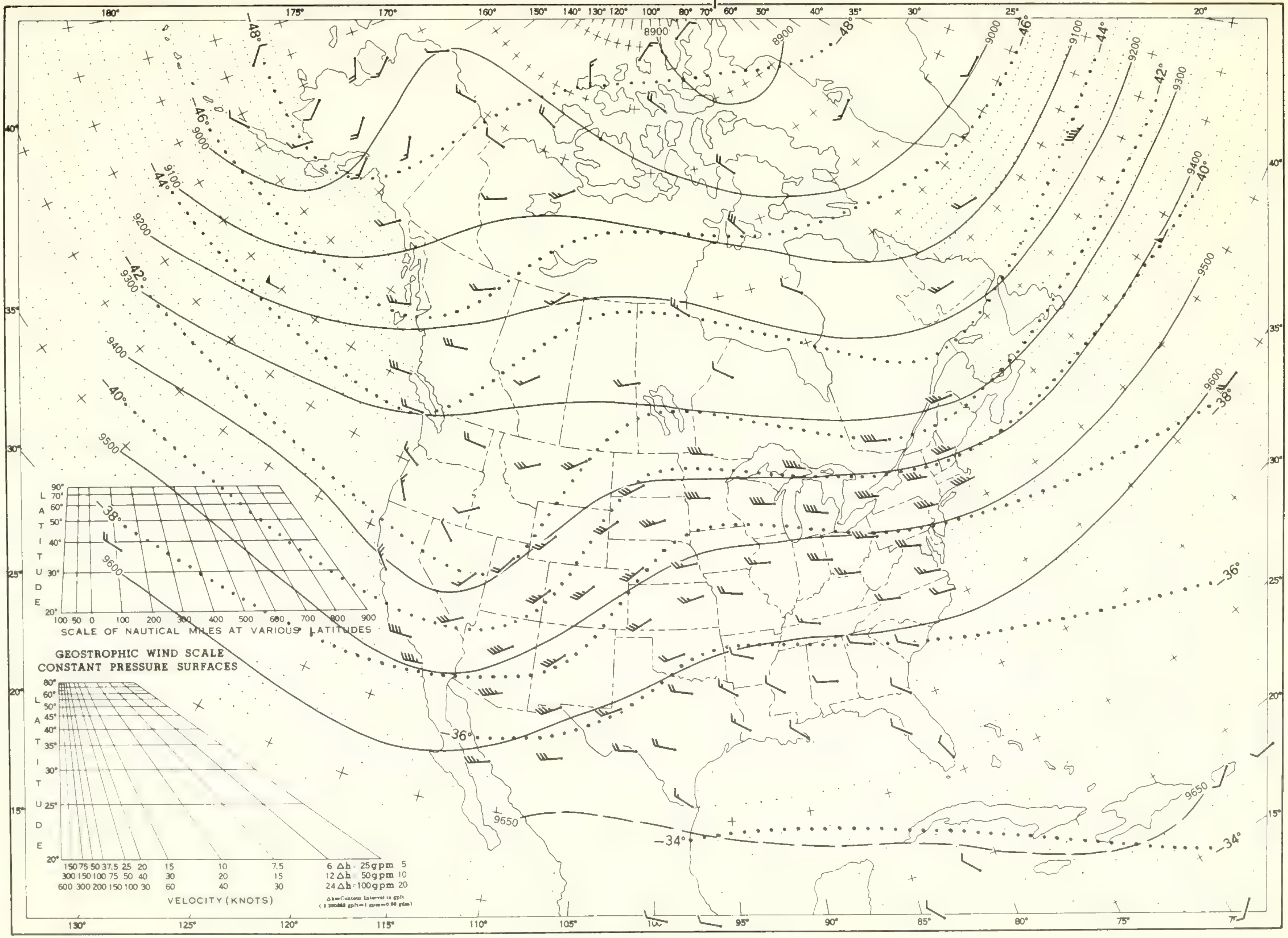
See Chart XI for explanation of map.

Chart XIII. 500-mb. Surface, 1200 GMT, June 1965. Average Height and Temperature, and Resultant Winds.



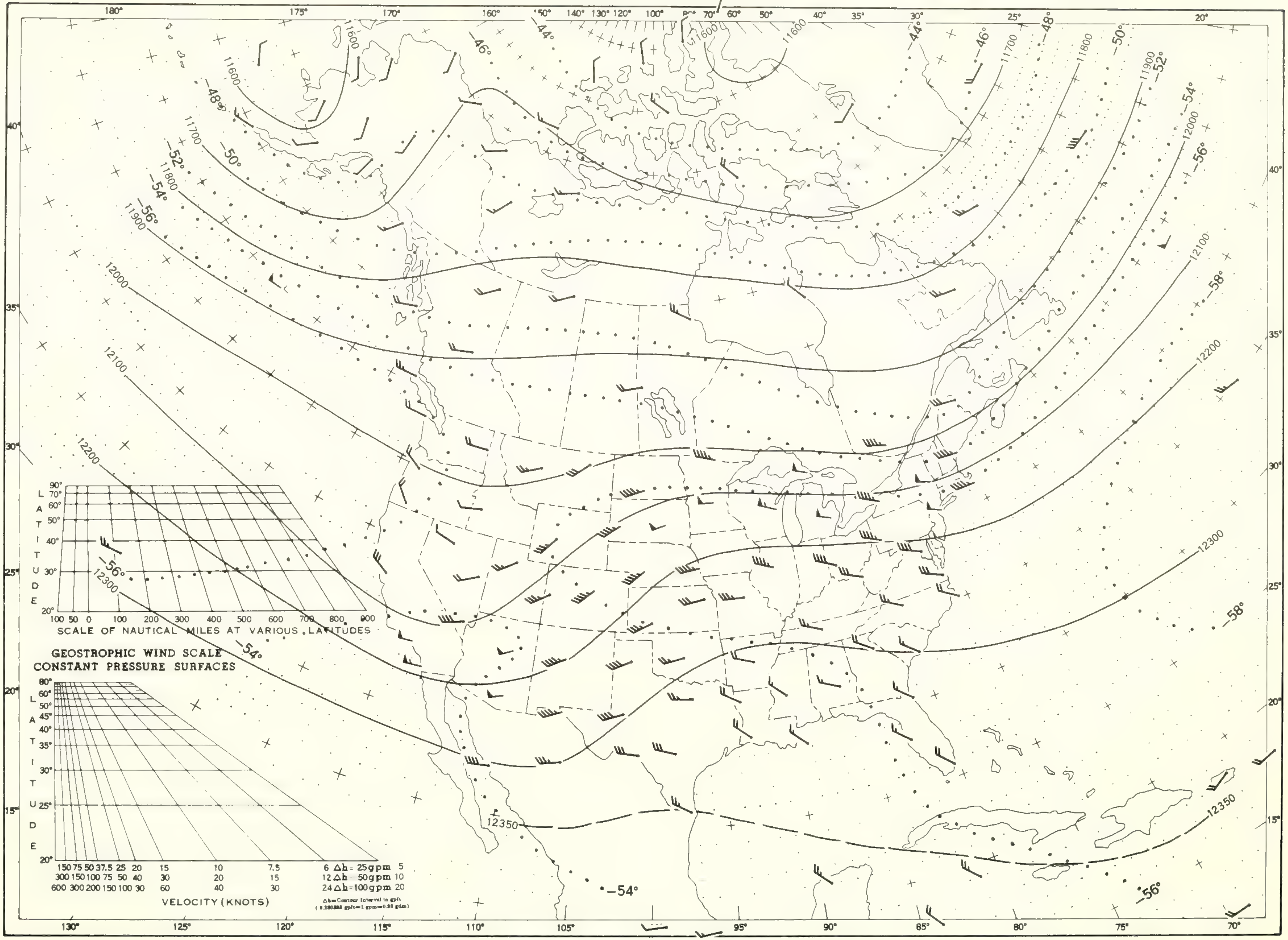
See Chart XI for explanation of map.

Chart XIV. 300-mb. Surface, 1200 GMT, June 1965. Average Height and Temperature, and Resultant Winds.



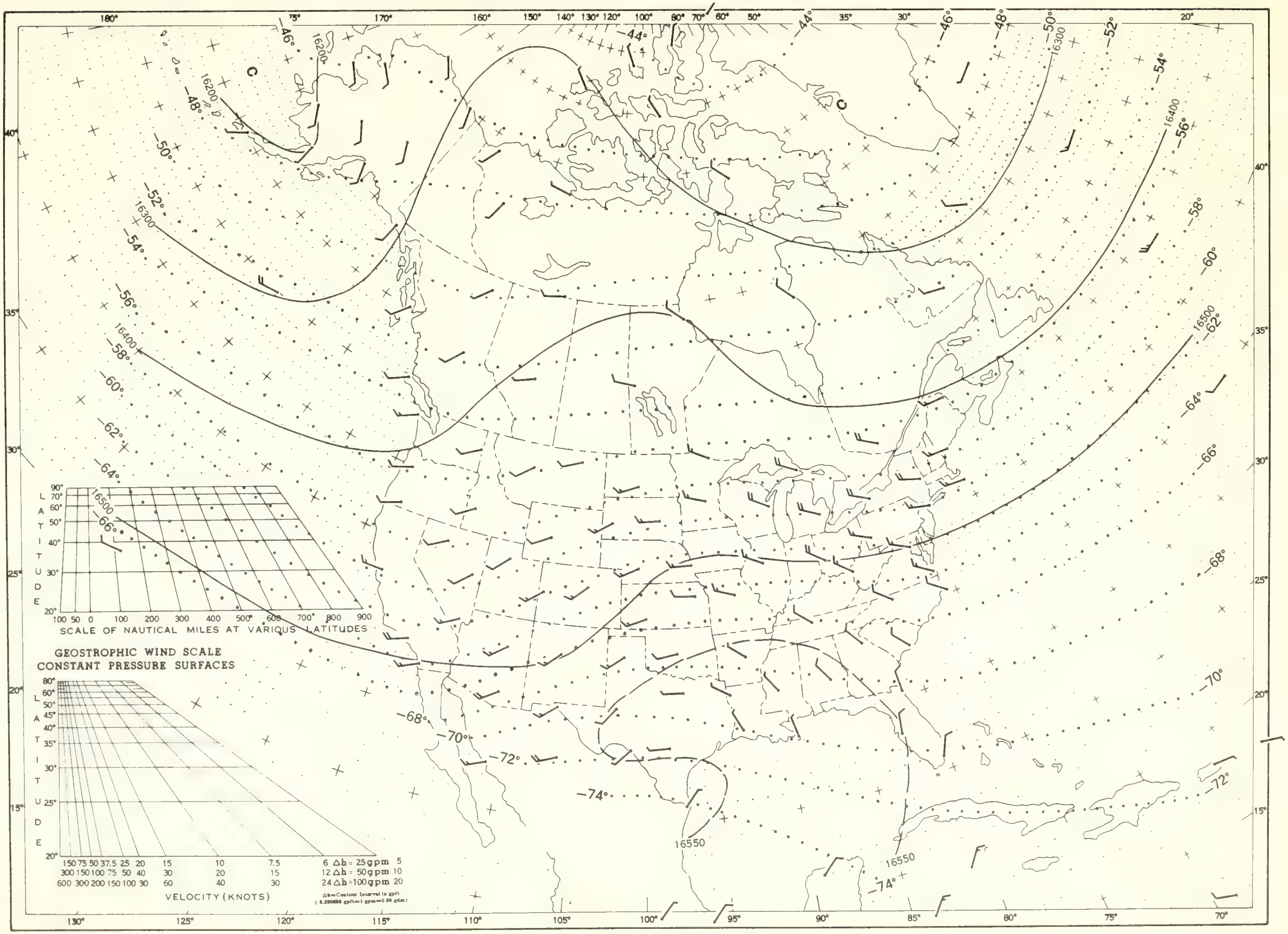
See Chart XI for explanation of map.

Chart XV. 200-mb. Surface, 1200 GMT, June 1965. Average Height and Temperature, and Resultant Winds.



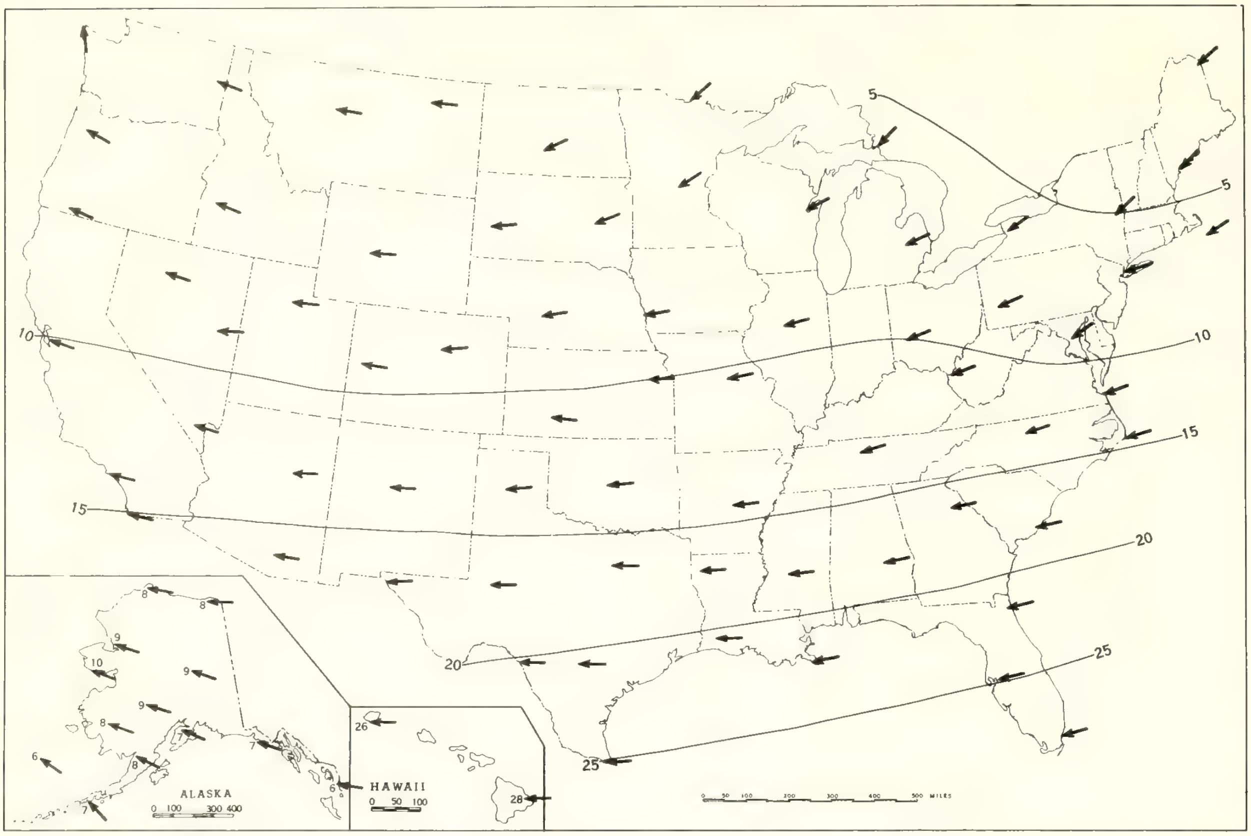
See Chart XI for explanation of map.

Chart XVI. 100-mb. Surface, 1200 GMT, June 1965. Average Height and Temperature, and Resultant Winds.

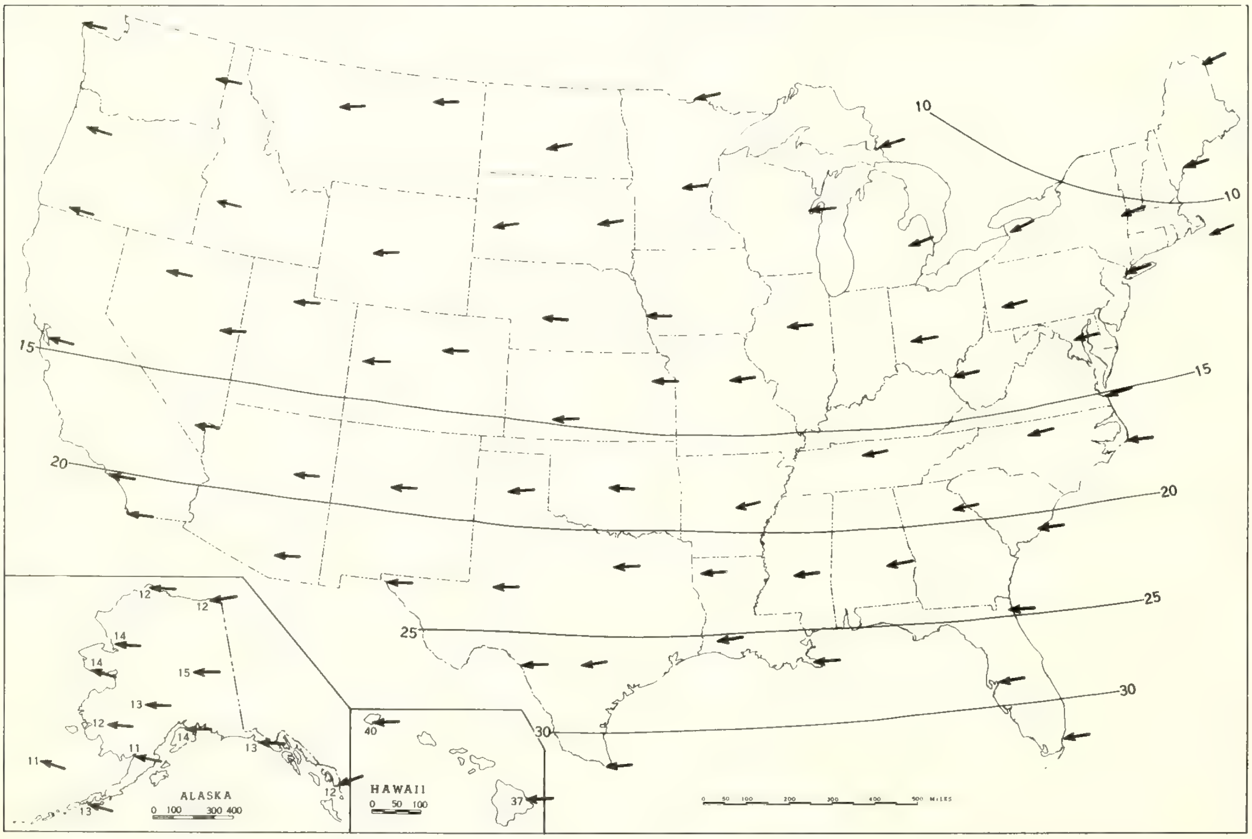


See Chart XI for explanation of map.

Chart XVII. A. 50-mb. Surface, 1200 GMT, June 1965. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, June 1965. Resultant Winds.



Wind speed (isotachs) in knots. Arrows show resultant wind direction. All wind data are based on rawin observations.

USCOMM-WB-Asheville, N. C. 10/12/65-1900

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

JULY 1965
Volume 16 No. 7

ASHEVILLE: 1965

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NOTE: Delayed data and corrections will be carried in the June and December issues of this publication.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 16 No. 7

JULY 1965

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. Second consecutive cool month.

2. Drought persisted in Northeast.

3. Abnormally heavy rainfall in Southeast and much of West.

TEMPERATURE.--Temperatures averaged below normal except slightly above in parts of the lower Great Plains and along the north Pacific coast. There were no abnormally prolonged heat waves.

Below normal temperatures were unusually persistent in the Great Lakes region and Northeast where monthly averages were as much as 6° below normal. Sault Ste. Marie and Alpena, Mich.; Syracuse, N. Y.; and Youngstown, Ohio, reported their coolest Julies on record. For New York State this was the coolest July since the 1890's, and frost occurred on the southern plateau on the 21st. Frost also was noted in northern Lower Michigan on the 6th and parts of New England on the 7th. At Milwaukee, Wis., 40° on the 1st was the lowest July temperature there since 1870.

Hot, dry weather with daily maxima in the 90's and 100's prevailed in Texas until a cold front crossed the State during the closing days of the month. A heat wave developed in the Pacific Northwest near the end of the month. Portland, Oreg., on the 30th recorded 107° which equaled the alltime high there.

Extreme temperatures for the month in the Conterminous United States was 120° at Maricopa, Ariz., and 19° at Bodie, Calif.

PRECIPITATION.--Rainfall, occuring mostly as showers and thunderstorms, was well distributed through the month and generally adequate for agriculture. As usual with this type of rainfall amounts varied greatly, ranging from record amounts in some sections to little or none in others.

From the Cascade - Sierra Mountains eastward through the Rockies, the central Great Plains, North Dakota, and parts of Minnesota, Wisconsin, Illinois, and Indiana, rainfall was well above normal. Monthly totals ranged up to 3 inches or more in the Pacific Northwest and 9 inches in the southern Rockies and mid-continent area. This was the wettest July for at least 15 stations in Utah and the wettest in 30 or 40 years at many stations in Colorado. Denver, Colo., measured 6.4 inches for its wettest July since the beginning of records there in 1872. Some unusually high monthly totals in the midcontinent area included 24.81 inches at Edgerton, Mo.; 16.18 inches at Sidney, Iowa; and 13.15 inches at Osceola, Ark.

Another area of well above normal rainfall extended southward from southern Virginia. Monthly totals ranged up to 18.47 inches at Parrish, Fla.; 16.22 at Painter, Va.; 15.39 at McCulley, N. C.; and 13.52 inches at Givhans Ferry State Park, S. C. In the coastal plain and Piedmont regions of North Carolina, the combined June and July totals ranged from 15 to 25 inches, resulting in a number of flash floods and damage to crops, particularly cotton and tobacco.

The long period of deficient precipitation in the Northeast continued through July. Most of the area received 50 to 75 percent of normal with actual amounts ranging mostly from 1 to 3 inches. At Boston, Mass., this was the second driest July in 148 years. At the end of the month extreme drought extended from northeastern Pennsylvania and northern New Jersey through eastern New York and all of New England except northern and eastern Maine. Many wells in the drought area were failing for the first time and streamflow and some city water supplies were very low.

The month was also extremely dry in Texas and Michigan. In the latter State, the June-July period in portions of central and east-central Lower Michigan was the driest of record. Rainfall in much of these areas was only about 20% of normal, and crops, particularly corn and dry beans, were damaged.

DESTRUCTIVE STORMS.--Hail, high winds, and lightning took their usual toll of crops and property. Losses from hail and wind were very heavy in eastern portions of Montana and Colorado. Numerous flash floods occurred across the Country during the month. These floods were unusually destructive in northwestern Missouri and the southeast Kentucky-northeast Tennessee area. Some areas of eastern Colorado that were affected by flash floods in June were again affected in July.

CONDENSED CLIMATOLOGICAL SUMMARY

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	Red Bay	99	25	Double Springs	50	31	Fairhope 2NE	13.72	Sand Mt Substa Au	1.78
Alaska	2 Stations	89	31+	Intricate Bay	25	23	Yakutat WBAP	14.58	3 Stations	.43
Arizona	Maricopa 4N	120	31	2 Stations	36	24+	Maverick	8.70	Dateland	.00
Arkansas	Siloam Springs	104	18	Evening Shade 1NE	49	31	Osceola	13.15	Ozone	.23
California	Death Valley	118	7+	Bodie	19	1	Squaw Valley	2.64	157 Stations	.00
Colorado	3 Stations	104	23+	Fraser	26	7+	Caribou Ranch	8.44	Yellow Jacket 1NW	.84
Connecticut	Hartford WBAP	100	14	Coventry	36	7	Mansfield Hollow Dam	5.90	Westbrook	.99
Delaware	Dover	96	25	2 Stations	46	2	Selbyville	10.96	Dover	1.38
Florida	Wewahitchka	101	20	Alexander Springs	59	23	Parrish	18.47	Dry Tortugas	.76
Georgia	Moultrie 2ESE	98	19+	4 Stations	52	17	Calhoun Exp Sta	10.95	Woodstock	1.54
Hawaii	2 Stations	91	31+	Mauna Loa Slope Obs	32	10+	Kahana 883	34.61	2 Stations	.00
Idaho	Kooskia	105	31	Warren	24	23+	Dubois 34W	3.15	Mountain Home 1SE	.00
Illinois	East St Louis Pks Col	104	24	Barrington 1NW	38	6+	Grand Tower 2N	8.45	Greenville 1E	1.04
Indiana	Farmland 5NNW	102	25	Osgood	42	30	Salem	7.03	Angola	1.40
Iowa	Souix Rapids	102	23	Carroll 2SSW	43	28	Sidney	16.18	Indianola 2SSW	.24
Kansas	Healy	107	23	Quinter	47	29	Hiawatha	10.09	Sharon Springs	.42
Kentucky	Williamsburg 2	102	25	Falmouth 5WNW	45	30	Middlesboro	13.05	Woodbury Lock 4	2.51
Louisiana	Logansport	103	18	4 Stations	60	31	Grand Chevier	12.63	Robson	.15
Maine	3 Stations	94	14	Squa Pan Dam	30	7	Oquossoc	5.01	Belfast	.32
Maryland	Picardy	100	24	Sines Deep Creek 2	39	2	US Soldiers Home DC	6.50	Boonsboro	.97
Massachusetts	5 Stations	97	26+	Birch Hill Dam	37	7	Adams	5.38	New Bedford	.32
Michigan	2 Stations	97	24+	Vanderbilt Trout Sta	27	6	Kincheloe AF Base	5.78	Bay City Sewage Plant	.31
Minnesota	St James Filtration Pl	99	23	Bigfork	32	5	Jordon 1S	8.37	Tyler	1.02
Mississippi	Tupelo 2WSW	102	18	2 Stations	52	31	Standard	10.77	Sledge	.35
Missouri	Perryville	105	24	Mt Vernon M U Farm	45	29	Edgerton	24.81	Waco	.69
Montana	5 Stations	99	28+	Yellowstone Pk NE Ent	25	13	Frazer	5.24	Heron 2NW	.14
Nebraska	Springview	106	22	Mullen	45	14	Staplehurst	8.82	Valentine Lks Game Ref	1.10
Nevada	Sunrise Manor Las Vegas	112	5	Rand Ranch Palisades	27	11	Bull Creek Ranch	2.13	Imlay	T
New Hampshire	Keene	97	14	Fabyan	30	7	Dixville Notch	6.17	Northwood	1.20
New Jersey	Atlantic City WBAP	97	25	Newton	41	21	Chatsworth	6.59	Shiloh	.84
New Mexico	2 Stations	109	19+	Dulce	29	3	Black Lake	7.02	Pena Blanca	.00
New York	Poughkeepsie	100	14	Franklinville	30	20	Utica FAA AP	8.67	Mongaup Valley 4SSW	.83
North Carolina	2 Stations	96	25+	Banner Elk	47	1	McCullers 1W	15.39	Asheville	1.00
North Dakota	Linton	99	22	2 Stations	34	5	Courtenay	9.90	Ambrose 3N	.95
Ohio	6 Stations	100	24+	Canfield 1S	35	20	Hillsboro 5S	9.86	Oberlin	.96
Oklahoma	Blanchard	110	13	Hammon	51	30	Ponca City FAA AP	7.89	Comanche	.11
Oregon	The Dalles	108	31+	Fremont	24	12+	Crescent Lake Junction	2.05	3 Stations	.00
Pennsylvania	2 Stations	98	24+	Milanville	32	21	Coatesville 1SW	7.60	Kegg	.50
Puerto Rico	Mayaguez AP	95	19	Cayey 1E	56	31+	Coloso	23.26	Yauco 1S	.25
Rhode Island	Providence WBAP	92	25+	Kingston	44	6	Woonsocket	2.50	Newport	1.00
South Carolina	Calhoun Falls	98	25	3 Stations	56	23	Givhans Ferry State Pk	13.52	Landrum 1NE	2.54
South Dakota	Fort Sully 8NE	110	22	Deerfield 5NW	33	13	Vermillion 2N	7.48	Fort Sully 8NE	.29
Tennessee	Jackson FAA AP	101	24	Lawrenceburg Filter Pl	47	31	McMinnville	10.36	Moscow	1.29
Texas	2 Stations	110	10+	Clarendon	51	30	Freeport 2NW	7.21	39 Stations	.00
Utah	Saint George Pwr House	104	28+	2 Stations	32	14+	Nutters Ranch	5.37	Saint George Pwr House	.21
Vermont	2 Stations	94	14	West Burke	31	7	Huntington Center	4.22	Cornwall	1.22
Virginia	Elkwood 6SE	100	25	Monterey	43	1	Painter 2W	16.22	Riverton	1.27
Washington	Priest Rapids Dam	108	31	Rainier Paradise RS	30	12	Mount Spokane Summit	2.10	John Day Dam	T
West Virginia	5 Stations	96	25+	Canaan Valley	36	1	Logan	7.33	Horner	.54
Wisconsin	West Allis	102	13	Breed	33	6	Baldwin	7.39	Brillion	1.05
Wyoming	Rochelle 3E	102	22	Bondurant 3NW	21	13	Lookout 14NE	4.67	Wamsutter 1N	.15

+ And also on an earlier date or dates

NOTE: Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	994.6	1016.6	87	68	77.7	- 3.9	92	18	59	31	5	0	70	81	4.87	- 0.29	1.57	14	14	0.0	0	0.4	22	42	N	3	4	10	17	6.9	43
HUNTSVILLE	600	993.6	1016.3	88	70	79.0	- 2.1	93	2	58	31	9	0	69	74	4.44	- 0.19	1.29	10	12	0.0	0	0.6	8	38	36	10	8	12	11	6.2	
MOBILE	211	1008.5	1016.3	91	74	82.4	- 0.2	98	20	71	30+	21	0	73	80	8.13	- 1.54	2.80	15	17	0.0	0	1.0	21	25	8	29	1	15	15	6.9	
MONTGOMERY	194	1009.1	1016.4	89	72	80.5	- 1.3	94	3	68	31	18	0	73	83	4.99	- 0.41	1.93	12	12	0.0	0	1.2	24	28	N	3	5	10	16	6.8	63
ALASKA																																
ANCHORAGE PRK STRIP	85			63	50	56.6	- 0.5	76	30	43	2	B 3	0			1.72	- 0.14	0.40	16		0.0	0										
ANCHORAGE	143	1011.9	1016.7	66	52	59.0		77	30	45	26	9	0	47	67	1.74	- 0.45	0.55	18	1	0.0	0	2.7	19	23	16	4+	1	0	30	9.1	27
ANNETTE	110	1014.9	1018.8	65	49	57.0	- 0.3	82	31	43	23	7	0	50	80	3.34	- 2.68	1.74	12	0	0.0	0	2.7	18	17	12	26+	3	8	20	7.9	
BARROW	22	1016.3	1017.0	43	33	38.3	- 0.8	62	7	29	14+	0	12	35	90	0.79	0.02	0.16	11	0	0.0	0	3.7	9	26	11	22	3	10	18	7.6	
BARTER ISLAND	39	1014.6	1016.4	40	32	36.2	- 5.1	50	6	28	30	0	17	33	89	1.58	0.70	0.55	9	0	0.5	T	2.4	1	23	28	10	4	8	19	7.5	
BETHEL	125	1011.5	1017.1	59	45	51.6	- 3.1	76	30+	32	19	5	1	43	75	1.13	- 0.90	0.67	10	0	0.0	0	4.1	25	29	19	16	2	2	27	8.7	
COLD BAY	94	1014.2	1018.1	53	45	48.7	- 1.0	65	28	40	12	0	0	44	86	1.20	- 0.62	0.54	16	0	0.0	0	3.1	27	50	16	6	0	1	30	9.6	
FAIRBANKS	436	998.3	1015.2	70	51	60.2	0.5	80	30+	40	21	17	0	45	59	1.39	- 0.45	0.75	10	1	0.0	0	1.7	24	18	22	31	2	3	26	8.3	
JUNEAU	12	1016.9	1017.7	64	46	55.4	0.1	82	7	40	20	11	0	49	83	2.26	- 2.23	0.55	10	0	0.0	0	1.0	7	24	14	21+	7	5	19	7.5	37
KING SALMON	43	1013.5	1015.5	61	44	52.7	- 2.2	75	27	36	20	6	0	45	78	1.93	- 0.13	0.76	14	0	0.0	0	2.4	18	30	13	8+	1	8	22	8.5	
KOTZEBUE	10	1013.9	1014.3	56	46	51.1	- 1.6	69	28	37	19	0	0	46	83	1.79	0.33	0.71	11	0	0.0	0	5.1	27	35	31	18	3	6	22	7.9	
MC GRATH	334	1003.4	1016.0	64	47	55.5	- 3.2	78	30	34	21	7	0	45	70	1.60	- 0.83	0.50	14	0	0.0	0	1.9	24	23	4	26	2	4	25	8.6	
NOME	13	1013.5	1014.4	51	42	46.5	- 3.0	68	28+	32	19	0	1	43	87	2.95	0.66	0.76	18	0	0.0	0	5.2	21	35	12	23	1	7	23	8.3	26
ST. PAUL ISLAND	22	1015.9	1016.9	48	41	44.7	- 0.8	55	31	33	22	0	0	43	95	2.67	0.42	1.38	21	0	0.0	0	4.1	21	32	22	23	0	0	31	9.8	
SHEMYA	122	1009.8	1013.5	48	44	46.2	- 0.2	55	29	42	6	0	0	45	96	4.17	2.02	0.99	18	0	0.0	0	6.5	19	40	19	26	0	1	30	9.6	
YAKUTAT	28	1016.3	1017.4	56	45	50.3	- 3.8	72	29	39	8	3	0	48	92	14.58	6.15	3.63	20	0	0.0	0	2.4	14	21	12	23	0	7	24	9.1	
ARIZONA																																
FLAGSTAFF	6993	792.4	1016.9	80	50	65.0	- 0.5	87	5+	45	8	0	0	47	59	2.34	0.06	1.03	9	13	0.0	0	1.3	21	20	6	11+	6	8	17	6.8	
PHOENIX	1117	971.6	1009.2	105	77	91.0	1.2	113	4	70	2	31	0	56	34	0.16	- 0.61	0.07	4	5	0.0	0	1.4	20	38Y	S	15	12	12	7	4.6	86
TUCSON	2584	924.8	1010.3	98	73	85.0	- 1.3	107	3	68	29+	30	0	56	43	2.13	0.07	0.72	11	12	0.0	0	2.5	18	54	SE	8	7	16	8	5.7	74
WINSLOW	4895	854.0	1014.3	91	62	76.6	- 3.6	101	4	57	3	20	0	51	51	1.47	0.45	0.52	12	17	0.0	0	2.1	21	35	24	5	6	14	11	6.2	
YUMA	194	1002.0	1009.1	106	79	92.4	- 1.9	113	4	73	1	31	0	56	33	0.03	- 0.20	0.03	1	1	0.0	0	5.4	20	45	SE	28	18	7	6	3.5	84
ARKANSAS																																
FORT SMITH	449	999.3	1015.5	93	71	82.2	- 0.8	100	25+	58	30	25	0	71	72	1.96	- 0.84	0.86	8	7	0.0	0	1.9	8	44	NE	25	9	15	7	5.2	73
LITTLE ROCK	257	1006.4	1015.8	94	72	82.9	1.0	101	24	60	31	28	0	71	71	2.51	- 0.83	1.57	8	11	0.0	0	1.0	24	49	SE	24		14	8	5.6	74
TEXARKANA	372	1003.1	1016.0	94	72	82.9	0.3	100	18	60	31	27	0	71	71	3.02	- 0.82	1.47	5	6	0.0	0	2.0	19				13	12	6	4.4	
CALIFORNIA																																
BAKERSFIELD	494	995.3	1012.3	96	68	82.0	- 2.3	105	6	60	27	26	0	49	35	0.30	0.29	0.30	1	0	0.0	0	3.7	32	22	32	25	26	2	3	1.5	
BISHOP	4108			95	55	74.7	- 1.9	101	5	46	21	27	0			0.59	0.47	0.22	4		0.0	0						20	5	6	3.0	
BLUE CANYON	5280			77	58	67.2	- 0.8	84	29+	49	27+	0	0			0.06	- 0.03	0.05	2		0.0	0			20	16	21	26	3	2	1.6	
BURBANK	724	987.8	1013.3	86	59	72.5	- 1.3	96	5	54	27	8	0	56	65	0.04	0.04	0.03	2	0	0.0	0	6.0	15	16	17	11	23	6	2	2.2	
EUREKA U	43			59	51	54.8	- 1.5	66	26	48	22+	0	0			T	- 0.11	T	0		0.0	0			23	NW	21	3	10	18	7.5	46
FRESNO	328	1000.7	1012.3	96	61	78.9	- 2.4	104	15	53	11	29	0	54	45	T	0.00	T	0	0	0.0	0	4.8	31	18	NW	26+	26	3	2	1.4	93
LONG BEACH	34	1013.2	1014.5	78	59	68.2	- 3.4	89	30	53	27+	0	0	55	71	T	0.00	T	0	0	0.0	0	3.5	26	21	28	27	16	12	3	3.6	
LOS ANGELES	97	1010.5	1014.2	72	60	65.7	- 3.4	87	30	56	4	0	0	56	75	T	- 0.01	T	0	0	0.0	0	7.2	26	25Y	W	28+	9	15	7	4.9	
LOS ANGELES U	270			80	60	70.1	- 2.9	91	30	55	2	1	0			T	0.00	T	0		0.0	0			17	W	26	21	8	2	2.9	72
MT SHASTA R	3544			85	49	66.8	- 1.2	93	16+	38	28	9	0			0.25	- 0.05	0.20	3		0.0	0										
OAKLAND	6	1015.6	1015.6	68	57	62.4	- 1.9	75	22	53	6+	0	0	54	77	0.01	0.01	0.01	1	1	0.0	0	9.2	29	24	30	22+	16	12	3	3.4	
RED BLUFF	341	999.7	1011.9	97	66	81.3	- 2.5	108	5	58	27+	26	0	48	34	T	- 0.04	T	0	0	0.0	0	2.7	17	25	S	19	27	1	3	1.2	95
SACRAMENTO	17	1011.9	1012.7	92	57	74.4	- 1.0	102	15	51	7	21	0	52	54	T	0.00	T	0	1	0.0	0	7.0	21	25	SW	25	27	2	2	1.2	96
SANDBERG R	4517			83	61	72.4	- 2.0	91	5	53	26	1	0			0.49	0.47	0.49	1		0.0	0			24	34	29+	25	3	3	1.9	
SAN DIEGO	13	1013.2	1014.3	73	62	67.7	- 2.4	83	30	59	11	0	0	58	75	0.02	0.01	0.02	1	0	0.0	0	5.0	29	19	NW	31	10	16	5	4.7	68
SAN FRANCISCO	8	1014.9	1015.7	68	52	60.3	- 2.4	77	22	48	5	0	0	50	76	T	- 0.01	T	0	1	0.0	0	11.6	30	35	W	10	22	7	2	2.9	
SAN FRANCISCO U	52			62	53	57.4	- 1.4	69	26	48	5	0	0			0.02	0.01	0.02	1		0.0	0			31	W	9					67
SANTA CATALINA	1568			77	60	68.3	- 0.4	92	5	54	23+	3	0			0.02	0.00	0.02	1	0	0.0	0						23	5	3	2.5	
SANTA MARIA	236			72	52	61.6	- 0.6	83	30	45	10	0	0			0.01	- 0.02	0.01	1		0.0	0						15	15	1	3.5	
STOCKTON	22	1012.5	1013.5	94	60	77.1	- 1.1	104	5	53	1	25	0	54	50	T	- 0.01	T	0	0	0.0	0	7.5	30	21	27	19	26	4	1	1.3	
COLORADO																																
ALAMOSA	7536			80	50	65.0	0.1	86	21+	42	9	0	0			1.52	0.45	0.44	15		0.0	0						7	19	5	5.3	
COLORADO SPRINGS	6145	815.8	1015.6	82	57	69.4	- 1.1	91	21	49	31	2	0	53	61	5.02	2.65	0.89	16	19	0.0	0	2.0	3	32	10	14	4	16	11	6.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days		Average dew point		Total	Departure from normal	Greatest in 24 hours	No of days		Snow, Sleet		Resultant speed	Resultant direction	Fastest mile			Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
												Max. 90 F. or above	Min. 32 F. or below						.01 inch or more	With thunderstorms	Total	Maximum depth on ground			Speed	Direction	Date					
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
COLORADO																																
DENVER	5283	840.2	1014.3	87	59	72.7	- 0.2	96	15	52	2	14	0	52	56	6.41	4.88	2.42	17	13	0.0	0	1.6	20	56	SW	25	7	12	12	5.9	68
GRAND JUNCTION	4855	854.0	1012.8	93	65	78.9	0.7	99	5	57	2	25	0	50	41	0.89	0.32	0.27	10	11	0.0	0	2.5	14	43	NW	7	8	14	9	5.4	69
PUEBLO	4684	858.5	1013.8	92	61	76.8	0.3	102	21	54	10	23	0	54	50	2.41	0.59	1.52	8	14	0.0	0	1.5	9	35	N	23	9	13	9	5.4	77
CONNECTICUT																																
BRIDGEPORT	7	1015.6	1016.1	80	62	71.2	- 2.5	90	25	55	20+	1	0	60	71	3.99	0.22	2.21	9	5	0.0	0	3.5	23	29	33	19	10	9	12	5.4	
HARTFORD	169	1008.5	1015.0	85	59	72.4	- 1.0	100	14	49	7	9	0	57	62	1.68	- 1.93	1.35	9	3	0.0	0	2.8	23	23	SW	28+	10	8	13	5.8	65
NEW HAVEN	6			80	62	71.1	- 0.8	88	26	53	7	0	0			2.18	- 1.25	0.96	8		0.0	0			22	SE	18	11	10	10	5.1	71
DELAWARE																																
WILMINGTON	78	1012.5	1015.7	84	65	74.5	- 1.5	91	25	56	2	4	0	63	71	3.84	- 0.41	2.84	9	4	0.0	0	2.5	23	25	34	28	9	8	14	5.9	
DIST.OF COLUMBIA																																
WASH NATL AP	14	1013.2	1015.7	88	68	78.2	0.0	97	25	58	21	14	0	65	68	2.98	- 1.17	1.45	9	8	0.0	0	3.0	17	47	N	18	4	17	10	6.0	61
FLORIDA																																
APALACHICOLA U	13			87	75	80.8	- 0.7	93	18	71	13	4	0			6.64	- 1.29	1.86	14	8	0.0	0			29	E	21	5	12	14	6.9	54
DAYTONA BEACH	31	1016.6	1018.0	87	70	78.7	- 1.4	92	5	65	23	4	0	69	78	3.72	- 3.02	0.83	13	20	0.0	0	3.0	17	33	29	15	2	17	12	6.5	
FORT MYERS	15	1017.3	1017.8	89	73	81.2	- 1.0	93	1	70	11+	16	0	73	83	12.05	2.97	4.06	21	29	0.0	0	1.8	13	30	13	10	0	19	12	6.8	
JACKSONVILLE	24	1016.3	1017.2	91	73	81.8	- 0.8	96	19	65	23	19	0	71	76	2.71	- 4.97	1.06	16	15	0.0	0	2.9	21	42	SW	16	6	14	11	6.3	58
KEY WEST	4	1016.3	1017.0	89	81	85.2	1.9	92	21	77	29+	12	0	75	71	2.94	- 1.22	2.27	9	12	0.0	0	7.0	12	27	E	27	2	22	7	6.0	78
LAKELAND U	214			89	72	80.6	- 1.0	95	1	70	31+	22	0			7.27	- 1.03	1.74	24		0.0	0						0	21	10	7.0	62
MIAMI	7	1017.3	1017.6	88	74	81.3	- 0.5	92	7	70	20	8	0	72	76	6.56	- 0.19	1.92	18	18	0.0	0	4.4	13	23	4	30+	3	17	11	6.6	
ORLANDO	108	1013.9	1018.0	89	72	80.5	- 2.0	94	3	68	23	20	0	71	82	11.55	3.55	2.66	20	20	0.0	0	3.1	18	28	14	24	5	14	12	6.2	
PENSACOLA	112	1012.5	1016.6	89	73	80.8	- 0.9	97	20	71	30+	10	0	73	80	4.88	- 3.14	1.22	15		0.0	0	1.6	22	32	NE	12					54
TALLAHASSEE	58	1014.6	1017.1	91	72	81.2	- 0.1	97	19	65	23	21	0	70	76	8.09	0.04	4.24	17	20	0.0	0	1.4	20	23	18	12	1	18	12	6.9	
TAMPA	19	1017.3	1017.6	88	73	80.3	- 1.3	92	2	70	23+	9	0	71	79	9.70	1.08	2.50	21	27	0.0	0	1.7	19	23	11	25+	2	16	13	6.7	51
WEST PALM BEACH	15	1017.3	1018.1	90	72	80.9	- 1.7	93	31	68	22+	15	0	71	75	11.27	4.61	3.38	17	16	0.0	0	4.2	14	36	32	15	3	15	13	6.5	
GEORGIA																																
ATHENS	802	988.2	1016.4	89	69	78.8	- 0.9	95	24	64	17	12	0	70	81	4.41	- 0.58	1.67	10	11	0.0	0	2.1	23	35	30	3	3	15	13	6.6	
ATLANTA	1010	980.7	1016.8	85	68	76.6	- 2.3	90	18	62	17	1	0	68	80	4.59	- 0.13	1.54	11	12	0.0	0	2.4	24	32	N	3	4	14	13	7.2	43
AUGUSTA	143	1010.8	1016.0	90	69	79.1	- 1.6	96	4	64	22+	18	0	70	81	5.39	0.89	2.04	12	14	0.0	0	2.3	18	28	22	27	2	17	12	6.9	
COLUMBUS	385			90	70	79.7	- 1.4	94	4	68	22+	15	0	71	82	5.48	- 0.39	1.56	12		0.0	0	0.6	25	35	22	6	4	7	20	7.2	
MACON	354	1004.4	1017.1	89	70	79.4	- 2.5	94	18	64	22	14	0	71	83	7.92	2.28	2.69	17	15	0.0	0	2.0	22	31	NW	16	2	13	16	7.2	56
ROME	637			88	66	77.1	- 1.9	92	24+	56	31	5	0			6.10	1.21	1.61	11		0.0	0										
SAVANNAH	46	1014.9	1016.7	89	70	79.8	- 1.5	93	19+	64	3	14	0	71	80	7.46	0.85	1.59	18	23	0.0	0	2.7	20	30	S	9	7	15		6.0	65
HAWAII																																
HILO	31	1015.2	1016.3	83	67	75.2	0.3	88	12	64	8+	0	0	66	76	7.15	- 2.67	1.79	27	0	0.0	0	0.4	20	21	13	12+	2	14	15	7.0	53
HONOLULU	7	1015.6	1015.9	86	74	79.9	1.1	89	21	70	29+	0	0	66	66	1.37	0.93	0.55	9	0	0.0	0	11.1	6	26	NE	20	5	17	9	6.0	86
KAHULUI	48	1013.2	1015.4	86	68	77.0	- 1.3	91	31+	58	30	2	0			0.74	0.31	0.31	11	0	0.0	0	13.1	6	34	NE	14	8	16	7	5.6	70
LIHUE	103	1011.9	1017.1	82	73	77.6	0.0	84	31+	67	30+	0	0	67	72	1.80	- 0.14	0.58	19	0	0.0	0	10.4	6	22	E	9	4	16	11	6.2	55
IDAHO																																
BOISE	2838	915.7	1013.7	89	58	73.3	- 1.9	99	14	45	22	17	0	45	39	0.25	0.04	0.12	4	6	0.0	0	1.1	26	33	SE	20+	18	8	5	3.1	83
IDAHO FALLS 42NW R	4790			86	47	66.3	- 2.8	95	29+	36	13	6	0			0.12	- 0.32	0.12	2				0.7	22	24	SSW	12					
IDAHO FALLS 46W R	4932			84	48	66.1	- 2.9	93	29	36	13	6	0			0.07	- 0.19	0.05	3		0.0	0	2.1	22	39	SSW	26					
LEWISTON	1413			90	59	74.2	0.4	102	31+	48	22	19	0			0.82	0.39	0.60	7		0.0	0						19	9	3	3.0	
POCATELLO	4454	864.9	1014.6	86	51	68.6	- 3.8	94	15+	37	13	9	0	45	48	1.19	0.68	0.98	4	8	0.0	0	3.6	22	33	W	1	15	10	6	4.0	82
ILLINOIS																																
CAIRO U	314			89	71	80.0	- 1.1	101	24	61	30	10	0			4.33	1.14	2.00	7		0.0	0			26	NE	2	6	15	10	5.8	76
CHICAGO O HARE	658	991.5	1015.7	82	57	69.4	- 3.3	94	23	40	1	2	0	60	72	3.66	0.27	1.76	10	5	0.0	0	1.3	24	29	34	17	8	16	7	5.4	
CHICAGO MIDWAY	607	993.6		83	63	72.7	- 2.9	94	23	50	1	3	0	59	64	4.61	1.24	1.80	9	5	0.0	0	1.6	21	32	NW	13	9	13	9	5.5	76
MOLINE	582	993.9	1015.1	85	65	74.9	- 0.7	98	23	54	29	4	0	64	70	4.78	1.52	0.94	9	8	0.0	0	2.1	23	48	NW	13	7	12	12	5.7	72
PEORIA	652	992.2	1015.9	84	63	73.7	- 2.3	96	23	55	1	5	0	64	72	3.31	- 0.23	1.09	8	8	0.0	0	1.1	22	31	NW	9	8	11	12	5.8	64
ROCKFORD	724	988.5	1015.0	85	61	72.9	- 1.3	99	23	47	6	3	0			3.81	- 0.33	2.60	6	6	0.0	0	2.6	24	23	33	26+	8	17	6	4.9	
SPRINGFIELD	588	993.9	1015.8	85	64	74.2	- 3.8	96	23	56	30+	4	0	64	72	2.05	- 1.44	0.76	9	6	0.0	0	1.6	21	38	NW	17	10	11	10	5.5	72

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	°F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
INDIANA																																
EVANSVILLE	381	1002.0	1016.0	87	65	76.2	-2.6	97	24	51	30	5	0	66	73	6.09	2.77	2.96	9	7	0.0	0	0.9	32	26	S	25	9	11	11	5.6	71
FORT WAYNE	791	986.5	1016.0	82	59	70.4	-3.8	94	24	51	30+	2	0	59	70	3.44	0.07	1.50	12	7	0.0	0	1.8	26	43	N	16	9	16	6	5.5	74
INDIANAPOLIS	792	987.5	1016.1	83	63	72.9	-2.3	95	24	51	30	3	0	63	71	3.18	-0.32	0.94	8	8	0.0	0	1.0	29	19	5	2	7	16	8	5.4	78
SOUTH BEND	773	988.2	1015.8	82	58	69.9	-3.7	94	22	49	30+	2	0	58	66	2.22	-1.25	1.17	9	8	0.0	0	1.9	26	21	18	31+	11	13	7	5.1	
IOWA																																
BURLINGTON	694			83	64	73.5	-3.1	94	23	56	29	3	0	65	76	3.90	0.50		10	7	0.0		1.7	27	23	36	6	10	14	7	5.3	
DES MOINES	938	981.4	1015.5	85	65	74.8	-1.5	99	23	54	28	6	0	64	71	1.93	-1.13	0.91	9	10	0.0	0	1.4	21	29	NW	2	12	9	10	5.3	69
DUBUQUE	1065			83	61	72.1	-0.5	97	23	51	6	3	0			4.82	1.31	2.49	8		0.0	0						7	17	7	5.5	
SIOUX CITY	1095	976.0	1014.8	86	65	75.2	-2.2	95	23+	54	28+	8	0	64	71	2.16	-0.95	0.50	11	12	0.0	0	1.7	17	38	NW	15	7	14	10	5.6	62
WATERLOO	968	983.7	1015.0	81	59	70.3	-3.5	95	23	48	29	2	0	63	78	4.41	0.62	2.38	10	7	0.0	0	1.4	21	25	9	16+	10	12	9	5.5	
KANSAS																																
CONCORDIA	1470	962.4	1014.2	88	67	77.5	-2.8	101	23	58	29	11	0	64	66	3.21	0.38	1.08	12	15	0.0	0	4.7	14	36	S	4	15	10	6	4.0	81
DODGE CITY	2582	925.5	1014.1	91	68	79.2	-1.0	101	23	59	29	18	0	61	59	3.37	1.06	0.89	7	9	0.0	0	4.5	16	36	NE	4	15	7	9	4.7	82
GOODLAND	3645	890.6	1014.5	90	62	76.0	-0.6	103	22	54	31	16	0	58	59	1.72	-0.95	0.60	9	13	0.0	0	4.5	16	51	33	3	13	13	5	4.3	
TOPEKA	876	983.7	1015.0	86	68	77.0	-2.9	98	23	59	29	6	0	68	75	3.33	-0.27	1.19	8	10	0.0	0	2.8	14	29	SW	6	10	10	11	5.5	74
WICHITA	1321	967.5	1014.1	93	71	81.9	1.0	103	13	57	29	19	0	66	61	3.62	-0.02	2.18	8	8	0.0	0	4.9	15	44	W	6	11	11	9	5.0	78
KENTUCKY																																
COVINGTON	869	985.1	1016.1	84	63	73.2	-2.2	99	24	52	30	3	0	62	71	4.42	0.81	1.83	8	6	0.0	0	1.1	30	30	1	24	7	15	9	5.7	
LEXINGTON	966	981.7	1016.5	84	63	73.7	-3.7	97	24	51	30	2	0	62	69	3.64	-0.34	1.11	13	10	0.0	0	0.9	24	23	32	2	7	15	9	5.7	
LOUISVILLE	474	998.6	1015.7	86	66	76.3	-1.3	97	24	55	30	4	0	65	71	4.86	1.50	1.84	15	13	0.0	0	0.7	34	33	W	9	7	14	10	5.8	72
LOUISIANA																																
ALEXANDRIA	92	1012.2	1016.4	94	70	82.0	-0.2	98	11	66	31+	29	0	71	77	4.28	-0.97	1.25	11	15	0.0	0	1.2	23	29	1	17	7	18	6	5.5	
BATON ROUGE	64	1013.9	1016.7	92	72	81.6	-1.1	94	31+	68	18	27	0	72	80	4.50	-1.77	1.01	16	20	0.0	0	1.3	25	35	36	20	3	19	9	6.2	
LAKE CHARLES	14	1015.2	1016.1	94	71	82.8	0.5	98	28	68	15	30	0	71	76	1.85	-5.44	0.80	7	16	0.0	0	1.6	24	31	3	14	2	22	7	6.3	
NEW ORLEANS	3	1015.2	1016.2	90	72	81.0	-0.6	94	21	66	18	17	0	72	77	5.26	-1.46	2.20	12	16	0.0	0	1.4	24	29	35	27	2	18	11	6.5	
SHREVEPORT	252	1006.4	1015.5	93	73	83.0	-0.7	98	23	68	31+	29	0	70	69	1.49	-2.26	0.91	3	3	0.0	0	2.6	21	29	14	15	13	15	3	4.1	82
MAINE																																
CARIBOU	624			73	50	61.5	-3.0	82	5	37	7	0	0			3.71	-0.33	1.42	14		0.0	0						3	11	17	7.2	
PORTLAND	61	1011.9	1014.4	79	53	66.3	-1.8	94	14	40	7	1	0	54	68	0.61	-2.25	0.16	8	1	0.0	0	3.6	23	23	NW	6	9	13	9	5.6	67
MARYLAND																																
BALTIMORE	148	1010.2	1015.6	88	65	76.8	0.0	98	25	54	21+	12	0	65	72	2.61	-1.61	1.52	7	8	0.0	0	1.9	20	30	W	3	4	16	11	6.0	52
MASSACHUSETTS																																
BLUE HILL OBS R	629			81	60	70.7	-0.2	94	14	52	20	3	0			0.92	-2.35	0.68	5		0.0	0			34	S	3+					67
BOSTON	15	1013.5	1014.6	80	62	71.0	-2.7	93	25+	54	7	2	0	58	68	0.55	-2.33	0.33	7	3	0.0	0	5.1	24	27	SW	24	13	6	12	5.4	70
NANTUCKET	43	1015.2	1015.5	74	60	67.4	-0.6	81	26	51	7	0	0	61	82	1.85	-0.86	1.49	6	5	0.0	0	5.5	21	26	W	11+	6	6	19	6.9	60
PITTSFIELD	1170			78	52	65.1	-2.7	94	14	43	7+	1	0			3.55	-1.34	2.05	10		0.0	0										
WORCESTER	986	979.3	1015.6	78	58	68.2	-1.6	92	14	49	20	1	0	51	56	1.03	-2.60	0.79	7	3	0.0	0	5.7	26	31	30	26	13	6	12	5.5	
MICHIGAN																																
ALPENA	689			76	48	61.9	-4.0	88	13	34	20	0	0			1.04	-1.82	0.44	11		0.0	0			22	W	27	8	13	10	5.6	74
DETROIT	619	993.2	1015.7	81	60	70.4	-4.0	95	24	47	1	1	0	57	63	2.99	0.17	1.49	8	5	0.0	0	1.0	29	29	NW	28	6	16	9	5.4	72
DETROIT M WAYNE CO	633	991.9	1015.6	82	57	69.2	-3.7	96	24	41	1	4	0	56	63	2.38	-0.31	1.10	6	5	0.0	0	1.9	24				9	13	9	5.6	
DETROIT WILLOW RUN	711	988.2	1016.1	81	55	67.6	-6.6	93	24	42	1	2	0	53	61	1.84	-0.84	0.63	5	5	0.0	0	2.1	24	25	24	16+	8	15	8	5.4	
FLINT	770	988.2	1015.6	82	55	68.4	-1.7	93	24+	40	1	3	0	54	61	1.64	-1.27	0.61	5	4	0.0	0	2.0	25	20	24	13+	10	11	10	5.7	
GRAND RAPIDS	784	987.1	1015.8	82	58	70.0	-2.3	96	23	47	1	2	0	55	63	1.96	-0.77	0.63	10	7	0.0	0	2.1	25	31	W	23	8	15	8	5.4	66
HOUGHTON LAKE	1150	974.6	1016.3	76	50	63.0		85	23	33	6	0	0	52	67	1.26	-0.94	1.02	6	5	0.0	0	2.6	26	21	34	28	12	12	7	5.3	
LANSING	841	984.4	1015.8	83	54	68.6	-3.1	94	23+	39	20	4	0	56	66	0.50	-2.08	0.17	8	2	0.0	0	2.6	27	33	NW	24	8	15	8	5.3	68
MARQUETTE U	677			72	54	63.1	-3.6	90	23	47	20+	1	0			2.10	-1.10	0.88	8		0.0	0			30	SW	13	7	16	8	5.7	72
MUSKEGON	627	992.9	1015.4	81	60	70.1	-1.2	94	23	49	6	1	0	57	65	2.08	-0.33	0.78	9	8	0.0	0	2.0	24	29	33	23	10	17	4	5.1	
SAULT STE MARIE	721	988.8	1015.2	70	49	59.1	-5.5	80	13+	36	6	0	0	51	77	5.46	2.98	2.79	12	9	0.0	0	3.5	28	28	30	2	8	13	10	5.9	62
MINNESOTA																																
DULUTH	1428	964.4	1015.7	73	51	61.9	-3.6	87	23+	41	6	0	0	52	73	3.57	0.03	1.46	10	7	0.0	0	1.0	31	29	W	13	9	13	9	5.9	67

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average dew point	Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below			Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MINNESOTA																																
INTERNATIONAL FALLS	1179	971.9	1014.8	75	52	63.1	- 2.5	90	23	42	11	1	0	55	77	2.13	- 1.36	0.49	11	9	0.0	0	3.2	27	32	29	13	6	13	12	6.6	
MINNEAPOLIS	834	984.8	1014.8	81	60	70.5	- 1.8	95	23	50	10	2	0	58	67	4.69	1.42	1.51	10	10	0.0	0	0.2	5	31	N	23	8	14	9	5.5	72
ROCHESTER	1297	968.5	1015.6	79	59	69.1	- 3.2	92	23+	51	10	2	0	60	75	4.67	0.99	2.04	12	9	0.0	0	3.1	24	25	20	1	11	12	8	5.0	
ST CLOUD	1034	977.7	1014.9	80	58	68.9	- 2.1	92	23	47	10	2	0		72	4.66	1.40	1.20	12		0.0	0						9	11	11	5.4	
MISSISSIPPI																																
JACKSON	310	1004.7	1016.3	94	69	81.5	- 0.8	99	18	63	31	27	0	70	75	1.92	- 2.84	0.71	8	13	0.0	0	0.7	25	22	E	21	2	19	10	6.1	62
MERIDIAN	290	1005.8	1016.7	91	69	79.6	- 1.9	94	18+	62	31	22	0	71	80	4.54	- 1.68	2.70	9	15	0.0	0	1.0	25	24	36	7	2	20	9	6.5	
VICKSBURG U	234			91	73	81.7	- 0.1	94	22+	68	31	23	0			2.69	- 1.21	1.19	9		0.0	0			34	NE	10	11	15	5	5.1	79
MISSOURI																																
COLUMBIA	778	987.8	1015.4	85	68	76.6	- 2.1	95	24+	58	29	7	0	65	71	3.19	- 0.22	1.07	11	6	0.0	0	1.3	18	34	NW	9	8	15	8	5.5	71
KANSAS CITY	742	988.5	1014.9	87	70	78.5	- 3.0	97	23	62	29	7	0	66	67	9.83	6.64	3.19	12	12	0.0	0	2.2	14	28	NW	17	7	14	10	5.8	76
SAINT JOSEPH	811			87	68	77.5	- 1.9	94	23+	56	29	10	0	67	76	9.62	6.40	2.73	11	11	0.0	0	1.9	16	29	29	17	12	15	4	4.6	
ST LOUIS	535	995.9	1016.1	86	67	76.8	- 1.3	100	24	60	30+	8	0	65	68	3.17	- 0.13	1.32	7	4	0.0	0	2.3	25	36	W	9	11	11	9	5.3	71
SPRINGFIELD	1268	971.9	1016.1	87	65	76.2	- 2.6	95	24+	52	30+	7	0	68	78	1.91	- 1.98	0.84	9	7	0.0	0	3.2	15	30	SW	9+	12	10	9	5.2	57
MONTANA																																
BILLINGS	3567	893.3	1015.1	86	57	71.5	- 3.2	95	21	49	13	9	0	51	54	1.28	0.38	0.82	9	8	0.0	0	1.6	27	45	W	29	15	10	6	4.2	77
GLASGOW	2284			83	59	71.0	0.3	93	28+	50	13+	5	0			0.91	- 0.42	0.43	7		0.0	0						11	14	6	4.9	
GREAT FALLS	3662	890.6	1015.1	84	56	69.6	0.2	94	28	47	23	3	0	49	51	1.03	- 0.25	0.28	10	11	0.0	0	3.2	23	32	SW	20+	14	14	3	3.9	88
HAVRE	2582			82	55	68.4	- 1.6	93	27	47	1	2	0			3.77	2.50	1.16	8		0.0	0			45	W	20+	13	12	6	4.4	86
HELENA	3828	883.2	1016.4	83	52	67.7	- 0.7	90	28+	42	13	2	0	49	55	0.60	- 0.43	0.19	9	12	0.0	0	2.0	28	38	S	21+	15	11	5	3.8	81
KALISPELL	2965	913.0	1016.5	81	48	64.5	- 1.2	93	26	38	23+	5	0	48	60	0.85	- 0.19	0.36	6	6	0.0	0	1.5	18	28	32	20	15	12	4	3.5	
MILES CITY	2629	923.5	1014.5	88	60	74.2	- 1.1	96	28+	51	13	14	0	54	55	3.59	2.25		10	10	0.0		1.3	1								
MISSOULA	3190	906.5	1017.3	81	49	65.0	- 2.0	88	31+	38	23	0	0	49	63	1.59	0.74	0.70	10	11	0.0	0	2.0	31	34	SW	27+	17	11	3	3.5	81
NEBRASKA																																
GRAND ISLAND	1841	950.2	1015.0	87	63	74.8	- 2.4	101	23	54	29	9	0	62	68	2.36	- 0.15	0.41	13	13	0.0	0	2.6	16	32	25	5	12	10	9	4.5	
LINCOLN U	1150			85	67	75.8	- 4.3	98	23	59	28+	5	0			4.23	0.96	1.24	15		0.0	0			43	NE	16	9	12	10	5.4	63
NORFOLK	1544			85	64	74.1	- 2.9	98	16+	53	28	6	0			3.86	0.84	2.60	12		0.0	0						9	14	8	5.3	
NORTH PLATTE	2775	918.1	1013.8	86	61	73.1	- 3.0	96	22	53	4	6	0	62	73	6.68	4.16	1.27	16	17	0.0	0	2.9	12	44	N	4	9	17	5	4.8	71
OMAHA	978	980.4	1015.1	85	66	75.7	- 2.8	96	23	57	28	6	0	67	76	4.39	1.02	1.31	14	10	0.0	0	2.1	17	28	N	30+	11	10	10	5.4	70
SCOTTSBLUFF	3957	881.5	1014.4	87	60	73.5	- 1.2	97	16	54	3+	11	0	58	64	2.06	0.61	0.78	9	16	0.0	0	2.7	10	32	31	20	8	18	5	5.0	
VALENTINE	2587			87	61	73.7	- 1.7	104	22	51	3	9	0			2.40	0.08	1.34	9		0.0	0			42	N	5	12	13	6	4.8	78
NEVADA																																
ELKO	5050	846.9		88	47	67.7	- 1.9	96	15	36	11	12	0			0.62	0.22	0.14	9	8	0.0	0	1.0	22	29	22	25+	13	9	9	4.5	
ELY	6253	812.1	1013.3	84	48	65.5	- 2.0	90	28	38	13+	1	0	35	38	1.12	0.47	0.59	6	10	0.0	0	6.1	20	33	SW	19	11	8	12	5.2	77
LAS VEGAS	2162	935.7	1009.9	102	76	88.7	- 1.0	108	5+	68	13	30	0	39	21	0.28	- 0.22	0.15	4	5	0.0	0	5.1	21	33	SW	6	15	9	7	4.1	80
RENO	4404	867.3	1014.8	89	44	66.1	- 1.6	96	6	33	10	14	0	42	45	0.35	0.08	0.20	4	6	0.0	0	1.7	27	28	NW	24	21	7	3	2.6	95
WINNEMUCCA	4299	868.6	1013.8	89	51	70.2	- 0.8	97	29	41	29+	16	0	36	31	0.36	0.09	0.18	6	5	0.0	0	0.6	2	40	W	25	18	6	7	3.5	75
NEW HAMPSHIRE																																
CONCORD	342	1002.4	1014.8	81	51	65.9	- 3.7	96	14	35	7	1	0	54	67	1.73	- 1.68	0.78	10	3	0.0	0	2.1	23	23	NW	1	10	11	10	5.5	66
MT WASHINGTON OBS	6262			51	39	45.2	- 3.9	59	13+	28	6	0	2			4.42	- 2.29	1.09	17	3	0.0	0			76Y	W	14+	2	8	21	8.0	30
NEW JERSEY																																
ATLANTIC CITY	64	1013.9	1016.2	83	63	72.8	- 2.3	97	25	46	2	3	0	63	75	2.61	- 1.11	1.47	7	5	0.0	0	4.2	20	29	31	10	8	8	15	6.2	59
ATLANTIC CITY U	11			78	68	73.0	- 1.2	88	15	60	2	0	0			4.92	1.06	2.03	6						48	W	28					
NEWARK	11	1014.6	1015.5	85	67	75.7	- 1.6	95	14	60	2	7	0	58	57	1.73	- 1.94	0.63	10	5	0.0	0	2.3	21	39	20	17	10	11	10	5.4	
TRENTON U	56			84	65	74.7	- 1.3	92	25	58	21	4	0			5.64	1.46	2.55	7		0.0	0			33	SW	17	8	10	13	6.0	62
NEW MEXICO																																
ALBUQUERQUE	5310	840.8	1013.1	92	64	77.9	- 0.6	97	21+	56	4	24	0	51	44	1.65	0.45	0.72	9	12	0.0	0	2.0	13	38	SW	8	9	17	5	4.8	74
CLAYTON	4969			87	61	73.7	- 0.8	95	23	56	4+	10	0			2.93	0.60	1.35	11		0.0	0						11	12	8	4.9	
RATON	6379			83	54	68.7	- 1.1	91	20	48	9	2	0			2.63	0.23	0.72	14		0.0	0						6	16	9	5.6	
ROSWELL	3617			96	65	80.9	2.3	102	19+	58	4	28	0			1.50	- 0.27	0.72	6	7	0.0	0			27	2	3	14	15	2	4.0	
SILVER CITY	5373			91	63	76.8	- 0.3	97	8+	59	30+	19	0			2.04	- 0.05	0.78	16		0.0	0						8	21	2	4.6	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station ∅	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90° F. or above	Min. 32° F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW YORK																																
ALBANY	275	1004.4	1015.0	83	55	68.9	- 3.2	94	14	45	7	3	0	55	62	3.52	0.03	1.69	9	5	0.0	0	3.9	25	31	NW	26	10	8	13	5.8	59
BINGHAMTON	1590	958.0	1015.9	77	56	66.7	- 1.7	89	14	44	21	0	0	54	67	2.23	- 1.48	0.57	9	6	0.0	0	3.1	28	29	W	9	3	15	13	6.5	79
BUFFALO	705	990.2	1015.6	78	58	67.6	- 2.2	89	9	46	20	0	0	55	68	3.69	1.12	1.40	9	4	0.0	0	3.6	24	38	SW	9	9	9	13	6.2	68
NEW YORK U	132	1012.9	1016.0	83	65	74.3	- 2.5	93	14	58	20	4	0	58	62	1.33	- 2.37	0.52	8	4	0.0	0	1.6	19	20	SE	2	12	10	9	4.7	69
J.F. KENNEDY	15	1014.9	1015.6	81	64	72.2	- 3.7	91	25	56	7	1	0	62	73	2.45	- 1.59	1.12	10	7	0.0	0	4.5	20	25	20	26+	8	11	12	5.7	
NEW YORK LA GUARDIA	11	1013.9	1015.5	84	69	76.6	- 0.2	95	14	62	20	4	0	59	59	1.34	- 2.37	0.56	9	5	0.0	0	2.7	20	27	S	2	11	10	10	5.2	
ROCHESTER	547	996.3	1016.1	80	56	67.5	- 4.1	91	24+	46	21+	2	0	53	62	1.46	- 1.38	0.58	7	3	0.0	0	4.6	26	36	SW	9	7	15	9	5.6	74
SYRACUSE	410	1000.3	1014.9	79	56	67.5	- 4.7	91	24+	45	20	2	0	54	64	1.34	- 1.75	0.73	8	2	0.0	0	3.7	28	42	S	7	10	13	8	5.4	59
NORTH CAROLINA																																
ASHEVILLE	2140	942.4	1017.4	82	62	72.2	- 0.2	88	25+	58	22+	0	0	65	85	4.47	- 1.38	1.42	15	15	0.0		0.8	35	23	36	5	2	12	17	7.2	53
CAPE HATTERAS R	7	1016.3	1016.6	83	72	77.5	- 0.5	87	26+	64	3	0	0	71	82	9.99	3.84	4.80	15	10	0.0	0	4.3	21	29	SW	19	5	11	15	6.7	69
CHARLOTTE	735	989.2	1016.1	87	69	77.8	- 1.4	92	24+	66	30+	11	0	69	79	6.19	1.31	2.46	14	12	0.0	0	1.7	19	35	SW	7	3	14	14	6.9	61
GREENSBORO	897	985.4	1016.5	85	67	75.7	- 1.6	91	25+	60	2+	3	0	69	85	9.08	4.29	2.18	15	12	0.0	0	1.3	19	40	NW	4	5	10	16	6.8	45
RALEIGH	434	1000.7	1016.1	86	67	76.2	- 1.7	91	25+	55	2	6	0	68	81	5.54	0.05	2.26	15	17	0.0	0	2.0	21	20	24	5+	4	11	16	6.9	49
WILMINGTON	28	1015.6	1016.8	87	71	79.1	- 0.9	93	26	60	22	11	0	69	73	12.09	4.41	3.09	17	15	0.0	0	2.8	21	29	N	6	6	14	11	6.2	65
NORTH DAKOTA																																
BISMARCK	1647	956.0	1014.9	81	58	69.4	- 2.3	97	22	47	5	2	0	58	69	3.35	1.16	0.81	10	10	0.0	0	1.7	2	41	NW	22	14	8	9	4.8	73
FARGO	896	982.7	1015.2	80	57	68.5	- 2.9	93	22	42	5	1	0	58	71	4.81	1.90	1.26	12	9	0.0	0	0.7	33	60	S	29	10	15	6	5.2	71
WILLISTON	1899			83	58	70.4	- 0.9	92	29	49	14	4	0			1.52	- 0.35	0.70	9		0.0	0			42	W	20	10	13	8	5.0	78
OHIO																																
AKRON	1208	972.6	1016.5	83	57	69.8	- 2.8	94	24	45	20	2	0	56	65	1.56	- 2.21	1.12	6	5	0.0	0	1.2	31	31	27	9	6	18	7	5.6	
CINCINNATI OBS	761			86	64	74.8	- 2.1	99	24	54	30	5	0			3.60	0.01	1.30	7		0.0	0			22	SW	9					63
CLEVELAND	777	987.1	1016.0	80	58	69.0	- 2.5	98	24	46	20	2	0	57	67	3.01	- 0.30	1.29	7	6	0.0	0	1.4	26	43	W	9	6	16	9	5.8	74
COLUMBUS	812	986.8	1016.4	84	60	72.0	- 2.8	97	24	47	1	5	0	57	61	3.76	- 0.17	2.04	10	6	0.0	0	1.6	33	32	SW	9	9	12	10	5.6	67
DAYTON	1002	980.7	1016.2	86	62	73.8	- 1.4	100	24	52	30	6	0	56	56	2.24	- 1.29	0.68	7	6	0.0	0	1.2	29	27	W	24	8	16	7	5.4	80
MANSFIELD	1295			80	56	68.0	- 3.7	96	24	44	1	1	0			1.42	- 2.06	1.07	4	2	0.0	0						6	17	8	5.6	
TOLEDO	676	991.2	1016.1	81	56	68.5	- 4.2	94	24	43	1	3	0	57	69	2.03	- 0.56	0.76	7	8	0.0	0	2.0	28	34	NW	24	6	18	7	5.5	76
YOUNGSTOWN	1178	974.3	1016.5	81	55	67.8	- 2.7	95	24	45	1	1	0	56	69	3.42	- 0.90	1.19	9	5	0.0	0	1.6	31	35	28	9	5	18	8	5.8	
OKLAHOMA																																
OKLAHOMA CITY	1280	969.2	1014.3	96	73	84.6	2.1	104	24	63	30	26	0	65	55	1.57	- 0.80	1.10	5	7	0.0	0	6.2	16	40	NW	6	12	11	8	4.6	74
TULSA	650	991.2	1014.8	94	72	83.2	1.0	103	24	62	29	26	0	69	66	3.39	0.45	1.52	9	7	0.0	0	4.4	17	38	NW	6	12	10	9	4.9	83
OREGON																																
ASTORIA	8	1018.3	1018.9	68	52	60.2	- 0.4	81	23	46	28+	0	0	53	79	0.46	- 0.81	0.34	5	0	0.0	0	5.2	26	21	21	29+	6	12	13	6.6	
BURNS U	4151	875.0	1015.7	84	51	67.1	- 2.4	94	30	37	12	7	0	42	44	0.52	0.18	0.31	6		0.0	0	2.7	33				18	11	2	3.1	
EUGENE	359	1003.7	1017.0	84	52	68.0	1.4	99	31	44	9	11	0	53	65	0.24	- 0.03	0.23	3	2	0.0	0	2.9	32	21	24	31+	20	4	7	3.2	
MEACHAM	4050			76	52	64.0	0.6	90	31+	39	22	2	0			0.74	0.24	0.49	5		0.0	0						19	6	6	3.5	
MEDFORD	1298	968.5	1015.3	92	54	72.9	0.9	102	24	43	22	21	0	48	46	0.03	- 0.18	0.02	2	0	0.0	0	3.3	31	17	29	28+	23	5	3	1.8	
PENDLETON	1482	962.8	1015.4	89	59	73.8	0.2	102	31	46	9	17	0	42	35	0.51	0.29	0.28	4	4	0.0	0	2.8	27	35	27	26	21	5	5	3.1	
PORTLAND	21	1015.6	1016.8	83	56	69.7	2.5	107	30	50	19+	8	0	54	64	0.44	0.03	0.28	2	1	0.0	0	5.5	31	18	NW	22+	16	7	8	4.0	80
SALEM	196	1009.8	1017.1	84	50	67.2	1.1	104	31	42	22	9	0	53	64	0.19	- 0.16	0.14	3	1	0.0	0	3.3	32	20	36	23+	19	5	7	3.3	
SEXTON SUMMIT R	3836	885.5	1014.7	78	53	65.5	1.9	91	30	39	21	2	0			0.05	- 0.27	0.05	1		0.0	0			27	34	6	25	3	3	1.9	
PACIFIC AREA																																
CANTON ISLAND	8			88	78	83.2	- 0.4	90	29+	74	5+	3	0			2.11	- 0.48	0.46	17		0.0	0						2	13	16	7.3	
ENIWETOK	13	1008.8	1009.4	86	77	81.6	- 1.2	89	29+	73	23+	0	0	76	82	8.68	2.23	1.84	25	0	0.0	0	15.2	9								
TAGUAC GUAM R	361			84	73	78.7	- 0.8	87	25+	68	26	0	0			15.67	6.69	3.75	30		0.0	0			28	SE	2					
JOHNSTON	7	1012.9	1013.4	85	75	79.7	- 1.4	86	31+	70	9+	0	0	71	73	0.62	- 0.68	0.14	13	0	0.0	0	15.0	11	32	NE	8	4	19	8	6.2	79
KOROR R	94	1005.4	1009.2	84	74	78.8	- 2.1	88	28+	72	25+	0	0	75	88	30.57	15.40	4.10	27	7	0.0	0	7.2	27	30	NW	20	0	0	31	9.9	26
KWAJALEIN	8	1008.5	1009.5	86	76	80.9	- 0.7	88	8	72	16+	0	0	75	83	12.03	3.12	2.75	28	0	0.0	0	10.7	8	33	8	15	0	1	30	9.7	
MARCUS ISLAND	20			90	79	84.4		93	29	76	21	19	0			14.85	2.32	2.99	28	1	0.0	0	8.1	9	24	E	15+	0	3	28	9.3	41
MAJURO	10	1008.8	1009.2	85	76	80.7	0.5	87	29+	73	26	0	0	75	82	0.88	- 3.82	0.31	6		0.0	0			21	E	14	10	10	11	5.7	87
PONAPE R	123	1003.4	1008.7	85	73	78.9	- 0.8	89	1	70	17	0	0	75	90	37.20	20.98	7.07	29	1	0.0	0	1.0	8	18	NE	24	0	0	31	9.7	16
TRUK MOEN ISLAND	5	1008.5	1008.8	84	74	79.0	- 1.5	87	10+	71	15	0	0	75	86	25.19	12.86	4.08	29	2	0.0	0	2.7	31	32	NW	23	0	2	29	9.4	35
WAKE	11	1013.2	1013.3	86	77	81.4	- 0.6	87	31+	74	21+	0	0	72	75	0.78	- 3.82	0.44	12	0	0.0	0	11.1	6	21	6	16+	7	15	9	5.6	
YAP R	55	1005.8	1007.7	84	74	79.0	- 2.4	90	1	72	10+	1	0	75	90	26.47	12.69	6.47	30	6	0.0	0	3.1	25	19	N	19	0	0	31	10.0	14

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)				
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90° F. or above	Min. 32° F. or below	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	°F.	°F.	F.	F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PENNSYLVANIA																																
ALLENTOWN	376	1002.0	1015.7	85	60	72.4	- 1.7	91	24+	49	21	8	0	58	64	1.58	- 3.24	0.71	9	5	0.0	0	2.5	25	23	22	28+	11	9	11	5.3	
ERIE	732	989.8	1016.2	77	59	67.5	- 3.6	91	24	48	1	1	0	56	68	3.48	- 0.19	1.81	11	4	0.0	0	2.2	23	32	25	7	13	13	5	4.6	
HARRISBURG	338	1003.1	1015.7	87	64	75.6	- 0.6	97	9	52	21	12	0	60	61	3.10	- 0.41	1.16	13	7	0.0	0	1.5	24	23	W	9	7	13	11	5.9	67
PHILADELPHIA	5	1014.6	1015.5	84	65	74.1	- 1.5	91	25	52	2	3	0	62	67	3.22	- 0.94	1.77	7	4	0.0	0	2.4	23	33	NW	18	9	8	14	5.9	60
PITTSBURGH	1137	972.9	1016.2	83	57	69.9	- 2.2	92	24+	45	20	3	0	55	64	1.82	- 2.06	0.56	7	5	0.0	0	2.9	28	35	29	24+	5	16	10	5.9	68
READING U	266			85	65	75.2	- 1.7	93	14+	54	21	8	0			2.72	- 1.54	1.59	9		0.0	0			42	NW	3	11	10	10	5.2	67
SCRANTON	930	982.4	1016.0	83	59	71.0	- 1.4	94	14	46	20	4	0	57	65	1.30	- 3.49	0.41	12	8	0.0	0	1.7	25	34	SW	27	8	12	11	5.6	71
WILLIAMSPORT	527	997.0	1015.9	82	56	68.9	- 4.7	93	14	43	20	2	0	57	71	1.70	- 2.48	0.44	10	8	0.0	0	2.8	27	29	30	14	8	13	10	5.5	
RHODE ISLAND																																
BLOCK ISLAND	110			75	62	68.5	- 1.1	82	15	56	2	0	0			1.75	- 0.94	1.30	5		0.0	0						7	10	14	6.2	
PROVIDENCE	51	1012.9	1015.2	82	61	71.6	- 0.5	92	25+	49	7	3	0	56	62	1.28	- 1.63	1.00	6	3	0.0	0	4.8	23	23	22	14	12	7	12	5.5	69
SOUTH CAROLINA																																
CHARLESTON	41	1014.9	1016.6	88	70	79.0	- 1.6	92	26+	64	23+	10	0	69	76	8.90	1.19	3.12	18	16	0.0	0	2.9	20	48Y	N	6	4	16	11	6.7	56
CHARLESTON U	9			87	75	80.6	- 0.9	92	6	70	23+	4	0			5.78	- 2.00	2.55	15		0.0	0			33	NW	6					
COLUMBIA	217	1008.1	1016.1	90	70	79.9	- 1.7	95	26+	64	22	18	0	70	76	4.33	- 1.76	1.38	14	14	0.0	0	2.8	21	40	35	15	3	19	9	6.3	65
GNVLE-SPARTANBURG	957	982.1	1016.1	87	68	77.5	- 2.4	92	24	65	22+	6	0	68	79	3.13	- 1.52	0.61	14	18	0.0	0	1.3	23	34	W	7	6	10	15	6.8	53
SOUTH DAKOTA																																
ABERDEEN	1296	968.5	1014.4	85	59	71.7	- 1.8	99	22	49	5	6	0	59	66	2.22	- 0.28	1.22	8	8	0.0	0	1.3	3	38	34	8	10	15	6	5.0	
HURON	1282	968.5	1014.1	88	53	73.0	- 2.0	103	22	47	14	11	0	60	68	0.68	- 1.13	0.33	10	8	0.0	0	1.0	15	28	N	23	10	16	5	5.0	68
RAPID CITY	3165	905.9	1014.9	85	59	72.1	- 1.7	102	22	51	6	9	0	56	61	0.60	- 1.18	0.14	11	12	0.0	0	2.0	36	37	S	10+	17	6	8	4.4	63
SIOUX FALLS	1418	964.4	1014.9	83	59	70.8	- 3.5	97	22	46	28	6	0	62	76	1.49	- 1.35	0.44	11	8	0.0	0	1.4	19	37	28	6	10	12	9	5.4	
TENNESSEE																																
BRISTOL	1507	963.8	1016.9	84	65	74.5	- 1.4	88	24+	58	30+	0	0	66	80	7.17	1.62	2.19	12	10	0.0	0	0.5	24	23	29	4	2	14	15	6.9	
CHATTANOOGA	670	992.2	1016.5	86	67	76.8	- 3.9	90	9	57	31	1	0	68	80	3.13	- 1.98	0.90	13	12	0.0	0	0.7	16	30	NW	17	5	10	16	6.9	59
KNOXVILLE	980	982.1	1016.6	87	69	78.0	- 0.4	91	7	60	31	5	0	68	77	3.49	- 1.33	1.00	10	9	0.0	0	2.3	27	36	N	7	2	18	11	6.6	45
MEMPHIS	263	1006.1	1016.0	92	71	81.8	0.5	100	24	59	31	25	0	67	63	1.60	- 1.94	1.02	8	9	0.0	0	0.4	7	31	SW	4	8	16	7	5.5	73
NASHVILLE	590	994.6	1015.8	88	69	78.6	- 1.6	98	24	54	31	8	0	66	69	3.32	- 0.40	1.15	8	8	0.0	0	1.2	27	48	NW	2	5	17	9	6.0	69
OAK RIDGE	905			85	66	75.5	- 1.7	90	24	58	31+	1	0			7.54	1.59	2.62	13		0.0	0						9	8	14	5.9	
TEXAS																																
ABILENE	1762	953.9	1013.8	97	74	85.7	2.5	100	25+	64	30	31	0	59	44	0.69	- 1.59	0.56	3	3	0.0	0	6.5	17	34	NW	28	15	13	3	3.7	87
AMARILLO	3604	893.3	1013.1	91	66	78.6	- 2.0	97	19+	60	30	23	0	58	53	1.54	- 0.80	0.58	5	6	0.0	0	6.6	19	26	SW	19+	16	10	5	4.3	83
AUSTIN	597	993.9	1015.3	95	73	84.2	- 0.3	101	28	68	31	31	0	67	60	0.37	- 1.81	0.37	1	3	0.0	0	5.5	18	19	NE	29+	16	14	1	3.4	87
BROWNSVILLE	16	1014.2	1014.7	92	75	83.5	- 0.5	96	28	70	29	29	0	71	70	1.83	0.15	1.39	3	3	0.0	0	10.2	14	26	SE	27+	15	11	5	4.5	82
CORPUS CHRISTI	41	1013.5	1015.0	95	73	84.3	0.2	100	28	71	23	31	0	72	70	1.25	- 1.07	0.63	5	4	0.0	0	9.7	15	29	N	15	11	17	3	4.6	71
DALLAS	481	997.6	1014.6	97	78	87.0	2.1	100	7	68	31	30	0	67	54	0.16	- 1.78	0.12	2	2	0.0	0	7.1	17	28	SE	13	13	16	2	4.0	77
DEL RIO	1026	978.3	1013.5	98	74	85.8	- 0.4	101	28+	69	16	31	0	62	49	0.38	- 0.93	0.38	1	3	0.0	0	8.8	12	18	9	26+	21	8	2	2.9	
EL PASO	3918	882.2	1010.3	97	72	84.2	2.3	101	12+	67	30+	30	0	52	36	0.17	- 1.12	0.07	6	9	0.0	0	1.3	15	35	NE	3	21	8	2	3.1	86
FORT WORTH	537	994.9	1014.8	98	75	86.3	0.9	101	27+	65	31	31	0	65	51	0.09	- 1.66	0.09	1	4	0.0	0	5.5	17	25	29	15	15	14	2	3.8	
GALVESTON U	7			88	79	83.7	0.6	97	22	74	30	7	0			1.24	- 3.55	0.69	4		0.0	0			23	NE	29					74
HOUSTON U	41			93	77	85.2	1.3	99	28	73	14	26	0			3.13	- 2.02	1.18	7		0.0	0										
HOUSTON	50	1013.9	1015.9	95	75	85.1	2.1	100	28	74	30+	29	0	72	70	1.57	- 2.72	0.52	6	10	0.0	0	4.0	19	24	4	28	4	22	5	5.9	68
LUBBOCK	3243	905.5	1013.8	95	68	81.7	2.2	101	8	60	30	27	0	59	50	2.14	0.13	0.87	5	6	0.0	0	7.3	17	37	27	9	15	14	2	3.8	
MIDLAND	2851	916.7	1012.5	96	70	82.8	- 0.1	101	9	64	30+	29	0	54	41	0.06	- 1.82	0.06	1	0	0.0	0	7.9	15	25	3	31	20	7	4	3.1	
PORT ARTHUR	16	1015.2	1016.0	94	74	83.8	1.9	98	28	70	15+	29	0	73	78	3.21	- 2.79	1.00	8	14	0.0	0	2.9	23	45	S	14	1	25	5	6.0	77
SAN ANGELO	1903	948.5	1013.2	99	73	85.7	0.9	102	9+	60	31	31	0	59	45	0.26	- 1.15	0.18	3	1	0.0	0	5.6	16	23	8	14	18	10	3	3.1	
SAN ANTONIO	788	987.8	1015.3	96	74	84.9	0.9	99	28	65	31	31	0	67	59	0.08	- 2.01	0.08	1	1	0.0	0	6.4	15	29	S	15	16	13	2	3.6	84
VICTORIA	104	1011.2	1015.4	95	75	85.0	1.8	100	28	71	2	30	0	71	68	0.29	- 3.32	0.20	4	7	0.0	0	5.8	16	33Y	SSE	8	3	22	6	5.6	
WACO	500	997.3	1014.8	98	77	87.2	1.9	101	28+	67	31	31	0	63	46	0.12	- 1.87	0.06	3	3	0.0	0	7.7	17	25	10	13	22	7	2	2.8	
WICHITA FALLS	994	978.3	1013.8	101	72	86.2	0.6	105	27+	58	30	31	0	62	49	0.35	- 1.62	0.34	2	4	0.0	0	7.5	18	30	1	25	13	13	5	4.4	
UTAH																																
MILFORD	5028			90	54	72.2	- 1.6	98	28	45	3	23	0			0.34	- 0.36	0.08	11		0.0	0						12	8	11	5.1	
SALT LAKE CITY	4220	872.7	1013.4	90	60	75.0	- 1.9	98	28+	50	13	19	0	48	43	1.50	0.92	0.64	8	8	0.0	0	2.9	16	36	NW	19	12	10	9	4.7	85
WENDOVER	4237			88	66	77.3	- 2.1	96	10	60	2	13	0			0.41	0.10	0.23	5		0.0	0						14	8	9	4.3	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

JULY 1965

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
VERMONT																																
BURLINGTON	332	1001.7	1014.0	77	54	65.1	- 3.9	87	13	43	7	0	0	54	69	2.91	- 0.94	1.17	13	7	0.0	0	1.4	24	30	S	7	7	10	14	6.3	66
VIRGINIA																																
LYNCHBURG	916			84	63	73.9	- 2.4	93	25+	51	2	3	0			1.83	- 2.38	0.62	9	10	0.0	0			21	SW	7	6	12	13	6.0	66
NORFOLK	26	1014.9	1016.0	84	69	76.7	- 2.1	95	25	58	2	6	0	69	79	3.46	- 2.46	1.15	10	7	0.0	0	3.6	18	28	S	5	5	11	15	6.8	52
RICHMOND	162	1010.2	1016.0	84	65	74.9	- 3.2	93	25	51	2	3	0	66	78	6.33	0.72	2.65	9	9	0.0	0	1.8	19	30	NW	5	4	13	14	6.5	60
ROANOKE	1149	974.9	1016.2	84	64	73.9	- 2.7	90	24+	50	2	2	0	65	75	5.50	1.25	1.81	12	9	0.0	0	1.2	23	32	29	7	5	18	8	6.1	
WASHINGTON																																
OLYMPIA	195	1010.8	1018.0	81	51	65.9	2.0	99	31	41	19	6	0	53	69	0.48	- 0.28	0.30	3	0	0.0	0	2.1	23	26	22	7	8	14	9	5.3	
SEATTLE TACOMA	400	1001.7	1018.0	80	56	67.8	2.9	94	30	49	19	5	0	54	66	0.38	- 0.43	0.21	4	3	0.0	0	1.7	29	18	35	30	9	13	9	5.3	64
SPOKANE	2356	933.0	1015.3	85	56	70.1	- 0.4	97	31	46	9	13	0	44	44	0.69	0.31	0.44	3	3	0.0	0	2.7	20	30	SW	26	17	9	5	3.6	76
STAMPEDE PASS R	3958			68	50	58.8	2.6	87	31	38	8	0	0			0.31	- 1.15	0.12	6		0.0	0						13	8	10	4.9	
TATOOSH ISLAND R	101	1015.9	1018.9	59	51	54.8	- 0.7	73	29	48	23	0	0	52	92	0.70	- 1.64	0.52	7	1	0.0	0	6.9	20	27	E	29	5	7	19	7.5	32
WALLA WALLA U	949			89	63	75.8	- 0.2	104	31	53	9	19	0			0.59	0.38	0.56	2		0.0	0			22	S	26	22	5	4	2.8	85
YAKIMA	1052	977.0	1014.7	88	53	70.0	- 1.0	101	31	44	9	18	0	47	46	0.27	0.14	0.27	1	3	0.0	0	3.7	29	31	23	25	20	4	7	3.4	
WEST INDIES																																
SAN JUAN P.R.	15	1014.9	1017.4	87	76	81.7	1.3	93	27	74	25+	3	0	74	79	5.88	- 0.37	1.37	27	3	0.0	0	8.4	9	25	NE	31+	1	16	14	6.9	67
SWAN ISLAND	28			87	79	83.0	0.5	89	22	76	12	0	0			0.36	- 3.84	0.14	8		0.0	0						1	22	8	6.3	
WEST VIRGINIA																																
BECKLEY	2504	930.2	1016.6	79	58	68.7		85	24+	48	30	0	0	61	78	3.03	0.15	0.90	12	13	0.0	0	1.9	24	22	16	2	1	15	15	7.8	
CHARLESTON	939	982.4	1015.8	84	62	73.2	- 1.7	92	24	53	30+	1	0	61	71	2.46	- 3.21	0.46	13	11	0.0	0	1.2	23	37	26	9	3	12	16	6.7	
ELKINS	1970	947.2	1017.3	81	55	67.9	- 2.2	87	24	44	2	0	0	59	79	2.27	- 3.22	0.85	13	9	0.0	0	2.2	27	37	30	9	0	17	14	7.2	
HUNTINGTON	827	986.5	1015.8	85	64	74.5	- 0.7	94	24	54	2	4	0	64	75	4.72	0.22	1.36	15	11	0.0	0	0.7	23	23	28	9	4	14	13	6.5	
PARKERSBURG U	615			85	63	73.5	- 2.3	94	24	53	22+	3	0			2.71	- 1.40	0.81	12		0.0	0			35	W	9					59
WISCONSIN																																
GREEN BAY	687	990.2	1015.3	81	56	68.8	- 1.7	92	22	40	6	3	0	57	69	1.96	- 0.75	0.58	12	9	0.0	0	1.7	26	38	NW	23	9	14	8	5.4	61
LA CROSSE	651	991.5	1015.6	82	59	70.4	- 3.4	99	23	50	6	3	0	61	75	4.48	0.73	1.55	9	8	0.0	0	0.9	20	23	33	23+	11	11	9	5.4	
MADISON	858	984.1	1015.1	82	54	68.3	- 2.8	98	22	36	6	3	0	58	70	3.30	- 0.28	1.02	7	6	0.0	0	1.8	26	30	NE	17	9	17	5	4.9	76
MILWAUKEE	672	991.5	1016.5	79	59	68.9	0.2	93	13	40	1	3	0	59	74	2.64	- 0.31	1.48	8	6	0.0	0	0.8	19	34	SW	13	12	14	5	4.4	77
WYOMING																																
CASPER	5338	840.8	1014.	85	54	69.3	- 2.4	92	21+	45	13	4	0	45	47	1.16	0.16	0.45	8	9	0.0	0	1.8	25	30	31	25	11	12	8	5.0	
CHEYENNE	6126	817.1	1016.3	82	54	68.2	- 1.8	90	21+	49	13+	2	0	48	55	0.89	- 0.93	0.31	9	14	0.0	0	2.7	29	40	NW	1	7	15	9	5.8	69
LANDER	5563	832.4	1014.6	84	56	70.0	- 0.6	92	15	48	13	6	0	44	44	1.67	0.90	0.66	7	10	0.0	0	4.6	25	37	W	11	11	9	11	5.4	67
SHERIDAN	3964	881.5	1015.9	86	53	69.8	- 1.5	97	21	43	13	10	0	49	52	0.93	- 0.26	0.48	11	12	0.0	0	1.1	27	41	NW	29	9	15	7	4.9	73

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.
A Maximum hourly average.
B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average dew point	Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower			Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	°C.	C.	°C.		°C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
ALABAMA																																
BIRMINGHAM	189	994.6	1016.6	30.6	20.0	25.4	-2.2	33.3	18	15.0	31	5	0	21.1	81	124	- 7	40	14	14	0	0	0.2	22	18.8	N	3	4	10	17	6.9	43
HUNTSVILLE	183	993.6	1016.3	31.1	21.1	26.1	-1.2	33.9	2	14.4	31	9	0	20.6	74	113	5	33	10	12	0	0	0.3	8	17.0	36	10	8	12	11	6.2	
MOBILE	64	1008.5	1016.3	32.8	23.3	28.0	-0.1	36.7	20	21.7	30+	21	0	22.8	80	207	- 39	71	15	17	0	0	0.4	21	11.2	8	29	1	15	15	6.9	
MONTGOMERY	59	1009.1	1016.4	31.7	22.2	26.9	-0.7	34.4	3	20.0	31	18	0	22.8	83	127	- 10	49	12	12	0	0	0.5	24	12.5	N	3	5	10	16	6.8	63
ALASKA																																
ANCHORAGE PRK STRIP	26			17.2	10.0	13.7	-0.3	24.4	30	6.1	2	B 3	0			44	- 4	10	16		0	0										
ANCHORAGE	44	1011.9	1016.7	18.9	11.1	15.0		25.0	30	7.2	26	9	0	8.3	67	44	- 11	14	18	1	0	0	1.2	19	10.3	16	4+	1	0	30	9.1	27
ANNETTE	34	1014.9	1018.8	18.3	9.4	13.9	-0.2	27.8	31	6.1	23	7	0	10.0	80	85	- 68	44	12	0	0	0	1.2	18	7.6	12	26+	3	8	20	7.9	
BARROW	7	1016.3	1017.0	6.1	0.6	3.5	-0.4	16.7	7	- 1.7	14+	0	12	1.7	90	20	1	4	11	0	0	0	1.7	9	11.6	11	22	3	10	18	7.6	
BARTER ISLAND	12	1014.6	1016.4	4.4	0.0	2.3	-2.8	10.0	6	- 2.2	30	0	17	0.6	89	40	18	14	9	0	13	T	1.1	1	10.3	28	10	4	8	19	7.5	
BETHEL	38	1011.5	1017.1	15.0	7.2	10.9	-1.7	24.4	30+	0.0	19	5	1	6.1	75	29	- 23	17	10	0	0	0	1.8	25	13.0	19	16	2	2	27	8.7	
COLD BAY	29	1014.2	1018.1	11.7	7.2	9.3	-0.6	18.3	28	4.4	12	0	0	6.7	86	30	- 16	14	16	0	0	0	1.4	27	22.4	16	6	0	1	30	9.6	
FAIRBANKS	133	998.3	1015.2	21.1	10.6	15.7	0.3	26.7	30+	4.4	21	17	0	7.2	59	35	- 11	19	10	1	0	0	0.8	24	8.0	22	31	2	3	26	8.3	
JUNEAU	4	1016.9	1017.7	17.8	7.8	13.0	0.1	27.8	7	4.4	20	11	0	9.4	83	57	- 57	14	10	0	0	0	0.4	7	10.7	14	21+	7	5	19	7.5	37
KING SALMON	13	1013.5	1015.5	16.1	6.7	11.5	-1.2	23.9	27	2.2	20	6	0	7.2	78	49	- 3	19	14	0	0	0	1.1	18	13.4	13	8+	1	8	22	8.5	
KOTZEBUE	3	1013.9	1014.3	13.3	7.8	10.6	-0.9	20.6	28	2.8	19	0	0	7.8	83	45	8	18	11	0	0	0	2.3	27	15.6	31	18	3	6	22	7.9	
MC GRATH	102	1003.4	1016.0	17.8	8.3	13.1	-1.8	25.6	30	1.1	21	7	0	7.2	70	41	- 21	13	14	0	0	0	0.8	24	10.3	4	26	2	4	25	8.6	
NOME	4	1013.5	1014.4	10.6	5.6	8.1	-1.7	20.0	28+	0.0	19	0	1	6.1	87	75	17	19	18	0	0	0	2.3	21	15.6	12	23	1	7	23	8.3	26
ST. PAUL ISLAND	7	1015.9	1016.9	8.9	5.0	7.1	-0.4	12.8	31	0.6	22	0	0	6.1	95	68	11	35	21	0	0	0	1.8	21	14.3	22	23	0	0	31	9.8	
SHEMYA	37	1009.8	1013.5	8.9	6.7	7.9	-0.1	12.8	29	5.6	6	0	0	7.2	96	106	51	25	18	0	0	0	2.9	19	17.9	19	26	0	1	30	9.6	
YAKUTAT	9	1016.3	1017.4	13.3	7.2	10.2	-2.1	22.2	29	3.9	8	3	0	8.9	92	370	156	92	20	0	0	0	1.1	14	9.4	12	23	0	7	24	9.1	
ARIZONA																																
FLAGSTAFF	2131	792.4	1016.9	26.7	10.0	18.3	-0.3	30.6	5+	7.2	8	0	0	8.3	59	59	2	26	9	13	0	0	0.6	21	8.9	6	11+	6	8	17	6.8	
PHOENIX	340	971.6	1009.2	40.6	25.0	32.8	0.7	45.0	4	21.1	2	31	0	13.3	34	4	- 15	2	4	5	0	0	0.6	20	17.0Y	S	15	12	12	7	4.6	86
TUCSON	788	924.8	1010.3	36.7	22.8	29.4	-0.7	41.7	3	20.0	29+	30	0	13.3	43	54	2	18	11	12	0	0	1.1	18	24.1	SE	8	7	16	8	5.7	74
WINSLOW	1492	854.0	1014.3	32.8	16.7	24.8	-2.0	38.3	4	13.9	3	20	0	10.6	51	37	11	13	12	17	0	0	0.9	21	15.6	24	5	6	14	11	6.2	
YUMA	59	1002.0	1009.1	41.1	26.1	33.6	-1.1	45.0	4	22.8	1	31	0	13.3	33	1	- 5	1	1	1	0	0	2.4	20	20.1	SE	28	18	7	6	3.5	84
ARKANSAS																																
FORT SMITH	137	999.3	1015.5	33.9	21.7	27.9	-0.4	37.8	25+	14.4	30	25	0	21.7	72	50	- 21	22	8	7	0	0	0.8	8	19.7	NE	25	9	15	7	5.2	73
LITTLE ROCK	78	1006.4	1015.8	34.4	22.2	28.3	0.6	38.3	24	15.6	31	28	0	21.7	71	64	- 21	40	8	11	0	0	0.4	24	21.9	SE	24	9	14	8	5.6	74
TEXARKANA	113	1003.1	1016.0	34.4	22.2	28.3	0.2	37.8	18	15.6	31	27	0	21.7	71	77	- 21	37	5	6	0	0	0.9	19				13	12	6	4.4	
CALIFORNIA																																
BAKERSFIELD	151	995.3	1012.3	35.6	20.0	27.8	-1.3	40.6	6	15.6	27	26	0	9.4	35	8	7	8	1	0	0	0	1.7	32	9.8	32	25	26	2	3	1.5	
BISHOP	1252			35.0	12.8	23.7	-1.1	38.3	5	7.8	21	27	0			15	12	6	4		0	0						20	5	6	3.0	
BLUE CANYON	1609			25.0	14.4	19.6	-0.4	28.9	29+	9.4	27+	0	0			2	- 1	1	2		0	0			8.9	16	21	26	3	2	1.6	
BURBANK	221	987.8	1013.3	30.0	15.0	22.5	-0.7	35.6	5	12.2	27	8	0	13.3	65	1	1	1	2	0	0	0	2.7	15	7.2	17	11	23	6	2	2.2	
EUREKA U	13			15.0	10.6	12.7	-0.8	18.9	26	8.9	22+	0	0			T	- 3	T	0		0	0			10.3	NW	21	3	10	18	7.5	46
FRESNO	100	1000.7	1012.3	35.6	16.1	26.1	-1.3	40.0	15	11.7	11	29	0	12.2	45	T	0	T	0	0	0	0	2.1	31	8.0	NW	26+	26	3	2	1.4	93
LONG BEACH	10	1013.2	1014.5	25.6	15.0	20.1	-1.9	31.7	30	11.7	27+	0	0	12.8	71	T	0	T	0	0	0	0	1.6	26	9.4	28	27	16	12	3	3.6	
LOS ANGELES	30	1010.5	1014.2	22.2	15.6	18.7	-1.9	30.6	30	13.3	4	0	0	13.3	75	T		T	0	0	0	0	3.2	26	11.2Y	W	28+	9	15	7	4.9	
LOS ANGELES U	82			26.7	15.6	21.2	-1.6	32.8	30	12.8	2	1	0			T	0	T	0		0	0			7.6	W	26	21	8	2	2.9	72
MT SHASTA R	1080			29.4	9.4	19.3	-0.7	33.9	16+	3.3	28	9	0			6	- 1	5	3		0	0										
OAKLAND	2	1015.6	1015.6	20.0	13.9	16.9	-1.1	23.9	22	11.7	6+	0	0	12.2	77	T	0	T	1	1	0	0	4.1	29	10.7	30	22+	16	12	3	3.4	
RED BLUFF	104	999.7	1011.9	36.1	18.9	27.4	-1.4	42.2	5	14.4	27+	26	0	8.9	34	T	- 1	T	0	0	0	0	1.2	17	11.2	S	19	27	1	3	1.2	95
SACRAMENTO	5	1011.9	1012.7	33.3	13.9	23.6	-0.6	38.9	15	10.6	7	21	0	11.1	54	T	0	T	0	1	0	0	3.1	21	11.2	SW	25	27	2	2	1.2	96
SANDBERG R	1377			28.3	16.1	22.4	-1.1	32.8	5	11.7	26	1	0			12	12	12	1		0	0			10.7	34	29+	25	3	3	1.9	
SAN DIEGO	4	1013.2	1014.3	22.8	16.7	19.8	-1.3	28.3	30	15.0	11	0	0	14.4	75	1	0	1	1	0	0	0	2.2	29	8.5	NW	31	10	16	5	4.7	68
SAN FRANCISCO	2	1014.9	1015.7	20.0	11.1	15.7	-1.3	25.0	22	8.9	5	0	0	10.0	76	T		T	0	1	0	0	5.2	30	15.6	W	10	22	7	2	2.9	
SAN FRANCISCO U	16			16.7	11.7	14.1	-0.8	20.6	26	8.9	5	0	0			1	0	1	1		0	0			13.9	W	9					67
SANTA CATALINA	478			25.0	15.6	20.2	-0.2	33.3	5	12.2	23+	3	0			1	0	1	1	0	0	0						23	5	3	2.5	
SANTA MARIA	72			22.2	11.1	16.4	-0.3	28.3	30	7.2	10	0	0			T	- 1	T	1		0	0						15	15	1	3.5	
STOCKTON	7	1012.5	1013.5	34.4	15.6	25.1	-0.6	40.0	5	11.7	1	25	0	12.2	50	T		T	0	0	0	0	3.4	30	9.4	27	19	26	4	1	1.3	
COLORADO																																
ALAMOSA	2297			26.7	10.0	18.3	0.1	30.0	21+	5.6	9	0	0			39	11	11	15		0	0						7	19	5	5.3	
COLORADO SPRINGS	1873	815.8	1015.6	27.8	13.9	20.8	-0.6	32.8	21	9.4	31	2	0	11.7	61	128	67	23	16	19	0	0	0.9	3	14.3	10	14	4	16	11	6.1	
DENVER	1610	840.2	1014.3	30.6	15.0	22.6	-0.1	35.6	15	11.1	2	14	0	11.1	56	163	124	61	17	13	0	0	0.7	20	25.0	SW	25	7	12	12	5.9	68
GRAND JUNCTION	1480	854.0	1012.8	33.9	18.3	26.1	0.4	37.2	5	13.9	2	25	0	10.0	41	23	8	7	10	11	0	0	1.1	14	19.2	NW	7	8	14	9	5.4	69
PUEBLO	1428	858.5	1013.8	33.3	16.1	24.9	0.2	38.9	21	12.2	10	23	0	12.2	50	61	15	39	8	14	0	0	0.7	9	15.6	N	23	9	13	9	5.4	77

See footnotes at end of table

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
CONNECTICUT																																
BRIDGEPORT	2	1015.6	1016.1	26.7	16.7	21.8	-1.4	32.2	25	12.8	20+	1	0	15.6	71	101	6	56	9	5	0	0	1.6	23	13.0	33	19	10	9	12	5.4	
HARTFORD	52	1008.5	1015.0	29.4	15.0	22.4	-0.6	37.8	14	9.4	7	9	0	13.9	62	43	- 49	34	9	3	0	0	1.3	23	10.3	SW	28+	10	8	13	5.8	65
NEW HAVEN	2			26.7	16.7	21.7	-0.4	31.1	26	11.7	7	0	0			55	- 32	24	8		0	0			9.8	SE	18	11	10	10	5.1	71
DELAWARE																																
WILMINGTON	24	1012.5	1015.7	28.9	18.3	23.6	-0.8	32.8	25	13.3	2	4	0	17.2	71	98	- 10	72	9	4	0	0	1.1	23	11.2	34	28	9	8	14	5.9	
DIST.OF COLUMBIA																																
WASH NATL AP	4	1013.2	1015.7	31.1	20.0	25.7	0.0	36.1	25	14.4	21	14	0	18.3	68	76	- 30	37	9	8	0	0	1.3	17	21.0	N	18	4	17	10	6.0	61
FLORIDA																																
APALACHICOLA U	4			30.6	23.9	27.1	-0.4	33.9	18	21.7	13	4	0			169	- 33	47	14	8	0	0			13.0	E	21	5	12	14	6.9	54
DAYTONA BEACH	9	1016.6	1018.0	30.6	21.1	25.9	-0.8	33.3	5	18.3	23	4	0	20.6	78	94	- 77	21	13	20	0	0	1.3	17	14.8	29	15	2	17	12	6.5	
FORT MYERS	5	1017.3	1017.8	31.7	22.8	27.3	-0.6	33.9	1	21.1	11+	16	0	22.8	83	306	75	103	21	29	0	0	0.8	13	13.4	13	10	0	19	12	6.8	
JACKSONVILLE	7	1016.3	1017.2	32.8	22.8	27.7	-0.4	35.6	19	18.3	23	19	0	21.7	76	69	-126	27	16	15	0	0	1.3	21	18.8	SW	16	6	14	11	6.3	58
KEY WEST	1	1016.3	1017.0	31.7	27.2	29.6	1.1	33.3	21	25.0	29+	12	0	23.9	71	75	- 31	58	9	12	0	0	3.1	12	12.1	E	27	2	22	7	6.0	78
LAKELAND U	65			31.7	22.2	27.0	-0.6	35.0	1	21.1	31+	22	0			185	- 26	44	24		0	0						0	21	10	7.0	62
MIAMI	2	1017.3	1017.6	31.1	23.3	27.4	-0.3	33.3	7	21.1	20	8	0	22.2	76	167	- 5	49	18	18	0	0	2.0	13	10.3	4	30+	3	17	11	6.6	
ORLANDO	33	1013.9	1018.0	31.7	22.2	26.9	-1.1	34.4	3	20.0	23	20	0	21.7	82	293	90	68	20	20	0	0	1.4	18	12.5	14	24	5	14	12	6.2	
PENSACOLA	34	1012.5	1016.6	31.7	22.8	27.1	-0.5	36.1	20	21.7	30+	10	0	22.8	80	124	- 80	31	15		0	0	0.7	22	14.3	NE	12					54
TALLAHASSEE	18	1014.6	1017.1	32.8	22.2	27.3	-0.1	36.1	19	18.3	23	21	0	21.1	76	205	1	108	17	20	0	0	0.6	20	10.3	18	12	1	18	12	6.9	
TAMPA	6	1017.3	1017.6	31.1	22.8	26.8	-0.7	33.3	2	21.1	23+	9	0	21.7	79	246	27	64	21	27	0	0	0.8	19	10.3	11	25+	2	16	13	6.7	51
WEST PALM BEACH	5	1017.3	1018.1	32.2	22.2	27.2	-0.9	33.9	31	20.0	22+	15	0	21.7	75	286	117	86	17	16	0	0	1.9	14	16.1	32	15	3	15	13	6.5	
GEORGIA																																
ATHENS	244	988.2	1016.4	31.7	20.6	26.0	-0.5	35.0	24	17.8	17	12	0	21.1	81	112	- 15	42	10	11	0	0	0.9	23	15.6	30	3	3	15	13	6.6	
ATLANTA	308	980.7	1016.8	29.4	20.0	24.8	-1.3	32.2	18	16.7	17	1	0	20.0	80	117	- 3	39	11	12	0	0	1.1	24	14.3	N	3	4	14	13	7.2	43
AUGUSTA	44	1010.8	1016.0	32.2	20.6	26.2	-0.9	35.6	4	17.8	22+	18	0	21.1	81	137	23	52	12	14	0	0	1.0	18	12.5	22	27	2	17	12	6.9	
COLUMBUS	117			32.2	21.1	26.5	-0.8	34.4	4	20.0	22+	15	0	21.7	82	139	- 10	40	12		0	0	0.3	25	15.6	22	6	4	7	20	7.2	
MACON	108	1004.4	1017.1	31.7	21.1	26.3	-1.4	34.4	18	17.8	22	14	0	21.7	83	201	58	68	17	15	0	0	0.9	22	13.9	NW	16	2	13	16	7.2	56
ROME	194			31.1	18.9	25.1	-1.1	33.3	24+	13.3	31	5	0			155	31	41	11		0	0										
SAVANNAH	14	1014.9	1016.7	31.7	21.1	26.6	-0.8	33.9	19+	17.8	3	14	0	21.7	80	189	22	40	18	23	0	0	1.2	20	13.4	S	9	7	15	9	6.0	65
HAWAII																																
HILO	9	1015.2	1016.3	28.3	19.4	24.0	0.2	31.1	12	17.8	8+	0	0	18.9	76	182	- 68	45	27	0	0	0	0.2	20	9.4	13	12+	2	14	15	7.0	53
HONOLULU	2	1015.6	1015.9	30.0	23.3	26.6	0.6	31.7	21	21.1	29+	0	0	18.9	66	35	24	14	9	0	0	0	5.0	6	11.6	NE	20	5	17	9	6.0	86
KAHULUI	15	1013.2	1015.4	30.0	20.0	25.0	-0.7	32.8	31+	14.4	30	2	0			19	8	8	11	0	0	0	5.9	6	15.2	NE	14	8	16	7	5.6	70
LIHUE	31	1011.9	1017.1	27.8	22.8	25.3	0.0	28.9	31+	19.4	30+	0	0	19.4	72	46	- 4	15	19	0	0	0	4.6	6	9.8	E	9	4	16	11	6.2	55
IDAHO																																
BOISE	865	915.7	1013.7	31.7	14.4	22.9	-1.1	37.2	14	7.2	22	17	0	7.2	39	6	1	3	4	6	0	0	0.5	26	14.8	SE	20+	18	8	5	3.1	83
IDAHO FALLS 42NW R	1460			30.0	8.3	19.1	-1.6	35.0	29+	2.2	13	6	0			3	- 8	3	2				0.3	22	10.7	SSW	12					
IDAHO FALLS 46W R	1503			28.9	8.9	18.9	-1.6	33.9	29	2.2	13	6	0			2	- 5	1	3		0	0	0.9	22	17.4	SSW	26					
LEWISTON	431			32.2	15.0	23.4	0.2	38.9	31+	8.9	22	19	0			21	10	15	7		0	0						19	9	3	3.0	
POCATELLO	1358	864.9	1014.6	30.0	10.6	20.3	-2.1	34.4	15+	2.8	13	9	0	7.2	48	30	17	25	4	8	0	0	1.6	22	14.8	W	1	15	10	6	4.0	82
ILLINOIS																																
CAIRO U	96			31.7	21.7	26.7	-0.6	38.3	24	16.1	30	10	0			110	29	51	7		0	0			11.6	NE	2	6	15	10	5.8	76
CHICAGO O HARE	201	991.5	1015.7	27.8	13.9	20.8	-1.8	34.4	23	4.4	1	2	0	15.6	72	93	7	45	10	5	0	0	0.6	24	13.0	34	17	8	16	7	5.4	
CHICAGO MIDWAY	185	993.6		28.3	17.2	22.6	-1.6	34.4	23	10.0	1	3	0	15.0	64	117	31	46	9	5	0	0	0.7	21	14.3	NW	13	9	13	9	5.5	76
MOLINE	177	993.9	1015.1	29.4	18.3	23.8	-0.4	36.7	23	12.2	29	4	0	17.8	70	121	39	24	9	8	0	0	0.9	23	21.5	NW	13	7	12	12	5.7	72
PEORIA	199	992.2	1015.9	28.9	17.2	23.2	-1.3	35.6	23	12.8	1	5	0	17.8	72	84	- 6	28	8	8	0	0	0.5	22	13.9	NW	9	8	11	12	5.8	64
ROCKFORD	221	988.5	1015.0	29.4	16.1	22.7	-0.7	37.2	23	8.3	6	3	0			97	- 8	66	6	6	0	0	1.2	24	10.3	33	26+	8	17	6	4.9	
SPRINGFIELD	179	993.9	1015.8	29.4	17.8	23.4	-2.1	35.6	23	13.3	30+	4	0	17.8	72	52	- 37	19	9	6	0	0	0.7	21	17.0	NW	17	10	11	10	5.5	72
INDIANA																																
EVANSVILLE	116	1002.0	1016.0	30.6	18.3	24.6	-1.4	36.1	24	10.6	30	5	0	18.9	73	155	70	75	9	7	0	0	0.4	32	11.6	S	25	9	11	11	5.6	71
FORT WAYNE	241	986.5	1016.0	27.8	15.0	21.3	-2.1	34.4	24	10.6	30+	2	0	15.0	70	87	2	38	12	7	0	0	0.8	26	19.2	N	16	9	16	6	5.5	74
INDIANAPOLIS	241	987.5	1016.1	28.3	17.2	22.7	-1.3	35.0	24	10.6	30	3	0	17.2	71	81	- 8	24	8	8	0	0	0.4	29	8.5	5	2	7	16	8	5.4	78
SOUTH BEND	236	988.2	1015.8	27.8	14.4	21.1	-2.1	34.4	22	9.4	30+	2	0	14.4	66	56	- 32	30	9	8	0	0	0.8	26	9.4	18	31+	11	13	7	5.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)				
												No. of days							No of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 C or lower	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
IOWA																																
BURLINGTON	212			28.3	17.8	23.1	-1.7	34.4	23	13.3	29	3	0	18.3	76	99	13		10	7	0		0.8	27	10.3	36	6	10	14	7	5.3	
DES MOINES	286	981.4	1015.5	29.4	18.3	23.8	-0.8	37.2	23	12.2	28	6	0	17.8	71	49	- 29	23	9	10	0	0	0.6	21	13.0	NW	2	12	9	10	5.3	69
DUBUQUE	325			28.3	16.1	22.3	-0.3	36.1	23	10.6	6	3	0			122	33	63	8		0	0						7	17	7	5.5	
SIOUX CITY	334	976.0	1014.8	30.0	18.3	24.0	-1.2	35.0	23+	12.2	28+	8	0	17.8	71	55	- 24	13	11	12	0	0	0.8	17	17.0	NW	15	7	14	10	5.6	62
WATERLOO	265	983.7	1015.0	27.2	15.0	21.3	-1.9	35.0	23	8.9	29	2	0	17.2	78	112	16	60	10	7	0	0	0.6	21	11.2	9	16+	10	12	9	5.5	
KANSAS																																
CONCORDIA	448	962.4	1014.2	31.1	19.4	25.3	-1.6	38.3	23	14.4	29	11	0	17.8	66	82	10	27	12	15	0	0	2.1	14	16.1	S	4	15	10	6	4.0	81
DODGE CITY	787	925.5	1014.1	32.8	20.0	26.2	-0.6	38.3	23	15.0	29	18	0	16.1	59	86	27	23	7	9	0	0	2.0	16	16.1	NE	4	15	7	9	4.7	82
GOODLAND	1111	890.6	1014.5	32.2	16.7	24.4	-0.3	39.4	22	12.2	31	16	0	14.4	59	44	- 24	15	9	13	0	0	2.0	16	22.8	33	3	13	13	5	4.3	
TOPEKA	267	983.7	1015.0	30.0	20.0	25.0	-1.6	36.7	23	15.0	29	6	0	20.0	75	85	- 7	30	8	10	0	0	1.3	14	13.0	SW	6	10	10	11	5.5	74
WICHITA	403	967.5	1014.1	33.9	21.7	27.7	0.6	39.4	13	13.9	29	19	0	18.9	61	92	- 1	55	8	8	0	0	2.2	15	19.7	W	6	11	11	9	5.0	78
KENTUCKY																																
COVINGTON	265	985.1	1016.1	28.9	17.2	22.9	-1.2	37.2	24	11.1	30	3	0	16.7	71	112	21	46	8	6	0	0	0.5	30	13.4	1	24	7	15	9	5.7	
LEXINGTON	294	981.7	1016.5	28.9	17.2	23.2	-2.1	36.1	24	10.6	30	2	0	16.7	69	92	- 9	28	13	10	0	0	0.4	24	10.3	32	2	7	15	9	5.7	
LOUISVILLE	144	998.6	1015.7	30.0	18.9	24.6	-0.7	36.1	24	12.8	30	4	0	18.3	71	123	38	47	15	13	0	0	0.3	34	14.8	W	9	7	14	10	5.8	72
LOUISIANA																																
ALEXANDRIA	28	1012.2	1016.4	34.4	21.1	27.8	-0.1	36.7	11	18.9	31+	29	0	21.7	77	109	- 25	32	11	15	0	0	0.5	23	13.0	1	17	7	18	6	5.5	
BATON ROUGE	20	1013.9	1016.7	33.3	22.2	27.6	-0.6	34.4	31+	20.0	18	27	0	22.2	80	114	- 45	26	16	20	0	0	0.6	25	15.6	36	20	3	19	9	6.2	
LAKE CHARLES	4	1015.2	1016.1	34.4	21.7	28.2	0.3	36.7	28	20.0	15	30	0	21.7	76	47	-138	20	7	16	0	0	0.7	24	13.9	3	14	2	22	7	6.3	
NEW ORLEANS	1	1015.2	1016.2	32.2	22.2	27.2	-0.3	34.4	21	18.9	18	17	0	22.2	77	134	- 37	56	12	16	0	0	0.6	24	13.0	35	27	2	18	11	6.5	
SHREVEPORT	77	1006.4	1015.5	33.9	22.8	28.3	-0.4	36.7	23	20.0	31+	29	0	21.1	69	38	- 57	23	3	3	0	0	1.2	21	13.0	14	15	13	15	3	4.1	82
MAINE																																
CARIBOU	190			22.8	10.0	16.4	-1.7	27.8	5	2.8	7	0	0			94	- 8	36	14		0	0						3	11	17	7.2	
PORTLAND	19	1011.9	1014.4	26.1	11.7	19.1	-1.0	34.4	14	4.4	7	1	0	12.2	68	15	- 57	4	8	1	0	0	1.6	23	10.3	NW	6	9	13	9	5.6	67
MARYLAND																																
BALTIMORE	45	1010.2	1015.6	31.1	18.9	24.9	0.0	36.7	25	12.2	21+	12	0	18.3	72	66	- 41	39	7	8	0	0	0.8	20	13.4	W	3	4	16	11	6.0	52
MASSACHUSETTS																																
BLUE HILL OBS R	192			27.2	15.6	21.5	-0.1	34.4	14	11.1	20	3	0			23	- 60	17	5		0	0			15.2	S	3+					67
BOSTON	5	1013.5	1014.6	26.7	16.7	21.7	-1.5	33.9	25+	12.2	7	2	0	14.4	68	14	- 59	8	7	3	0	0	2.3	24	12.1	SW	24	13	6	12	5.4	70
NANTUCKET	13	1015.2	1015.5	23.3	15.6	19.7	-0.3	27.2	26	10.6	7	0	0	16.1	82	47	- 22	38	6	5	0	0	2.5	21	11.6	W	11+	6	6	19	6.9	60
PITTSFIELD	357			25.6	11.1	18.4	-1.5	34.4	14	6.1	7+	1	0			90	- 34	52	10		0	0										
WORCESTER	301	979.3	1015.6	25.6	14.4	20.1	-0.9	33.3	14	9.4	20	1	0	10.6	56	26	- 66	20	7	3	0	0	2.5	26	13.9	30	26	13	6	12	5.5	
MICHIGAN																																
ALPENA	210			24.4	8.9	16.6	-2.2	31.1	13	1.1	20	0	0			26	- 46	11	11		0	0			9.8	W	27	8	13	10	5.6	74
DETROIT	189	993.2	1015.7	27.2	15.6	21.3	-2.2	35.0	24	8.3	1	1	0	13.9	63	76	4	38	8	5	0	0	0.4	29	13.0	NW	28	6	16	9	5.4	72
DETROIT M WAYNE CO	193	991.9	1015.6	27.8	13.9	20.7	-2.1	35.6	24	5.0	1	4	0	13.3	63	60	- 8	28	6	5	0	0	0.8	24				9	13	9	5.6	
DETROIT WILLOW RUN	217	988.2	1016.1	27.2	12.8	19.8	-3.7	33.9	24	5.6	1	2	0	11.7	61	47	- 21	16	5	5	0	0	0.9	24	11.2	24	16+	8	15	8	5.4	
FLINT	235	988.2	1015.6	27.8	12.8	20.2	-0.9	33.9	24+	4.4	1	3	0	12.2	61	42	- 32	15	5	4	0	0	0.9	25	8.9	24	13+	10	11	10	5.7	
GRAND RAPIDS	239	987.1	1015.8	27.8	14.4	21.1	-1.3	35.6	23	8.3	1	2	0	12.8	63	50	- 20	16	10	7	0	0	0.9	25	13.9	W	23	8	15	8	5.4	66
HOUGHTON LAKE	351	974.6	1016.3	24.4	10.0	17.2		29.4	23	0.6	6	0	0	11.1	67	32	- 24	26	6	5	0	0	1.2	26	9.4	34	28	12	12	7	5.3	
LANSING	256	984.4	1015.8	28.3	12.2	20.3	-1.7	34.4	23+	3.9	20	4	0	13.3	66	13	- 53	4	8	2	0	0	1.2	27	14.8	NW	24	8	15	8	5.3	68
MARQUETTE U	206			22.2	12.2	17.3	-2.0	32.2	23	8.3	20+	1	0			53	- 28	22	8		0	0			13.4	SW	13	7	16	8	5.7	72
MUSKEGON	191	992.9	1015.4	27.2	15.6	21.2	-0.7	34.4	23	9.4	6	1	0	13.9	65	53	- 8	20	9	8	0	0	0.9	24	13.0	33	23	10	17	4	5.1	
SAULT STE MARIE	220	988.8	1015.2	21.1	9.4	15.1	-3.1	26.7	13+	2.2	6	0	0	10.6	77	139	76	71	12	9	0	0	1.6	28	12.5	30	2	8	13	10	5.9	62
MINNESOTA																																
DULUTH	435	964.4	1015.7	22.8	10.6	16.6	-2.0	30.6	23+	5.0	6	0	0	11.1	73	91	1	37	10	7	0	0	0.4	31	13.0	W	13	9	13	9	5.9	67
INTERNATIONAL FALLS	359	971.9	1014.8	23.9	11.1	17.3	-1.4	32.2	23	5.6	11	1	0	12.8	77	54	- 35	12	11	9	0	0	1.4	27	14.3	29	13	6	13	12	6.6	
MINNEAPOLIS	254	984.8	1014.8	27.2	15.6	21.4	-1.0	35.0	23	10.0	10	2	0	14.4	67	119	36	38	10	10	0	0	0.1	5	13.9	N	23	8	14	9	5.5	72
ROCHESTER	395	968.5	1015.6	26.1	15.0	20.6	-1.8	33.3	23+	10.6	10	2	0	15.6	75	119	25	52	12	9	0	0	1.4	24	11.2	20	1	11	12	8	5.0	
ST CLOUD	315	977.7	1014.9	26.7	14.4	20.5	-1.2	33.3	23	8.3	10	2	0		72	118	36	30	12		0	0						9	11	11	5.4	
MISSISSIPPI																																
JACKSON	94	1004.7	1016.3	34.4	20.6	27.5	-0.4	37.2	18	17.2	31	27	0	21.1	75	49	- 72	18	8	13	0	0	0.3	25	9.8	E	21	2	19	10	6.1	62
MERIDIAN	88	1005.8	1016.7	32.8	20.6	26.4	-1.1	34.4	18+	16.7	31	22	0	21.7	80	115	- 43	69	9	15	0	0	0.4	25	10.7	36	7	2	20	9	6.5	
VICKSBURG U	71			32.8	22.8	27.6	-0.1	34.4	22+	20.0	31	23	0			68	- 31	30	9		0	0			15.2	NE	10	11	15	5	5.1	79

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days			Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)				
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	No. of days: .25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
MISSOURI																																
COLUMBIA	237	987.8	1015.4	29.4	20.0	24.8	-1.2	35.0	24+	14.4	29	7	0	18.3	71	81	- 6	27	11	6	0	0	0.6	18	15.2	NW	9	8	15	8	5.5	71
KANSAS CITY	226	988.5	1014.9	30.6	21.1	25.8	-1.7	36.1	23	16.7	29	7	0	18.9	67	250	169	81	12	12	0	0	1.0	14	12.5	NW	17	7	14	10	5.8	76
SAINT JOSEPH	247			30.6	20.0	25.3	-1.1	34.4	23+	13.3	29	10	0	19.4	76	244	163	69	11	11	0	0	0.8	16	13.0	29	17	12	15	4	4.6	
ST LOUIS	163	995.9	1016.1	30.0	19.4	24.9	-0.7	37.8	24	15.6	30+	8	0	18.3	68	81	- 3	34	7	4	0	0	1.0	25	16.1	W	9	11	11	9	5.3	71
SPRINGFIELD	386	971.9	1016.1	30.6	18.3	24.6	-1.4	35.0	24+	11.1	30+	7	0	20.0	78	49	- 50	21	9	7	0	0	1.4	15	13.4	SW	9+	12	10	9	5.2	57
MONTANA																																
BILLINGS	1087	893.3	1015.1	30.0	13.9	21.9	-1.8	35.0	21	9.4	13	9	0	10.6	54	33	10	21	9	8	0	0	0.7	27	20.1	W	29	15	10	6	4.2	77
GLASGOW	696			28.3	15.0	21.7	0.2	33.9	28+	10.0	13+	5	0			23	- 11	11	7		0	0						11	14	6	4.9	
GREAT FALLS	1116	890.6	1015.1	28.9	13.3	20.9	0.1	34.4	28	8.3	23	3	0	9.4	51	26	- 6	7	10	11	0	0	1.4	23	14.3	SW	20+	14	14	3	3.9	88
HAVRE	787			27.8	12.8	20.2	-0.9	33.9	27	8.3	1	2	0			96	64	29	8		0	0			20.1	W	20+	13	12	6	4.4	86
HELENA	1167	883.2	1016.4	28.3	11.1	19.8	-0.4	32.2	28+	5.6	13	2	0	9.4	55	15	- 11	5	9	12	0	0	0.9	28	17.0	S	21+	15	11	5	3.8	81
KALISPELL	904	913.0	1016.5	27.2	8.9	18.1	-0.7	33.9	26	3.3	23+	5	0	8.9	60	22	- 5	9	6	6	0	0	0.7	18	12.5	32	20	15	12	4	3.5	
MILES CITY	801	923.5	1014.5	31.1	15.6	23.4	-0.6	35.6	28+	10.6	13	14	0	12.2	55	91	57		10	10	0		0.6	1								
MISSOULA	972	906.5	1017.3	27.2	9.4	18.3	-1.1	31.1	31+	3.3	23	0	0	9.4	63	40	19	18	10	11	0	0	0.9	31	15.2	SW	27+	17	11	3	3.5	81
NEBRASKA																																
GRAND ISLAND	561	950.2	1015.0	30.6	17.2	23.8	-1.3	38.3	23	12.2	29	9	0	16.7	68	60	- 4	10	13	13	0	0	1.2	16	14.3	25	5	12	10	9	4.5	
LINCOLN U	351			29.4	19.4	24.3	-2.4	36.7	23	15.0	28+	5	0			107	24	31	15		0	0			19.2	NE	16	9	12	10	5.4	63
NORFOLK	471			29.4	17.8	23.4	-1.6	36.7	16+	11.7	28	6	0			98	21	66	12		0	0						9	14	8	5.3	
NORTH PLATTE	846	918.1	1013.8	30.0	16.1	22.8	-1.7	35.6	22	11.7	4	6	0	16.7	73	170	106	32	16	17	0	0	1.3	12	19.7	N	4	9	17	5	4.8	71
OMAHA	298	980.4	1015.1	29.4	18.9	24.3	-1.6	35.6	23	13.9	28	6	0	19.4	76	112	26	33	14	10	0	0	0.9	17	12.5	N	30+	11	10	10	5.4	70
SCOTTSBLUFF	1206	881.5	1014.4	30.6	15.6	23.1	-0.7	36.1	16	12.2	3+	11	0	14.4	64	52	15	20	9	16	0	0	1.2	10	14.3	31	20	8	18	5	5.0	
VALENTINE	789			30.6	16.1	23.2	-0.9	40.0	22	10.6	3	9	0			61	2	34	9		0	0			18.8	N	5	12	13	6	4.8	78
NEVADA																																
ELKO	1539	846.9		31.1	8.3	19.8	-1.1	35.6	15	2.2	11	12	0			16	6	4	9	8	0	0	0.4	22	13.0	22	25+	13	9	9	4.5	
FLY	1906	812.1	1013.3	28.9	8.9	18.6	-1.1	32.2	28	3.3	13+	1	0	1.7	38	28	12	15	6	10	0	0	2.7	20	14.8	SW	19	11	8	12	5.2	77
LAS VEGAS	659	935.7	1009.9	38.9	24.4	31.5	-0.6	42.2	5+	20.0	13	30	0	3.9	21	7	- 6	4	4	5	0	0	2.3	21	14.8	SW	6	15	9	7	4.1	80
RENO	1342	867.3	1014.8	31.7	6.7	18.9	-0.9	35.6	6	0.6	10	14	0	5.6	45	9	2	5	4	6	0	0	0.8	27	12.5	NW	24	21	7	3	2.6	95
WINNEMUCCA	1310	868.6	1013.8	31.7	10.6	21.2	-0.4	36.1	29	5.0	29+	16	0	2.2	31	9	2	5	6	5	0	0	0.3	2	17.9	W	25	18	6	7	3.5	75
NEW HAMPSHIRE																																
CONCORD	104	1002.4	1014.8	27.2	10.6	18.8	-2.1	35.6	14	1.7	7	1	0	12.2	67	44	- 43	20	10	3	0	0	0.9	23	10.3	NW	1	10	11	10	5.5	66
MT WASHINGTON OBS	1909			10.6	3.9	7.3	-2.2	15.0	13+	- 2.2	6	0	2			112	- 58	28	17	3	0	0			34.0Y	W	14+	2	8	21	8.0	30
NEW JERSEY																																
ATLANTIC CITY	20	1013.9	1016.2	28.3	17.2	22.7	-1.3	36.1	25	7.8	2	3	0	17.2	75	66	- 28	37	7	5	0	0	1.9	20	13.0	31	10	8	8	15	6.2	59
ATLANTIC CITY U	3			25.6	20.0	22.8	-0.7	31.1	15	15.6	2	0	0			125	27	52	6						21.5	W	28					
NEWARK	3	1014.6	1015.5	29.4	19.4	24.3	-0.9	35.0	14	15.6	2	7	0	14.4	57	44	- 49	16	10	5	0	0	1.0	21	17.4	20	17	10	11	10	5.4	
TRENTON U	17			28.9	18.3	23.7	-0.7	33.3	25	14.4	21	4	0			143	37	65	7		0	0			14.8	SW	17	8	10	13	6.0	62
NEW MEXICO																																
ALBUQUERQUE	1618	840.8	1013.1	33.3	17.8	25.5	-0.3	36.1	21+	13.3	4	24	0	10.6	44	42	11	18	9	12	0	0	0.9	13	17.0	SW	8	9	17	5	4.8	74
CLAYTON	1515			30.6	16.1	23.2	-0.4	35.0	23	13.3	4+	10	0			74	15	34	11		0	0						11	12	8	4.9	
RATON	1944			28.3	12.2	20.4	-0.6	32.8	20	8.9	9	2	0			67	6	18	14		0	0						6	16	9	5.6	
ROSWELL	1102			35.6	18.3	27.2	1.3	38.9	19+	14.4	4	28	0			38	- 7	18	6	7	0	0			12.1	2	3	14	15	2	4.0	
SILVER CITY	1638			32.8	17.2	24.9	-0.2	36.1	8+	15.0	30+	19	0			52	- 1	20	16		0	0						8	21	2	4.6	
NEW YORK																																
ALBANY	84	1004.4	1015.0	28.3	12.8	20.5	-1.8	34.4	14	7.2	7	3	0	12.8	62	89	1	43	9	5	0	0	1.7	25	13.9	NW	26	10	8	13	5.8	59
BINGHAMTON	485	958.0	1015.9	25.0	13.3	19.3	-0.9	31.7	14	6.7	21	0	0	12.2	67	57	- 38	14	9	6	0	0	1.4	28	13.0	W	9	3	15	13	6.5	79
BUFFALO	215	990.2	1015.6	25.6	14.4	19.8	-1.2	31.7	9	7.8	20	0	0	12.8	68	94	28	36	9	4	0	0	1.6	24	17.0	SW	9	9	9	13	6.2	68
NEW YORK U	40	1012.9	1016.0	28.3	18.3	23.5	-1.4	33.9	14	14.4	20	4	0	14.4	62	34	- 60	13	8	4	0	0	0.7	19	8.9	SE	2	12	10	9	4.7	69
J.F. KENNEDY	5	1014.9	1015.6	27.2	17.8	22.3	-2.1	32.8	25	13.3	7	1	0	16.7	73	62	- 40	28	10	7	0	0	2.0	20	11.2	20	26+	8	11	12	5.7	
NEW YORK LA GUARDIA	3	1013.9	1015.5	28.9	20.6	24.8	-0.1	35.0	14	16.7	20	4	0	15.0	59	34	- 60	14	9	5	0	0	1.2	20	12.1	S	2	11	10	10	5.2	
ROCHESTER	167	996.3	1016.1	26.7	13.3	19.7	-2.3	32.8	24+	7.8	21+	2	0	11.7	62	37	- 35	15	7	3	0	0	2.1	26	16.1	SW	9	7	15	9	5.6	74
SYRACUSE	125	1000.3	1014.9	26.1	13.3	19.7	-2.6	32.8	24+	7.2	20	2	0	12.2	64	34	- 44	19	8	2	0	0	1.7	28	18.8	S	7	10	13	8	5.4	59
NORTH CAROLINA																																
ASHEVILLE	652	942.4	1017.4	27.8	16.7	22.3	-0.1	31.1	25+	14.4	22+	0	0	18.3	85	114	- 35	36	15	15	0		0.4	35	10.3	36	5	2	12	17	7.2	53
CAPE HATTERAS R	2	1016.3	1016.6	28.3	22.2	25.3	-0.3	30.6	26+	17.8	3	0	0	21.7	82	254	98	122	15	10	0	0	1.9	21	13.0	SW	19	5	11	15	6.7	69
CHARLOTTE	224	989.2	1016.1	30.6	20.6	25.4	-0.8	33.3	24+	18.9	30+	11	0	20.6	79	157	33	62	14	12	0	0	0.8	19	15.6	SW	7	3	14	14	6.9	61

See footnotes at end of table

CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)				
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No of days: Max 32.2 °C or above	No of days: Min. 0 C or lower	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	No of days: .25 mm or more	No of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile (1.6 kilometers): Direction	Fastest mile (1.6 kilometers): Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
NORTH CAROLINA																																
GREENSBORO	273	985.4	1016.5	29.4	19.4	24.3	-0.9	32.8	25+	15.6	2+	3	0	20.6	85	231	109	55	15	12	0	0	0.6	19	17.9	NW	4	5	10	16	6.8	45
RALEIGH	132	1000.7	1016.1	30.0	19.4	24.6	-0.9	32.8	25+	12.8	2	6	0	20.0	81	141	1	57	15	17	0	0	0.9	21	8.9	24	5+	4	11	16	6.9	49
WILMINGTON	9	1015.6	1016.8	30.6	21.7	26.2	-0.5	33.9	26	15.6	22	11	0	20.6	73	307	112	78	17	15	0	0	1.3	21	13.0	N	6	6	14	11	6.2	65
NORTH DAKOTA																																
BISMARCK	502	956.0	1014.9	27.2	14.4	20.8	-1.3	36.1	22	8.3	5	2	0	14.4	69	85	29	21	10	10	0	0	0.8	2	18.3	NW	22	14	8	9	4.8	73
FARGO	273	982.7	1015.2	26.7	13.9	20.3	-1.6	33.9	22	5.6	5	1	0	14.4	71	122	48	32	12	9	0	0	0.3	33	26.8	S	29	10	15	6	5.2	71
WILLISTON	579			28.3	14.4	21.3	-0.5	33.3	29	9.4	14	4	0			39	- 9	18	9		0	0			18.8	W	20	10	13	8	5.0	78
OHIO																																
AKRON	368	972.6	1016.5	28.3	13.9	21.0	-1.6	34.4	24	7.2	20	2	0	13.3	65	40	- 56	28	6	5	0	0	0.5	31	13.9	27	9	6	18	7	5.6	
CINCINNATI OBS	232			30.0	17.8	23.8	-1.2	37.2	24	12.2	30	5	0			91	0	33	7		0	0			9.8	SW	9					63
CLEVELAND	237	987.1	1016.0	26.7	14.4	20.6	-1.4	36.7	24	7.8	20	2	0	13.9	67	76	- 8	33	7	6	0	0	0.6	26	19.2	W	9	6	16	9	5.8	74
COLUMBUS	247	986.8	1016.4	28.9	15.6	22.2	-1.6	36.1	24	8.3	1	5	0	13.9	61	96	- 4	52	10	6	0	0	0.7	33	14.3	SW	9	9	12	10	5.6	67
DAYTON	305	980.7	1016.2	30.0	16.7	23.2	-0.8	37.8	24	11.1	30	6	0	13.3	56	57	- 33	17	7	6	0	0	0.5	29	12.1	W	24	8	16	7	5.4	80
MANSFIELD	395			26.7	13.3	20.0	-2.1	35.6	24	6.7	1	1	0			36	- 52	27	4	2	0	0						6	17	8	5.6	
TOLEDO	206	991.2	1016.1	27.2	13.3	20.3	-2.3	34.4	24	6.1	1	3	0	13.9	69	52	- 14	19	7	8	0	0	0.9	28	15.2	NW	24	6	18	7	5.5	76
YOUNGSTOWN	359	974.3	1016.5	27.2	12.8	19.9	-1.5	35.0	24	7.2	1	1	0	13.3	69	87	- 23	30	9	5	0	0	0.7	31	15.6	28	9	5	18	8	5.8	
OKLAHOMA																																
OKLAHOMA CITY	390	969.2	1014.3	35.6	22.8	29.2	1.2	40.0	24	17.2	30	26	0	18.3	55	40	- 20	28	5	7	0	0	2.8	16	17.9	NW	6	12	11	8	4.6	74
TULSA	198	991.2	1014.8	34.4	22.2	28.4	0.6	39.4	24	16.7	29	26	0	20.6	66	86	11	39	9	7	0	0	2.0	17	17.0	NW	6	12	10	9	4.9	83
OREGON																																
ASTORIA	2	1018.3	1018.9	20.0	11.1	15.7	-0.2	27.2	23	7.8	28+	0	0	11.7	79	12	- 21	9	5	0	0	0	2.3	26	9.4	21	29+	6	12	13	6.6	
BURNS U	1265	875.0	1015.7	28.9	10.6	19.5	-1.3	34.4	30	2.8	12	7	0	5.6	44	13	5	8	6		0	0	1.2	33				18	11	2	3.1	
EUGENE	109	1003.7	1017.0	28.9	11.1	20.0	0.8	37.2	31	6.7	9	11	0	11.7	65	6	- 1	6	3	2	0	0	1.3	32	9.4	24	31+	20	4	7	3.2	
MEACHAM	1234			24.4	11.1	17.8	0.3	32.2	31+	3.9	22	2	0			19	6	12	5		0	0						19	6	6	3.5	
MEDFORD	396	968.5	1015.3	33.3	12.2	22.7	0.5	38.9	24	6.1	22	21	0	8.9	46	1	- 5	1	2	0	0	0	1.5	31	7.6	29	28+	23	5	3	1.8	
PENDLETON	452	962.8	1015.4	31.7	15.0	23.2	0.1	38.9	31	7.8	9	17	0	5.6	35	13	7	7	4	4	0	0	1.3	27	15.6	27	26	21	5	5	3.1	
PORTLAND	6	1015.6	1016.8	28.3	13.3	20.9	1.4	41.7	30	10.0	19+	8	0	12.2	64	11	1	7	2	1	0	0	2.5	31	8.0	NW	22+	16	7	8	4.0	80
SALEM	60	1009.8	1017.1	28.9	10.0	19.6	0.6	40.0	31	5.6	22	9	0	11.7	64	5	- 4	4	3	1	0	0	1.5	32	8.9	36	23+	19	5	7	3.3	
SEXTON SUMMIT R	1169	885.5	1014.7	25.6	11.7	18.6	1.1	32.8	30	3.9	21	2	0			1	- 7	1	1		0	0			12.1	34	6	25	3	3	1.9	
PACIFIC AREA																																
CANTON ISLAND	2			31.1	25.6	28.4	-0.2	32.2	29+	23.3	5+	3	0			54	- 12	12	17		0	0						2	13	16	7.3	
ENIWETOK	4	1008.8	1009.4	30.0	25.0	27.6	-0.7	31.7	29+	22.8	23+	0	0	24.4	82	220	57	47	25	0	0	0	6.8	9								
TAGUAC GUAM R	110			28.9	22.8	25.9	-0.4	30.6	25+	20.0	26	0	0			398	170	95	30		0	0			12.5	SE	2					
JOHNSTON	2	1012.9	1013.4	29.4	23.9	26.5	-0.8	30.0	31+	21.1	9+	0	0	21.7	73	16	- 17	4	13	0	0	0	6.7	11	14.3	NE	8	4	19	8	6.2	79
KOROR R	29	1005.4	1009.2	28.9	23.3	26.0	-1.2	31.1	28+	22.2	25+	0	0	23.9	88	776	391	104	27	7	0	0	3.2	27	13.4	NW	20	0	0	31	9.9	26
KWAJALEIN	2	1008.5	1009.5	30.0	24.4	27.2	-0.4	31.1	8	22.2	16+	0	0	23.9	83	306	79	70	28	0	0	0	4.8	8	14.8	8	15	0	1	30	9.7	
MAJURO	3	1008.8	1009.2	29.4	24.4	27.1	0.3	30.6	29+	22.8	26	0	0	23.9	82	377	59	76	28	1	0	0	3.6	9	10.7	E	15+	0	3	28	9.3	41
MARCUS ISLAND	6			32.2	26.1	29.1		33.9	29	24.4	21	19	0			22	- 97	8	6		0	0			9.4	E	14	10	10	11	5.7	87
PONAPE R	37	1003.4	1008.7	29.4	22.8	26.1	-0.4	31.7	1	21.1	17	0	0	23.9	90	945	533	180	29	1	0	0	0.4	8	8.0	NE	24	0	0	31	9.7	16
TRUK MOEN ISLAND	2	1008.5	1008.8	28.9	23.3	26.1	-0.8	30.6	10+	21.7	15	0	0	23.9	86	640	327	104	29	2	0	0	1.2	31	14.3	NW	23	0	2	29	9.4	35
WAKE	3	1013.2	1013.3	30.0	25.0	27.4	-0.3	30.6	31+	23.3	21+	0	0	22.2	75	20	- 97	11	12	0	0	0	5.0	6	9.4	6	16+	7	15	9	5.6	
YAP R	17	1005.8	1007.7	28.9	23.3	26.1	-1.3	32.2	1	22.2	10+	1	0	23.9	90	672	322	164	30	6	0	0	1.4	25	8.5	N	19	0	0	31	10.0	14
PENNSYLVANIA																																
ALLENTOWN	115	1002.0	1015.7	29.4	15.6	22.4	-0.9	32.8	24+	9.4	21	8	0	14.4	64	40	- 82	18	9	5	0	0	1.1	25	10.3	22	28+	11	9	11	5.3	
ERIE	223	989.8	1016.2	25.0	15.0	19.7	-2.0	32.8	24	8.9	1	1	0	13.3	68	88	- 5	46	11	4	0	0	1.0	23	14.3	25	7	13	13	5	4.6	
HARRISBURG	103	1003.1	1015.7	30.6	17.8	24.2	-0.3	36.1	9	11.1	21	12	0	15.6	61	79	- 10	29	13	7	0	0	0.7	24	10.3	W	9	7	13	11	5.9	67
PHILADELPHIA	2	1014.6	1015.5	28.9	18.3	23.4	-0.8	32.8	25	11.1	2	3	0	16.7	67	82	- 24	45	7	4	0	0	1.1	23	14.8	NW	18	9	8	14	5.9	60
PITTSBURGH	347	972.9	1016.2	28.3	13.9	21.1	-1.2	33.3	24+	7.2	20	3	0	12.8	64	46	- 52	14	7	5	0	0	1.3	28	15.6	29	24+	5	16	10	5.9	68
READING U	81			29.4	18.3	24.0	-0.9	33.9	14+	12.2	21	8	0			69	- 39	40	9		0	0			18.8	NW	3	11	10	10	5.2	67
SCRANTON	283	982.4	1016.0	28.3	15.0	21.7	-0.8	34.4	14	7.8	20	4	0	13.9	65	33	- 89	10	12	8	0	0	0.8	25	15.2	SW	27	8	12	11	5.6	71
WILLIAMSPORT	161	997.0	1015.9	27.8	13.3	20.5	-2.6	33.9	14	6.1	20	2	0	13.9	71	43	- 63	11	10	8	0	0	1.3	27	13.0	30	14	8	13	10	5.5	
RHODE ISLAND																																
BLOCK ISLAND	34			23.9	16.7	20.3	-0.6	27.8	15	13.3	2	0	0			44	- 24	33	5		0	0						7	10	14	6.2	
PROVIDENCE	16	1012.9	1015.2	27.8	16.1	22.0	-0.3	33.3	25+	9.4	7	3	0	13.3	62	33	- 41	25	6	3	0	0	2.1	23	10.3	22	14	12	7	12	5.5	69

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	°C.	C.	°C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
SOUTH CAROLINA																																
CHARLESTON	12	1014.9	1016.6	31.1	21.1	26.1	-0.9	33.3	26+	17.8	23+	10	0	20.6	76	226	30	79	18	16	0	0	1.3	20	21.5Y	N	6	4	16	11	6.7	56
CHARLESTON U	3			30.6	23.9	27.0	-0.5	33.3	6	21.1	23+	4	0			147	- 51	65	15		0	0			14.8	NW	6					
COLUMBIA	66	1008.1	1016.1	32.2	21.1	26.6	-0.9	35.0	26+	17.8	22	18	0	21.1	76	110	- 45	35	14	14	0	0	1.3	21	17.9	35	15	3	19	9	6.3	65
GNVLE SPARTANBURG	292	982.1	1016.1	30.6	20.0	25.3	-1.3	33.3	24	18.3	22+	6	0	20.0	79	80	- 39	15	14	18	0	0	0.6	23	15.2	W	7	6	10	15	6.8	53
SOUTH DAKOTA																																
ABERDEEN	395	968.5	1014.4	29.4	15.0	22.1	-1.0	37.2	22	9.4	5	6	0	15.0	66	56	- 7	31	8	8	0	0	0.6	3	17.0	34	8	10	15	6	5.0	
HURON	391	968.5	1014.1	31.1	14.4	22.8	-1.1	39.4	22	8.3	14	11	0	15.6	68	17	- 29	8	10	8	0	0	0.4	15	12.5	N	23	10	16	5	5.0	68
RAPID CITY	965	905.9	1014.9	29.4	15.0	22.3	-0.9	38.9	22	10.6	6	9	0	13.3	61	15	- 30	4	11	12	0	0	0.9	36	16.5	S	10+	17	6	8	4.4	63
SIOUX FALLS	432	964.4	1014.9	28.3	15.0	21.6	-1.9	36.1	22	7.8	28	6	0	16.7	76	38	- 34	11	11	8	0	0	0.6	19	16.5	28	6	10	12	9	5.4	
TENNESSEE																																
BRISTOL	459	963.8	1016.9	28.9	18.3	23.6	-0.8	31.1	24+	14.4	30+	0	0	18.9	80	182	41	56	12	10	0	0	0.2	24	10.3	29	4	2	14	15	6.9	
CHATTANOOGA	204	992.2	1016.5	30.0	19.4	24.9	-2.2	32.2	9	13.9	31	1	0	20.0	80	80	- 50	23	13	12	0	0	0.3	16	13.4	NW	17	5	10	16	6.9	59
KNOXVILLE	299	982.1	1016.6	30.6	20.6	25.6	-0.2	32.8	7	15.6	31	5	0	20.0	77	89	- 34	25	10	9	0	0	1.0	27	16.1	N	7	2	18	11	6.6	45
MEMPHIS	80	1006.1	1016.0	33.3	21.7	27.7	0.3	37.8	24	15.0	31	25	0	19.4	63	41	- 49	26	8	9	0	0	0.2	7	13.9	SW	4	8	16	7	5.5	73
NASHVILLE	180	994.6	1015.8	31.1	20.6	25.9	-0.9	36.7	24	12.2	31	8	0	18.9	69	84	- 10	29	8	8	0	0	0.5	27	21.5	NW	2	5	17	9	6.0	69
OAK RIDGE	276			29.4	18.9	24.2	-0.9	32.2	24	14.4	31+	1	0			192	40	67	13		0	0						9	8	14	5.9	
TEXAS																																
ABILENE	537	953.9	1013.8	36.1	23.3	29.8	1.4	37.8	25+	17.8	30	31	0	15.0	44	18	- 40	14	3	3	0	0	2.9	17	15.2	NW	28	15	13	3	3.7	87
AMARILLO	1098	893.3	1013.1	32.8	18.9	25.9	-1.1	36.1	19+	15.6	30	23	0	14.4	53	39	- 20	15	5	6	0	0	3.0	19	11.6	SW	19+	16	10	5	4.3	83
AUSTIN	182	993.9	1015.3	35.0	22.8	29.0	-0.2	38.3	28	20.0	31	31	0	19.4	60	9	- 46	9	1	3	0	0	2.5	18	8.5	NE	29+	16	14	1	3.4	87
BROWNSVILLE	5	1014.2	1014.7	33.3	23.9	28.6	-0.3	35.6	28	21.1	29	29	0	21.7	70	46	4	35	3	3	0	0	4.6	14	11.6	SE	27+	15	11	5	4.5	82
CORPUS CHRISTI	12	1013.5	1015.0	35.0	22.8	29.1	0.1	37.8	28	21.7	23	31	0	22.2	70	32	- 27	16	5	4	0	0	4.3	15	13.0	N	15	11	17	3	4.6	71
DALLAS	147	997.6	1014.6	36.1	25.6	30.6	1.2	37.8	7	20.0	31	30	0	19.4	54	4	- 45	3	2	2	0	0	3.2	17	12.5	SE	13	13	16	2	4.0	77
DFL RIO	313	978.3	1013.5	36.7	23.3	29.9	-0.2	38.3	28+	20.6	16	31	0	16.7	49	10	- 24	10	1	3	0	0	3.9	12	8.0	9	26+	21	8	2	2.9	
EL PASO	1194	882.2	1010.3	36.1	22.2	29.0	1.3	38.3	12+	19.4	30+	30	0	11.1	36	4	- 28	2	6	9	0	0	0.6	15	15.6	NE	3	21	8	2	3.1	86
FORT WORTH	164	994.9	1014.8	36.7	23.9	30.2	0.5	38.3	27+	18.3	31	31	0	18.3	51	2	- 42	2	1	4	0	0	2.5	17	11.2	29	15	15	14	2	3.8	
GALVESTON U	2			31.1	26.1	28.7	0.3	36.1	22	23.3	30	7	0			31	- 90	18	4		0	0			10.3	NE	29					74
HOUSTON U	12			33.9	25.0	29.6	0.7	37.2	28	22.8	14	26	0			80	- 51	30	7		0	0										
HOUSTON	15	1013.9	1015.9	35.0	23.9	29.5	1.2	37.8	28	23.3	30+	29	0	22.2	70	40	- 69	13	6	10	0	0	1.8	19	10.7	4	28	4	22	5	5.9	68
LUBBOCK	988	905.5	1013.8	35.0	20.0	27.6	1.2	38.3	8	15.6	30	27	0	15.0	50	54	3	22	5	6	0	0	3.3	17	16.5	27	9	15	14	2	3.8	
MIDLAND	869	916.7	1012.5	35.6	21.1	28.2	-0.1	38.3	9	17.8	30+	29	0	12.2	41	2	- 46	2	1	0	0	0	3.5	15	11.2	3	31	20	7	4	3.1	
PORT ARTHUR	5	1015.2	1016.0	34.4	23.3	28.8	1.1	36.7	28	21.1	15+	29	0	22.8	78	82	- 71	25	8	14	0	0	1.3	23	20.1	S	14	1	25	5	6.0	77
SAN ANGELO	580	948.5	1013.2	37.2	22.8	29.8	0.5	38.9	9+	15.6	31	31	0	15.0	45	7	- 29	5	3	1	0	0	2.5	16	10.3	8	14	18	10	3	3.1	
SAN ANTONIO	240	987.8	1015.3	35.6	23.3	29.4	0.5	37.2	28	18.3	31	31	0	19.4	59	2	- 51	2	1	1	0	0	2.9	15	13.0	S	15	16	13	2	3.6	84
VICTORIA	32	1011.2	1015.4	35.0	23.9	29.4	1.0	37.8	28	21.7	2	30	0	21.7	68	7	- 84	5	4	7	0	0	2.6	16	14.8Y	SSE	8	3	22	6	5.6	
WACO	152	997.3	1014.8	36.7	25.0	30.7	1.1	38.3	28+	19.4	31	31	0	17.2	46	3	- 47	2	3	3	0	0	3.4	17	11.2	10	13	22	7	2	2.8	
WICHITA FALLS	303	978.3	1013.8	38.3	22.2	30.1	0.3	40.6	27+	14.4	30	31	0	16.7	49	9	- 41	9	2	4	0	0	3.4	18	13.4	1	25	13	13	5	4.4	
UTAH																																
MILFORD	1533			32.2	12.2	22.3	-0.9	36.7	28	7.2	3	23	0			9	- 9	2	11		0	0						12	8	11	5.1	
SALT LAKE CITY	1286	872.7	1013.4	32.2	15.6	23.9	-1.1	36.7	28+	10.0	13	19	0	8.9	43	38	23	16	8	8	0	0	1.3	16	16.1	NW	19	12	10	9	4.7	85
WENDOVER	1291			31.1	18.9	25.2	-1.2	35.6	10	15.6	2	13	0			10	3	6	5		0	0						14	8	9	4.3	
VERMONT																																
BURLINGTON	101	1001.7	1014.0	25.0	12.2	18.4	-2.2	30.6	13	6.1	7	0	0	12.2	69	74	- 24	30	13	7	0	0	0.6	24	13.4	S	7	7	10	14	6.3	66
VIRGINIA																																
LYNCHBURG	279			28.9	17.2	23.3	-1.3	33.9	25+	10.6	2	3	0			46	- 60	16	9	10	0	0			9.4	SW	7	6	12	13	6.0	66
NORFOLK	8	1014.9	1016.0	28.9	20.6	24.8	-1.2	35.0	25	14.4	2	6	0	20.6	79	88	- 62	29	10	7	0	0	1.6	18	12.5	S	5	5	11	15	6.8	52
RICHMOND	49	1010.2	1016.0	28.9	18.9	23.8	-1.8	33.9	25	10.6	2	3	0	18.9	78	161	18	67	9	9	0	0	0.8	19	13.4	NW	5	4	13	14	6.5	60
ROANOKE	350	974.9	1016.2	28.9	17.8	23.3	-1.5	32.2	24+	10.0	2	2	0	18.3	75	140	32	46	12	9	0	0	0.5	23	14.3	29	7	5	18	8	6.1	
WASHINGTON																																
OLYMPIA	59	1010.8	1018.0	27.2	10.6	18.8	1.1	37.2	31	5.0	19	6	0	11.7	69	12	- 7	8	3	0	0	0	0.9	23	11.6	22	7	8	14	9	5.3	
SEATTLE TACOMA	122	1001.7	1018.0	26.7	13.3	19.9	1.6	34.4	30	9.4	19	5	0	12.2	66	10	- 11	5	4	3	0	0	0.8	29	8.0	35	30	9	13	9	5.3	64
SPOKANE	718	933.0	1015.3	29.4	13.3	21.2	-0.2	36.1	31	7.8	9	13	0	6.7	44	18	8	11	3	3	0	0	1.2	20	13.4	SW	26	17	9	5	3.6	76
STAMPEDE PASS R	1206			20.0	10.0	14.9	1.4	30.6	31	3.3	8	0	0			8	- 29	3	6		0	0						13	8	10	4.9	
TATOOSH ISLAND R	31	1015.9	1018.9	15.0	10.6	12.7	-0.4	22.8	29	8.9	23	0	0	11.1	92	18	- 42	13	7	1	0	0	3.1	20	12.1	E	29	5	7	19	7.5	32
WALLA WALLA U	289			31.7	17.2	24.3	-0.1	40.0	31	11.7	9	19	0			15	10	14	2		0	0			9.8	S	26	22	5	4	2.8	85
YAKIMA	321	977.0	1014.7	31.1	11.7	21.1	-0.6	38.3	31	6.7	9	18	0	8.3	46	7	4	7	1	3	0	0	1.7	29	13.9	23	25	20	4	7	3.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	°C.	°C.	°C.	C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
WEST INDIES																																
SAN JUAN P.R.	5	1014.9	1017.4	30.6	24.4	27.6	0.7	33.9	27	23.3	25+	3	0	23.3	79	149	- 9	35	27	3	0	0	3.8	9	11.2	NE	31+	1	16	14	6.9	67
SWAN ISLAND	9			30.6	26.1	28.3	0.3	31.7	22	24.4	12	0	0			9	- 98	4	8		0	0						1	22	8	6.3	
WEST VIRGINIA																																
BECKLEY	763	930.2	1016.6	26.1	14.4	20.4		29.4	24+	8.9	30	0	0	16.1	78	77	4	23	12	13	0	0	0.8	24	9.8	16	2	1	15	15	7.8	
CHARLESTON	286	982.4	1015.8	28.9	16.7	22.9	-0.9	33.3	24	11.7	30+	1	0	16.1	71	62	- 82	12	13	11	0	0	0.5	23	16.5	26	9	3	12	16	6.7	
ELKINS	600	947.2	1017.3	27.2	12.8	19.9	-1.2	30.6	24	6.7	2	0	0	15.0	79	58	- 82	22	13	9	0	0	1.0	27	16.5	30	9	0	17	14	7.2	
HUNTINGTON	252	986.5	1015.8	29.4	17.8	23.6	-0.4	34.4	24	12.2	2	4	0	17.8	75	120	6	35	15	11	0	0	0.3	23	10.3	28	9	4	14	13	6.5	
PARKERSBURG U	187			29.4	17.2	23.1	-1.3	34.4	24	11.7	22+	3	0			69	- 36	21	12		0	0			15.6	W	9					59
WISCONSIN																																
GREEN BAY	208	990.2	1015.3	27.2	13.3	20.4	-0.9	33.3	22	4.4	6	3	0	13.9	69	50	- 19	15	12	9	0	0	0.8	26	17.0	NW	23	9	14	8	5.4	61
LA CROSSE	198	991.5	1015.6	27.8	15.0	21.3	-1.9	37.2	23	10.0	6	3	0	16.1	75	114	19	39	9	8	0	0	0.4	20	10.3	33	23+	11	11	9	5.4	
MADISON	262	984.1	1015.1	27.8	12.2	20.2	-1.6	36.7	22	2.2	6	3	0	14.4	70	84	- 7	26	7	6	0	0	0.8	26	13.4	NE	17	9	17	5	4.9	76
MILWAUKEE	205	991.5	1016.5	26.1	15.0	20.5	0.1	33.9	13	4.4	1	3	0	15.0	74	67	- 8	38	8	6	0	0	0.4	19	15.2	SW	13	12	14	5	4.4	77
WYOMING																																
CASPER	1627	840.8	1014.8	29.4	12.2	20.7	-1.3	33.3	21+	7.2	13	4	0	7.2	47	29	4	11	8	9	0	0	0.8	25	13.4	31	25	11	12	8	5.0	
CHEYENNE	1867	817.1	1016.3	27.8	12.2	20.1	-1.0	32.2	21+	9.4	13+	2	0	8.9	55	23	- 24	8	9	14	0	0	1.2	29	17.9	NW	1	7	15	9	5.8	69
LANDER	1696	832.4	1014.6	28.9	13.3	21.1	-0.3	33.3	15	8.9	13	6	0	6.7	44	42	23	17	7	10	0	0	2.1	25	16.5	W	11	11	9	11	5.4	67
SHERIDAN	1208	881.5	1015.9	30.0	11.7	21.0	-0.8	36.1	21	6.1	13	10	0	9.4	52	24	- 7	12	11	12	0	0	0.5	27	18.3	NW	29	9	15	7	4.9	73

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.
A Maximum hourly average.
B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

State and station	Current season		Normals
	This month	Period July through this month	July through this month
ALABAMA			
BIRMINGHAM	0	0	0
HUNTSVILLE	0	0	0
MOBILE	0	0	0
MONTGOMERY	0	0	0
ALASKA			
ANCHORAGE	178	178	
ANNETTE	240	240	242
BARROW	821	821	803
BARTER ISLAND	886	886	735
BETHEL	406	406	319
COLD BAY	497	497	474
FAIRBANKS	152	152	171
JUNEAU	292	292	301
KING SALMON	373	373	313
KOTZEBUE	424	424	381
MC GRATH	290	290	208
NOME	568	568	481
ST. PAUL ISLAND	622	622	605
SHEMYA	574	574	577
YAKUTAT	448	448	338
ARIZONA			
FLAGSTAFF	22	22	46
PHOENIX	0	0	0
TUCSON	0	0	0
WINSLOW	0	0	0
YUMA	0	0	0
ARKANSAS			
FORT SMITH	0	0	0
LITTLE ROCK	0	0	0
TEXARKANA	0	0	0
CALIFORNIA			
BAKERSFIELD	0	0	0
BISHOP	0	0	0
BLUE CANYON	30	30	34
BURBANK	0	0	0
EUREKA U	309	309	270
FRESNO	0	0	0
LONG BEACH	0	0	0
LOS ANGELES	12	12	19
LOS ANGLES U	0	0	0
MT SHASTA R	29	29	25
OAKLAND	83	83	53
RED BLUFF	0	0	0
SACRAMENTO	0	0	0
SANDBERG U	1	1	0
SAN DIEGO	3	3	6
SAN FRANCISCO	139	139	81
SAN FRANCISCO U	230	230	192
SANTA CATALINA	38	38	16
SANTA MARIA	111	111	99
STOCKTON	0	0	0
COLORADO			
ALAMOSA	31	31	65
COLORADO SPRINGS	10	10	9
DENVER	6	6	6
GRAND JUNCTION	0	0	0
PUEBLO	3	3	0
CONNECTICUT			
BRIDGEPORT	0	0	0
HARTFORD	2	2	0
NEW HAVEN	0	0	0
DELAWARE			
WILMINGTON	0	0	0
DIST.OF COLUMBIA			
WASH NATL AP	0	0	0
FLORIDA			
APALACHICOLA U	0	0	0
DAYTONA BEACH	0	0	0
FORT MYERS	0	0	0
JACKSONVILLE	0	0	0
KEY WEST	0	0	0
LAKELAND U	0	0	0
MIAMI	0	0	0
ORLANDO	0	0	0
PENSACOLA	0	0	0
TALLAHASSEE	0	0	0
TAMPA	0	0	0
WEST PALM BEACH	0	0	0
GEORGIA			
ATHENS	0	0	0
ATLANTA	0	0	0
AUGUSTA	0	0	0
COLUMBUS	0	0	0
MACON	0	0	0
ROME	0	0	0
SAVANNAH	0	0	0
IDAHO			
BOISE	7	7	0
IDAHO FALLS 42NW R	23	23	16
IDAHO FALLS 46W R	29	29	16
LEWISTON	10	10	0
POCATELLO	16	16	0
ILLINOIS			
CAIRO U	0	0	0
CHICAGO O HARE	12	12	0
CHICAGO MIDWAY	0	0	0
MOLINE	0	0	0
PEORIA	0	0	0
ROCKFORD	1	1	6
SPRINGFIELD	0	0	0
INDIANA			
EVANSVILLE	0	0	0
FORT WAYNE	3	3	0
INDIANAPOLIS	0	0	0
SOUTH BEND	3	3	0
IOWA			
BURLINGTON	0	0	0
DES MOINES	0	0	0
DUBUQUE	2	2	12
SIOUX CITY	0	0	0
WATERLOO	4	4	12
KANSAS			
CONCORDIA	0	0	0
DODGE CITY	0	0	0
GOODLAND	0	0	0
TOPEKA	0	0	0
WICHITA	0	0	0
KENTUCKY			
COVINGTON	2	2	0
LEXINGTON	0	0	0
LOUISVILLE	0	0	0
LOUISIANA			
ALEXANDRIA	0	0	0
BATON ROUGE	0	0	0
LAKE CHARLES	0	0	0
NEW ORLEANS	0	0	0
SHREVEPORT	0	0	0
MAINE			
CARIBOU	115	115	78
PORTLAND	41	41	12
MARYLAND			
BALTIMORE	0	0	0
MASSACHUSETTS			
BLUE HILL OBS R	2	2	0
BOSTON	2	2	0
NANTUCKET	14	14	12
PITTSFIELD	56	56	25
WORCESTER	14	14	6
MICHIGAN			
ALPENA	126	126	68
DETROIT	10	10	0
DETROIT M WAYNE CO	18	18	0
DETROIT WILLOW RUN	33	33	0
FLINT	31	31	16
GRAND RAPIDS	5	5	8
HOUGHTON LAKE	109	109	
LANSING	29	29	6
MARQUETTE U	105	105	59
MUSKEGON	1	1	12
SAULT STE MARIE	180	180	96
MINNESOTA			
DULUTH	127	127	71
INTERNATIONAL FALLS	88	88	71
MINNEAPOLIS	7	7	22
ROCHESTER	10	10	25
ST CLOUD	14	14	28
MISSISSIPPI			
JACKSON	0	0	0
MERIDIAN	0	0	0
VICKSBURG U	0	0	0
MISSOURI			
COLUMBIA	0	0	0
KANSAS CITY	0	0	0
ST JOSEPH	0	0	0
ST LOUIS	0	0	0
SPRINGFIELD	0	0	0
MONTANA			
BILLINGS	3	3	6
GLASGOW	11	11	31
GREAT FALLS	17	17	28
HAVRE	17	17	28
HELENA	14	14	31
KALISPELL	62	62	50
MILES CITY	1	1	6
MISSOULA	44	44	34
NEBRASKA			
GRAND ISLAND	0	0	0
LINCOLN U	0	0	0
NORFOLK	0	0	9
NORTH PLATTE	0	0	0
OMAHA	0	0	0
SCOTTSBLUFF	0	0	0
VALENTINE	0	0	9
NEVADA			
ELKO	11	11	9
ELY	27	27	28
LAS VEGAS	0	0	0
RENO	34	34	43
WINNEMUCCA	10	10	0
NEW HAMPSHIRE			
CONCORD	50	50	6
MT WASHINGTON OBS	606	606	493
NEW JERSEY			
ATLANTIC CITY	3	3	0
ATLANTIC CITY U	0	0	0
NEWARK	0	0	0
TRENTON U	0	0	0
NEW MEXICO			
ALBUQUERQUE	0	0	0
CLAYTON	2	2	0
RATON	7	7	9
ROSWELL	0	0	0
SILVER CITY	0	0	0
NEW YORK			
ALBANY	11	11	0
BINGHAMTON	41	41	22
BUFFALO	23	23	19
NEW YORK U	0	0	0
J.F. KENNEDY	0	0	0
NEW YORK LA GUARDIA	0	0	0
ROCHESTER	24	24	9
SYRACUSE	27	27	6
NORTH CAROLINA			
ASHEVILLE	0	0	0
CAPE HATTERAS R	0	0	0
CHARLOTTE	0	0	0
GREENSBORO	0	0	0
RALEIGH	0	0	0
WILMINGTON	0	0	0
NORTH DAKOTA			
BISMARCK	14	14	34
FARGO	19	19	28
WILLISTON	3	3	31
OHIO			
AKRON	8	8	0
CINCINNATI OBS	0	0	0
CLEVELAND	24	24	9
COLUMBUS	4	4	0
DAYTON	0	0	0
MANSFIELD	23	23	9
TOLEDO	27	27	0
YOUNGSTOWN	24	24	6
OKLAHOMA			
OKLAHOMA CITY	0	0	0
TULSA	0	0	0
OREGON			
ASTORIA	144	144	146
BURNS U	50	50	12
EUGENE	31	31	34
MEACHAM	115	115	84
MEDFORD	4	4	0
PENDLETON	15	15	0
PORTLAND	22	22	25
SALEM	46	46	37
SEXTON SUMMIT R	99	99	81
PENNSYLVANIA			
ALLENTOWN	0	0	0
ERIE	26	26	0
HARRISBURG	0	0	0
PHILADELPHIA	0	0	0
PITTSBURGH	[illegible]	9	0
PITTSBURGH U	1	1	0
READING U	0	0	0
SCRANTON	7	7	0
WILLIAMSPORT	17	17	0
RHODE ISLAND			
BLOCK ISLAND	1	1	0
PROVIDENCE	3	3	0
SOUTH CAROLINA			
CHARLESTON	0	0	0
CHARLESTON U	0	0	0
COLUMBIA	0	0	0
GNVLE-SPARTANBURG	0	0	0
SOUTH DAKOTA			
ABERDEEN	5	5	25
HURON	0	0	[illegible]
RAPID CITY	3	3	22
SIOUX FALLS	2	2	19
TENNESSEE			
BRISTOL	0	0	0
CHATTANOOGA	0	0	0
KNOXVILLE	0	0	0
MEMPHIS	0	0	0
NASHVILLE	0	0	0
OAK RIDGE	0	0	0
TEXAS			
ABILENE	0	0	0
AMARILLO	0	0	0
AUSTIN	0	0	0
BROWNSVILLE	0	0	0
CORPUS CHRISTI	0	0	0
DALLAS	0	0	0
DEL RIO	0	0	0
EL PASO	0	0	0
FORT WORTH	0	0	0
GALVESTON U	0	0	0
HOUSTON U	0	0	0
HOUSTON	0	0	0
LUBBOCK	0	0	0
MIDLAND	0	0	0
PORT ARTHUR	0	0	0
SAN ANGELO	0	0	0
SAN ANTONIO	0	0	0
VICTORIA	0	0	0
WACO	0	0	0
WICHITA FALLS	0	0	0
UTAH			
MILFORD	0	0	0
SALT LAKE CITY	0	0	0
WENDOVER	0	0	0
VERMONT			
BURLINGTON	43	43	28
VIRGINIA			
LYNCHBURG	0	0	0
NORFOLK	0	0	0
RICHMOND	0	0	0
ROANOKE	0	0	0
WASHINGTON			
OLYMPIA	52	52	68
SEATTLE TACOMA	24	24	56
SPOKANE	31	31	9
STAMPEDE PASS R	231	231	273
TATOOSH ISLAND R	309	309	295
WALLA WALLA U	5	5	0
YAKIMA	29	29	0
WEST VIRGINIA			
BECKLEY	7	7	
CHARLESTON	0	0	0
ELKINS	12	12	9
HUNTINGTON	0	0	0
PARKERSBURG U	0	0	0
WISCONSIN			
GREEN BAY	26	26	28
LA CROSSE	8	[illegible]	12
MADISON	27	27	25
MILWAUKEE	25	25	43
WYOMING			
CASPER	4	4	6
CHEYENNE	11	11	19
LANDER	1	1	6
SHERIDAN	7	7	25

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

JULY 1965

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				ø ALL OTHER			
								†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS
Alabama	1	1	0	0	3					0	1	4	0	1	1	4	0									2	0	4	0
Alaska *																													
Arizona										0	3	4	0	2	1	4	0									0	0	4	0
Arkansas						0	0	5	5	0	0	5	5	2	4	4	0												
California	2	1	0	0	2									0	0	5	0												
Colorado	3	3	0	0	0	0	0	6	5	0	0	4	4	2	1	3	0									D 4	0	°6	C
Connecticut						0	0	0	5																				
Delaware														1	0	0	0												
Florida														6	16	N 5	?												
Georgia	2	2	0	0	4					0	0	4	3	1	0	3	0												
Hawaii *																													
Idaho									5	1	2	4		2		3													
Illinois						0	0	?	?																				
Indiana	1	1	0	0	4	0	0	3	3	0	0	4	0																
Iowa	3	3	0	0	4	0	0	3	4	0	0	4	3	0	1	4	0									0	0	3	0
Kansas	6	5	0	0	5	0	0	5	5	0	2	5	5	0	1	5	0												
Kentucky	1	1	0	0	2			?	5			4	?	2	1	4												H 6	6
Louisiana	5	4	0	1	5					0	0	?	0	5	3	0	0												
Maine *																													
Maryland						0	0	0	3	1	?	°5	C	0	1	4	0												
Massachusetts										0	0	4	0													0	0	R 4	0
Michigan						0	0	5	C	0	1	6	0	1	0	6	0												
Minnesota	7	6	0	0	5	0	5	5	6	2	5	5	4	0	0	5	0									2	0	5	4
Mississippi	3	3	0	0	4	0	0	1	5	0	0	4	0	1	3	5	0												
Missouri	1	1	0	0	3	0	0	6	6					0	1	4	0									F 4	0	6	6
Montana	5	4	0	1	4	0	5	6	6					1	0	0	0												
Nebraska	6	4	0	0	5	0	0	5	6	0	0	5	4	1	0	4	0												
Nevada																										0	0	3	4
New Hampshire	1	1	0	0	3					0	0	4	0	0	0	3	0									0	0	R 3	0
New Jersey										0	1	4	0	2	8	5	0												
New Mexico						0	0	2	0					1	0	0	0									1	0	0	4
New York	1	1			4				5		1	5			1	5													
North Carolina	2	2	0	0	4	0	0	4	6	0	0	5	4	4	1	5	0									1	0	5	5
North Dakota	17	9	0	0	4	0	0	5	5	0	0	3	4	0	0	4	0									0	0	5	4
Ohio	2	2	0	0	4	0	0	5	5					1	0	5	0									0	8	°6	C
Oklahoma						0	0	0	5	0	5	5	0	1	0	5	0									0	0	4	0
Oregon	1	1	0	0	0	0	0	3	4	0	0	4	4	0	0	4	3									B 1	6	4	4
Pacific Area *																													
Pennsylvania						0	0	0	4	0	0	4	0	0	1	6	0												
Puerto Rico *																													
Rhode Island *																													
South Carolina	4	4	0	0	4	0	0	0	3	0	0	3	0	3	12	5	0									1	2	5	0
South Dakota	4	3	0	0	5	0	0	4	5																				
Tennessee										0	0	5	3	0	0	5	0									0	0	F °6	C
Texas	2	2	0	0	2					3	1	4	0													0	0	5	0
Utah	1	1	0	0	3	0	0	0	3																	0	0	6	3
Vermont										0	0	4	2	0	0	2	0									0	0	R 3	0
U. S. Virgin Is. *																													
Virginia						0	0	0	4					0	2	4	0									0	0	5	0
Washington												3				3													
West Virginia	0													0	1	4	3												
Wisconsin	4	3	0	0	4	0	0	5	5	0	0	5	5																
Wyoming	3	3	0	0	5	0	0	°5	C																				

° Includes crop damage
C Crop damage
D Drowning - flooding
R Rain
F Floods
B Cloudburst
H Heavy rain - flash floods
N Numerous small fires and livestock losses due to lightning

* No occurrence of storms or unusual weather phenomena.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
ø For breakdown of "All Others", and for detailed listing of other storms, see the U. S. Weather Bureau monthly publication STORM DATA.

† Storm damages are placed in categories varying from 1 to 9 as follows:

1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5,000,000
7 $5,000,000 to $50,000,000
8 $50,000,000 to $500,000,000
9 $500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

JULY 1965

Record to near record stages were reported on many streams in northwestern Missouri during July. The American Red Cross reported that at least 9 lives were lost in this area by drowning. Rural and urban damages are heavy and will total many millions of dollars. This was second consecutive month that damaging floods had been reported in the Missouri Basin.

Numerous flash floods were reported in the Great Basin in Utah during the last half of the month.

ATLANTIC SLOPE DRAINAGE

Record or near record low flows were reported on many rivers in the drought-stricken Northeast. At Hartford, Conn., record low flow has been reported for 5 consecutive months. At Thompsonville, Conn., a new record low mean daily flow of 760 c.f.s. was established on July 31. The previous low was 1060 c.f.s. on August 28, 1949 and September 27, 1953.

An intense rain of 2.5 inches in 23 minutes on the 18th caused a flood in Little Pimmit Creek basin in Arlington County, Va. According to the U. S. Geological Survey, the peak flow of 2,500 c.f.s. was a 25-year flood. Losses were minor as there are essentially no encroachments on the flood plain.

Excessive rainfall, for the second consecutive month, occurred in eastern North Carolina. The total rainfall averaged nearly 3 inches above normal. A light flood crest was moving into the extreme lower Neuse in the beginning of the month. The first period of significant precipitation during July occurred on the 4th and 5th over the Tar, Neuse, and Cape Fear Basins. Amounts were generally less than 1 inch except on the Neuse where measurements were locally 3 inches. This produced about 2 to 5 feet of overflow along the lower Neuse. Widespread heavy rain of around 2 inches, with local amounts of 3 to 4 inches, before the second week ended resulted in stages of 2 to 3 feet above bankfull over the upper Neuse. These heavy rains prolonged the overflow along the lower Neuse but added no more than a foot of additional water. Slight rises on the upper Cape Fear produced gage readings about 3 feet above bankfull in the midportion and a little over 8 feet overflow along the lower reaches. General showers and thundershowers towards the end of July, averaging around 2 inches over the Tar and Cape Fear and locally to nearly 6 inches over the Neuse, caused flooding on the Cape Fear and Neuse Rivers. The Cape Fear responded rapidly and rose to a little under bankfull in the upper reaches to 10 feet over flood stage on the lower portion. Six to 7 feet of overflow occurred along the middle reach of the Neuse.

Scattered heavy rains over the upper reaches of the Santee Watershed in South Carolina on the 10th and 11th caused bankfull stage on the Saluda River at Chappells, S. C., on the 13th. The Broad River crested nearly 6 feet above flood stage at Blair, S. C., on the 12th. Considerable lowland flooding occurred on the Congaree River below Columbia, S. C. Minor losses occurred along the Saluda from Lake Greenwood to Lake Murray, and along the Broad River in the Gaffney and Blair areas. Principal losses occurred along the Congaree River below Columbia.

Minor flooding occurred along the Savannah River at Clyo, Ga., during the first few days of July and again during the middle of the month.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--Minor flooding occurred on the Iowa River at Marshalltown, Iowa, on the 9th and on the North Skunk River at Sigourney, Iowa, on the 7th. This flooding was due to heavy thundershowers. No damages were reported from the overflows which were confined to river bottom lands.

Missouri Basin.--A flash flood occurred on Runnels Creek near Forsythe, Mont., on the 27th due to heavy thundershowers. Minor damage resulted.

Locally intense thunderstorms caused flooding in the Bear and Clear Creek drainages, west of Denver, Colo., on July 24. Considerable damage resulted to roads and bridges. Most temporary culvert crossings on Plum Creek south of Denver, that were built in June, were washed out.

The flooding on the Platte River at Grand Island, Nebr., from June 27 to July 7 was due to heavy flow from the South Platte River in Colorado. A flat crest of 5 feet, 2 feet above flood stage, reached Grand Island on June 28. At Louisville, Nebr., the crest arrived on July 1, 0.2 foot above flood stage. Flooding of this nature is rather unusual on the Platte River in Nebraska. The last high water of similar proportion and circumstances occurred June 6, 1935 at Grand Island.

Minor overflow occurred on the Nishnabotna River near Hamburg, Iowa, on the 2d. Additional minor flooding occurred at this point on the 19th. Extremely heavy rains during the night of June 28 and 29 caused record flooding on the Nemaha River at Falls City, Nebr., on June 30. It receded back within its banks on July 1. The Tarkio River at Fairfax, Mo., overflowed its banks by nearly 4 feet on July 2. The One Hundred and Two River at Rosendale, Mo., was out of its banks from June 30 to July 6. The high water closed roads in the area during the evening of the 2d. The Little Platte River returned to its banks at Smithville, Mo., on July 1, after cresting nearly 5 feet above flood stage on June 30th. The Platte River at Agency, Mo., was out of its banks from the 2d to the 5th with a crest of nearly 3.5 feet above flood stage on the 3d.

Flooding from late June rains in the Blue River Basin in southern Nebraska continued into early July. Minor overflows developed on the Little Blue River in Nebraska and on the lower portion of Stranger Creek in Kansas between June 30 and July 4. Rainfall of 3 to 5 inches in southwestern Nebraska during the night of July 4-5 caused heavy flash flooding on Frenchman Creek in the Wauneta area. Only minor overflow occurred near Culbertson, Nebr. Rainfall of 3 inches or more on Big Creek in Kansas during the night of the 5-6th caused flooding in parts of Ellis, Kans. Heavy surface water accumulations occurred in Hays, Kans.

Minor overflow occurred on the upper Grand River in Missouri between the 2d and 4th. Downstream at Sumner, Mo., the Grand was out of its banks from the 2d to the 5th with a crest about 4.5 feet above bankfull. At Brunswick, Mo., the Grand was in flood from June 30 to July 6, with a crest of 6 feet above bankfull on the 3d.

Heavy rains on the 18th and 19th in northwestern Missouri, southwestern Iowa, southeastern Nebraska, and northeastern Kansas caused record to near record flooding on many streams. Torrential rains occurred over a narrow belt extending from Rockport in northwestern Missouri to the Blackwater River Basin in west-central Missouri. Maximum rainfall reported was 21 inches at Rockport in 36 hours and 19.5 inches at Edgerton, Mo. Rainfall in excess of 10 inches was reported at many stations in the heavy rain area. The One Hundred and Two River at Rosendale, Mo., rose to a record crest of 21.8 feet on the 20th. This was over 5 feet higher than the former rise. The Little Platte River reached a record crest of 44.7 feet at

Smithville, Mo., on the same date. This was nearly 18 feet above flood stage. The Platte River at Agency, Mo., rose to a record crest of 35.05 feet, which was more than 4.5 feet above the previous record stage of 30.46 feet recorded in June 1947. The overflow on the Tarkio River at Fairfax, Mo., on the 19th and 20th was not as heavy as during the previous rise earlier in the month. Overflows of 2 to 3 feet occurred along Stranger Creek in Kansas which was on the western edge of the heavy rain area. Locally heavy rainfall up to 7 inches caused considerable overflow on the upper Blue River in Nebraska on the 18-20th. Record crests occurred on Crooked River and Wakenda Creek in Missouri on the 20th and 21st. On the Blackwater River at Blue Lick, Mo., the crest of 37.5 feet on the 23d was the second highest of record. It approached within 4 feet of the previous record stage of November 1928. The crest of 31.4 feet at Valley City, Mo., on the 20th was within one-half foot of the previous record stage of 31.75 feet set in September 1961.

There were two periods of flooding along the main stem of the Missouri River below the mouth of the Nemaha River. The first occurred between June 30 and July 6 and the second between July 20 and 26. Numerous farm levees were reported topped or broken along the Missouri below Kansas City, Mo. This was the first time since April 1960 that the Missouri had been out of its banks at Kansas City, Mo.

Damage surveys indicate that rural and urban damages in northwestern Missouri from the July flooding was heavy and would total many millions of dollars. Communities damaged by the flooding were Smithville, Excelsior Springs, Mosby, Rockport, Riverside, Missouri City, Agency, Farley, Tracy, Edgerton, Buckner, and Amazonia. The American Red Cross reported at least 9 deaths from drowning.

Ohio Basin.--Locally heavy thundershowers during the night of the 23d and 24th over a small area in Pike County, Ky., caused flash flooding on small streams southeast of Pikeville, Ky. Considerable damage resulted to county roads and bridges on the Upper Chloe, Red Creek, Lower Pompey, Burning Fork, and Frozen Fork of the Raccoon. Many homes were flooded.

A flash flood developed on Paint Creek at Bourneville, Ohio, on the 23d. The crest stage of 16.5 feet was one of the highest observed summer stages since the development of Rocky Fork Reservoir. Many acres of corn were inundated; however, the recession was rapid and only 2 or 3 percent of the crop suffered permanent damage. A bucket survey of 140 points over approximately 200 square miles made by U. S. Geological Survey showed rainfall extremes of 10 inches. Considerable damage resulted to roads and boat moorings.

Minor overflow occurred along the Skillet Fork in southeastern Illinois on the 1st and 2d due to locally heavy rains on June 29-30. The rainfall was scattered and ranged from 1 to 3 inches. No damage was reported.

Low seasonal stages occurred over the Cumberland Basin during July except for severe flash flooding that developed on the night of the 23d-24th in Bell County, Ky., and Campbell County, Tenn. The hardest hit was the Clinchmore and Stoney Fork communities in the Cumberland Mountains of Campbell County, Tenn., and the Middlesboro and Arjay sections of Bell County, Ky. Walls of water rushed down the steep mountain valleys as the result of heavy thunderstorm rainfall. Small brooks that are only a few feet wide suddenly became raging torrents several hundred yards wide. Reports indicate a family of five was drowned when high water swept their home away in the Clinchmore area of Tennessee. Many houses and automobiles were swept down the mountain valley in the Clinchmore and Stoney Fork communities. A trestle that crossed Stoney Fork Creek which drains into the New River dammed the water, trapped debris, and then collapsed releasing a wall of water into the community. The Kentucky communities hardest hit were Middlesboro, Arjay, Ferndale, Premier Hollow, and Clear Creek.

Arkansas Basin.--Heavy thundershowers on the evening of the 24th caused flash flooding on North and South Cheyenne Creek just south of Colorado Springs, Colo. Most of the water was in the vicinity of Bates Bridge and in the Broadmoor area. At least 3 persons drowned and 1 other presumed drowned when flooding burst a small reservoir.

The North Canadian River at Seiling, Okla, exceeded flood stage by nearly 1/2 foot on July 1. It went out of its banks on June 30 and receded rapidly within its banks after cresting on July 1.

Snowmelt continued into early July in the headwaters of the Arkansas in southeastern Colorado. It reached a stage of 6.4 feet at Salida, Colo., (flood stage 13 feet), one of the highest, if not the highest stage there this year, on the morning of the 2d. At Canon City, Colo., the Arkansas reached a stage of slightly above 7.0 feet (flood stage 9 feet) on the morning of the 3d. It reached a stage of 7.4 feet on the 13th. At Pueblo, the Arkansas rose to a crest estimated at about 10 feet on the 22d. Flood stage at this point is 10 feet. Flooding along the Arkansas was generally limited to lowlands in the Canon City and Pueblo, Colo., areas. Some irrigation ditches and several roads were damaged. Some bridges were washed out. In addition to stream overflow, much damage was done in some communities by surface runoff.

GULF OF CALIFORNIA DRAINAGE

Colorado Basin.--A flash flood occurred in the headwaters of the Uncompahgre River, tributary of the Gunnison River on the 11th. A heavy local shower on the mountainsides east and southeast of Ouray, Colo., caused the flash flooding. Debris-choked flumes and small streams carrying the water through and past the town caused water to overflow into the streets. Several basements were flooded.

Two small creeks, Bullberry and Government, near Teasdale, Utah, were in flood approximately 1 hour on July 31. This flooding was due to localized rain of over 2 inches in 1 hour. Some damage resulted to crops, fences, irrigation structures, and county roads. Another flood occurred on the 31st on Ferron Creek (Green River Basin) at the mouth of Canyon to 5 miles east of Ferron, Utah. Some damages resulted to irrigation structures.

GREAT BASIN

Numerous flash floods, triggered by locally heavy thundershowers, occurred during the last half of the month in Utah. Flash floods were reported on the following streams:

1. Corn Creek in Millard County on July 16.
2. Castle Creek near Castleton, Utah, on July 17-18.
3. American Fork Canyon in vicinity of Timpanogos Cave National Monument Headquarters on July 18.
4. Butterfield Canyon near Harriman, Utah, on July 18.
5. Unita Basin near Bridgeland, Utah, on July 23.
6. Green River near Green River, Utah, on July 30.
7. Price River near Helper, Utah, on July 30.
8. Pleasant Creek near Mount Pleasant, Utah, on July 31.

9. Pine Creek in Teasdale, Utah, on July 31.

The most damaging of these floods occurred on the 18th and 31st.

Minor flash floods were reported in eastern Nevada on July 31. Only minor damages were reported.

PACIFIC SLOPE DRAINAGE

Columbia Basin.--Some flooding is reported by State Agencies to have continued on the Big Lost River in Custer and Butte Counties, Idaho, through the first 10 days of July. Heavy damage occurred during June below Mackay Reservoir to cropland, irrigation facilities, roads, and bridges. No additional damage is believed to have occurred during July.

Alternate periods of warm and cool weather during July resulted in monthly temperatures which were several degrees above normal throughout most of the Columbia Basin. Stages on the smaller tributary streams responded to the temperature regime with rising, steady, and falling trends. The overall effect on the main Columbia River was a gradual falling trend during July. At Vancouver, Wash., the Columbia River receded from 15 feet (flood stage 16 feet) on July 1 to near 6 feet by the end of the month. The average July stage at Vancouver was 9.8 feet or 1.8 feet lower than the long-term mean monthly stage.

FLOOD STAGE DATA

(All dates in July unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest*	
		From–	To–	Stage	Date
ATLANTIC SLOPE DRAINAGE	Ft.			Ft.	
Neuse: Neuse, N. C.	14	12	15	15.4	12
Smithfield, N. C.	13	5	8	17.85	6
		12	16	16.25	14
		28	Aug. 1	19.3	30
Goldsboro, N. C.	14	June 27	1	16.1	Jun. 29
		7	13	17.6	10
		15	21	16.35	18
		29	Aug. 9	#21.85	Aug. 3
Kinston, N. C.	14	Jun. 19	3	17.2	Jun. 26
		9	24	15.7	(14
					(21
		Aug. 1	Aug. 12	#18.6	Aug. 6
Cape Fear: Fayetteville, N. C.	35	13	14	38.2	13
		29	31	44.2	29
Lock No. 3, Tarheel (nr), N. C.	42	13	15	52.4	14
		28	Aug. 3	56.7	30
Lock No. 2, Elizabethtown, N. C.	20	13	17	28.15	14
		29	Aug. 4	30.4	31
Saluda: Chappells, S. C.	14	13	13	14.0	13
Broad: Blair, S. C.	14	12	12	19.9	12
North Fork Edisto: Orangeburg, S. C.	8	30	Aug. 5	(8.7	31
				(9.2	Aug. 3
Edisto: Givhans, S. C.	10	30	Aug. 1	10.05	31
Savannah: Clyo, Ga.	11	Jun. 21	5	13.8	1
		17	20	11.5	19
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Iowa: Marshalltown, Iowa	13	9	9	13.7	9
North Skunk. Sigourney, Iowa	16	7	7	17.95	7
Missouri Basin					
Platte: Grand Island, Nebr.	3	Jun. 27	7	5.0	Jun. 28
Louisville, Nebr.	9	1	1	9.2	1
Nishnabotna: Hamburg, Iowa	18	2	2	#20.7	2
		19	19	#20.0	19
Nemaha. Falls City, Nebr.	20	June 28	1	#29.1	Jun. 30
Tarkio: Fairfax, Mo.	17	2	2	#20.7	2
		19	19	19.0	19
		20	20	19.75	20
One Hundred and Two: Maryville,Mo.	14	2	3	14.6	2
Rosendale,Mo.	13	Jun. 30	6	16.65	3
		19	21	#21.8	20
Little Platte: Smithville, Mo.	27	Jun. 30	1	31.7	Jun. 30
		19	21	44.7	20
Platte: Agency, Mo.	20	2	5	23.3	3
		19	23	35.05	20
Arikaree: Haigler, Nebr.	9	25	25	10.9	25
Frenchman Creek: Culbertson, Nebr.	8	5	5	8.5	5
Sappa Creek: Oberlin, Kans.	11	11	11	12.9	11
Big Creek: Hays, Kans.	17	6	6	18.0	6
Solomon: Niles, Kans.	24	Jun. 30	1	25.7	1
Turkey Creek: Wilber, Nebr.	11	Jun. 28	4	(#14.2	Jun. 29
				(12.7	2
Chapman Creek: Chapman (nr),Kans.	19	7	7	19.75	7
Little Blue: DeWeese, Nebr.	8	Jun. 30	4	9.25	1
Fairbury, Nebr.	10	1	1	11.25	1
		2	2	10.3	2
Black Vermillion: Frankfort, Kans.	19	1	3	22.6	2
Big Blue: Surprise, Nebr.		18	19	11.7	18-19
Ulysses, Nebr.	15	19	20	20.3	19-20
Beatrice, Nebr.	16	Jun. 29	2	23.1	Jun. 30
Barneston, Nebr.	18	Jun. 29	2	(22.1	Jun. 29
				(24.5	1
Marysville, Kans.	35	1	2	#36.5	1
Blue Rapids, Kans.	1101	Jun. 30	3	1102.7	Jun. 30
				1106.0	Jul. 2
Tonganoxie Creek: Tonganoxie (nr), Kans.	22	(1	3	23.3	2
		(20	22	23.75	21
MISSISSIPPI SYSTEM (Cont'd.)	Ft.			Ft.	
Missouri Basin (Cont'd.)					
Stranger Creek: Easton, Kans.	15	Jun. 30	2	18.4	2
		(11	11	16.95	11
		(20	21	17.9	21
Blue: Kansas City, Mo. (Bannister Road)	21	1	1	21.9	1
Little Blue: Lake City, Mo.	18	19	21	#25.0	20
Crooked: Richmond, Mo.	20	19	22	#30.7	20
Wakenda Creek: Carrollton, Mo.	20	20	21	E24.35	21
Grand: Pattonsburg, Mo.	25	2	3	#28.7	3
Gallatin, Mo.	21	2	2	#21.6	2
Chillicothe, Mo.	24	2	4	(25.7	3
				(25.9	4
Sumner, Mo.	26	2	5	30.3	4
		21	22	28.1	22
Brunswick, Mo.	12	Jun. 30	6	#18.1	3
		20	25	#20.55	22
Lamine: Clifton City, Mo.	19	(2	2	19.2	2
		(15	15	20.2	15
		(21	21	19.0	21
Blackwater: Valley City, Mo.	20	(9	9	24.45	(9
		(19	23	31.4	(20
				23.9	(27
Blue Lick, Mo.	25	14	16	(26.2	14
				(#25.85	16
		20	28	37.5	23
Missouri: St. Joseph, Mo.	17	Jun. 30	3	20.8	Jun. 30
		20	20	18.1	20
Atchison, Kans.	22	Jun. 30	1	#23.3	Jun. 30
		20	20	22.2	20
Leavenworth, Kans.	19	Jun. (30	3	20.7	Jun.30,1
		(20	22	24.2	21
Kansas City, Mo.	22	21	21	22.8	21
Napoleon, Mo.	17	Jun. 30	1	19.2	Jun. 30
		20	22	21.9	21
Lexington, Mo.	22	Jun. 30	5	25.9	1
		20	23	#28.85	21
Waverly, Mo.	18	Jun. 30	5	24.2	2
		20	24	26.85	22
Miami, Mo.	18	Jun. 30	5	#23.1	2
		20	24	#26.05	22
Glasgow, Mo.	25	1	3	#27.1	3
		20	24	#29.6	23
Boonville, Mo.	21	1	5	#22.9	3
		21	25	26.05	23
Jefferson City, Mo.	23	3	4	23.6	3
		21	25	26.2	24
Hermann, Mo.	21	2	6	24.2	4
		22	26	25.5	24
St. Charles, Mo.	25	3	6	26.6	4
		23	26	27.9	25
Ohio Basin					
Paint Creek: Bourneville, Ohio	10	23	24	16.5	24
Skillet Fork: Wayne City, Ill.	15	1	2	16.1	1
Arkansas Basin					
North Canadian: Seiling, Okla.	11	Jun. 30	1	11.45	1

* Provisional
# Highest Stage Observed
Record Flooding
1/ Continued at End of Month
E Estimated

RAWINSONDE DATA

Average monthly values

JULY 1965

ALBANY, N. Y.
1005 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	86	16.4	85	206	2.5
1000	31	131			213	1.9
950	31	567	16.3	59	266	6.8
900	31	1,026	13.9	57	281	11.8
850	31	1,506	10.9	59	279	15.0
800	31	2,010	8.3	49	278	18.5
750	31	2,539	6.1	44	272	21.4
700	31	3,105	3.4	39	272	24.3
650	31	3,699	.5	R32	269	25.6
600	31	4,341	- 2.8	R29	266	28.9
550	31	5,019	- 6.6	R25	266	28.2
500	31	5,765	-11.4	R26	269	31.1
450	31	6,559	-16.7	R27	266	34.4
400	31	7,441	-22.8	R29	264	37.1
350	31	8,406	-30.3	R30	264	40.0
300	31	9,486	-38.3	R28	266	42.5
250	31	10,717	-46.6		264	46.8
200	31	12,173	-53.7		269	52.4
175	31	13,026	-55.9		270	47.6
150	31	14,002	-57.9		271	43.9
125	30	15,148	-59.1		269	36.5
100	30	16,543	-59.8		277	27.0
80	30	17,946	-57.0		274	13.4
70	28	18,796	-55.7		258	5.2
60	28	19,781	-53.9		150	2.1
50	28	20,956	-52.2		97	7.6
40	28	22,408	-49.7		91	10.3
30	27	24,298	-47.7		85	13.2
25	26	25,506	-46.0		85	15.9
20	22	26,990	-43.5		89	20.8
15	14	28,928	-40.0		85	26.6
10						
7						
5						

ALBUQUERQUE, N. MEX.
841 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,619	19.2	62	84	2.9
1000	31	102				
950	31	552				
900	31	1,027				
850	31	1,530				
800	31	2,053	19.1	51	182	1.7
750	31	2,598	15.9	52	207	4.9
700	31	3,188	11.9	55	224	6.0
650	31	3,797	7.2	61	218	7.0
600	31	4,458	2.1	65	196	5.4
550	31	5,151	- 2.8	64	196	5.1
500	31	5,904	- 7.7	63	209	6.2
450	31	6,714	-12.4	49	210	6.6
400	31	7,610	-18.2	41	210	7.4
350	31	8,594	-25.1	R34	208	9.3
300	31	9,696	-33.5	R29	209	10.5
250	31	10,950	-43.2		205	10.1
200	31	12,417	-54.6		201	10.9
175	31	13,261	-60.4		199	10.9
150	30	14,210	-66.0		203	9.7
125	30	15,305	-70.4		189	3.5
100	30	16,630	-69.1		131	3.9
80	28	17,971	-65.3		92	11.1
70	28	18,788	-63.0		91	14.4
60	28	19,742	-60.3		88	16.7
50	27	20,891	-56.3		87	19.4
40	27	22,320	-52.9		89	20.6
30	26	24,188	-49.4		89	22.5
25	23	25,383	-47.7		88	24.3
20	22	26,860	-45.6		86	26.2
15	17	28,777	-42.6			
10						
7						
5						

AMARILLO, TEXAS
894 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,095	19.7	71	203	4.7
1000	31	112				
950	31	565				
900	31	1,039				
850	31	1,531	21.8	51	221	14.6
800	31	2,055	18.7	50	230	11.8
750	31	2,602	15.0	51	250	8.0
700	31	3,187	10.9	49	265	6.0
650	31	3,795	6.7	48	265	2.5
600	31	4,453	2.1	47	237	.6
550	31	5,142	- 2.6	50	146	.2
500	31	5,900	- 7.2	45	335	1.0
450	31	6,709	-12.0	37	288	2.3
400	31	7,607	-17.9	33	305	5.2
350	31	8,591	-24.9	33	297	7.0
300	31	9,692	-33.4	34	294	7.6
250	31	10,946	-43.1		285	5.4
200	31	12,413	-54.1		274	2.7
175	30	13,257	-60.3		286	4.5
150	30	14,204	-66.0		298	5.6
125	30	15,297	-70.5		351	2.9
100	30	16,617	-70.4		88	6.2
80	30	17,959	-65.5		77	11.1
70	30	18,775	-63.1		80	13.6
60	29	19,728	-60.1		85	15.3
50	29	20,873	-57.1		85	19.0
40	29	22,298	-53.4		90	21.6
30	29	24,165	-49.9		90	23.5
25	28	25,360	-48.1		88	24.9
20	28	26,838	-46.0		83	26.6
15	21	28,765	-43.4		84	29.9
10	12	31,493	-38.8		90	35.2
7	11	33,955	-35.3		88	42.5
5	9	36,323	-31.6			

ANCHORAGE, ALASKA
1012 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	29	12.5	75	181	4.1
1000	31	145	12.2	72	181	4.7
950	31	568	9.6	74	158	3.7
900	31	1,020	7.1	76	108	3.9
850	31	1,488	4.0	80	112	4.9
800	31	1,978	.9	80	114	6.0
750	31	2,492	- 1.8	81	128	7.6
700	31	3,041	- 4.3	78	135	7.6
650	31	3,619	- 7.6	75	138	7.0
600	31	4,241	-11.0	67	139	7.2
550	31	4,899	-15.1	63	152	7.4
500	31	5,619	-20.0	59	160	9.3
450	31	6,385	-25.2	54	166	9.7
400	31	7,237	-31.3	49	162	10.9
350	31	8,168	-38.4	50	173	11.8
300	31	9,211	-45.9		193	11.7
250	31	10,407	-51.1		216	9.7
200	31	11,861	-49.3		238	8.7
175	31	12,738	-48.4		230	6.8
150	31	13,752	-48.4		236	6.6
125	31	14,951	-48.7		226	5.6
100	31	16,416	-49.0		208	4.1
80	31	17,882	-48.6		171	2.7
70	30	18,761	-48.3		120	3.5
60	30	19,777	-47.9		107	4.9
50	30	20,981	-47.3		97	7.8
40	30	22,458	-46.5		94	9.7
30	28	24,370	-44.9		91	12.2
25	28	25,592	-43.5		90	14.2
20	26	27,096	-41.3		88	16.5
15	22	29,059	-38.3		85	18.8
10	5	31,856	-36.0			
7						
5						

* ANNETTE, ALASKA
1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	37	10.7	91	128	1.7
1000	31	158	11.1	86	128	1.7
950	31	585	10.3	81	141	2.5
900	31	1,036	8.2	81	168	5.4
850	31	1,507	5.9	69	173	7.0
800	31	2,002	4.1	65	185	7.6
750	31	2,523	1.5	60	192	8.5
700	31	3,079	- 1.5	55	193	9.3
650	31	3,661	- 4.7	53	198	10.1
600	30	4,297	- 8.3	50	209	10.1
550	30	4,960	-12.4	46	215	10.9
500	30	5,691	-17.0	47	220	12.0
450	30	6,469	-22.4	47	222	12.2
400	30	7,330	-28.5	41	228	12.8
350	30	8,272	-36.1	42	220	12.6
300	30	9,324	-44.2		236	12.4
250	29	10,522	-52.2		240	14.8
200	29	11,956	-53.7		249	13.6
175	29	12,818	-51.9		243	12.4
150	29	13,818	-51.4		238	11.3
125	29	15,000	-52.0		233	9.9
100	29	16,443	-52.4		219	6.0
80	29	17,887	-52.0		210	3.5
70	29	18,751	-51.6		153	1.4
60	29	19,753	-51.1		110	3.9
50	29	20,940	-50.3		89	6.2
40	28	22,400	-49.0		92	10.9
30	27	24,296	-46.7		84	12.0
25	25	25,510	-45.3		88	15.2
20	25	27,006	-43.1		83	17.1
15	24	28,959	-39.9		86	20.4
10	21	31,755	-35.2		86	24.9
7	11	34,268	-30.3		89	28.2
5						

ATHENS, GA.
988 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	246	20.9	96	280	1.2
1000	31	144				
950	31	593	21.4	83	275	3.7
900	31	1,059	19.2	75	270	5.1
850	31	1,550	16.5	72	272	5.6
800	31	2,064	13.5	67	268	6.6
750	31	2,601	10.2	63	274	6.8
700	31	3,178	7.3	53	284	7.0
650	31	3,784	3.8	48	293	6.8
600	31	4,432	.2	44	300	7.2
550	31	5,117	- 3.5	37	294	7.2
500	31	5,874	- 7.5	29	299	7.4
450	31	6,684	-12.7	29	303	9.5
400	31	7,576	-18.6	28	307	10.9
350	31	8,558	-25.7	27	316	11.5
300	31	9,657	-34.1	26	319	14.0
250	31	10,907	-43.7		323	17.7
200	31	12,370	-54.6		329	21.4
175	30	13,213	-59.9		329	20.0
150	30	14,164	-64.7		339	18.6
125	30	15,267	-68.1		359	12.4
100	29	16,606	-67.8		33	11.5
80	29	17,956	-64.8		53	10.1
70	29	18,775	-61.9		66	13.4
60	29	19,738	-58.4		82	17.7
50	29	20,894	-55.0		93	21.0
40	29	22,329	-51.8		92	22.9
30	28	24,207	-49.0		90	24.9
25	27	25,410	-47.5		90	25.3
20	24	26,895	-45.5		89	26.8
15	15	28,836	-43.6		84	33.8
10	5	31,545	-41.4			
7						

* BARROW, ALASKA
1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	8	2.1	94	101	3.1
1000	31	135	3.3	87	115	2.9
950	31	555	4.9	75	199	1.6
900	31	993	4.1	63	230	4.5
850	31	1,457	2.1	65	219	5.8
800	31	1,945	- .4	66	220	6.4
750	31	2,458	- 3.2	64	218	6.2
700	31	3,003	- 6.1	59	213	7.8
650	31	3,578	- 9.2	55	211	10.5
600	31	4,196	-12.8	50	211	12.2
550	31	4,851	-17.2	50	213	14.0
500	31	5,563	-22.0	49	212	15.5
450	31	6,328	-27.4	42	208	17.1
400	31	7,168	-33.7	43	206	18.1
350	31	8,091	-40.8	43	205	20.0
300	31	9,124	-48.0		203	21.6
250	31	10,315	-50.6		203	18.1
200	31	11,785	-46.1		206	11.3
175	31	12,675	-45.4		208	8.2
150	31	13,703	-45.5		209	6.6
125	31	14,917	-45.9		203	3.7
100	31	16,403	-45.7		160	2.3
80	31	17,890	-45.0		126	2.3
70	31	18,782	-44.6		99	3.5
60	31	19,814	-44.1		90	4.3
50	31	21,037	-43.6		86	6.4
40	30	22,539	-43.1		90	8.4
30	30	24,478	-42.4		86	10.3
25	30	25,713	-41.2		82	12.0
20	30	27,234	-39.2		83	13.2
15	29	29,217	-36.4		81	14.0
10	27	32,054	-31.5		81	15.9
7	16	34,585	-27.3		78	17.1

BARTER IS., ALASKA
1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	15	1.4	94	48	1.6
1000	31	134	4.1	86	8	.8
950	31	557	7.8	70	317	1.0
900	31	1,001	7.5	60	268	3.9
850	31	1,470	5.6	59	260	7.2
800	31	1,964	2.9	62	257	7.8
750	31	2,481	- .4	65	254	9.7
700	31	3,033	- 3.8	68	246	10.3
650	31	3,611	- 7.1	61	245	10.3
600	31	4,235	-10.8	58	241	10.1
550	31	4,895	-14.9	56	238	11.3
500	31	5,614	-19.8	52	236	13.4
450	31	6,382	-25.4	46	234	13.2
400	31	7,232	-31.8	43	234	15.2
350	31	8,163	-38.9	42	230	17.1
300	31	9,202	-46.8		227	20.2
250	31	10,390	-53.2		230	20.0
200	31	11,842	-48.1		237	15.9
175	31	12,726	-46.8		239	12.8
150	31	13,748	-46.5		238	9.1
125	30	14,959	-46.6		240	6.2
100	30	16,441	-46.2		231	3.9
80	30	17,926	-45.5		165	1.0
70	30	18,816	-44.9		105	1.7
60	30	19,848	-44.3		78	2.9
50	30	21,072	-43.6		78	5.8
40	30	22,574	-42.9		81	7.6
30	30	24,518	-41.8		76	10.5
25	30	25,757	-40.5		78	12.4
20	26	27,285	-38.6		83	13.0
15	21	29,274	-35.6		80	14.0
10	8	32,121	-31.6			
7						

BETHEL, ALASKA
1012 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	39	8.8	84	259	3.9
1000	31	138	9.4	80	267	3.3
950	31	560	7.5	78	214	4.7
900	31	1,006	4.6	83	192	7.2
850	31	1,471	2.4	75	201	7.4
800	31	1,959	.5	68	208	7.4
750	31	2,471	- 2.1	64	210	5.6
700	31	3,021	- 4.7	56	216	6.2
650	31	3,597	- 7.9	54	219	7.0
600	31	4,220	-11.5	49	225	8.2
550	31	4,878	-15.5	43	242	9.1
500	31	5,595	-20.2	38	246	11.1
450	31	6,363	-25.2	39	253	12.8
400	31	7,214	-31.2	40	255	14.4
350	31	8,146	-38.2	40	257	17.1
300	31	9,190	-45.7		260	20.4
250	31	10,388	-51.1		262	22.1
200	31	11,845	-48.6		262	19.6
175	31	12,724	-48.3		258	15.5
150	31	13,739	-48.3		257	12.2
125	31	14,938	-48.6		240	8.5
100	31	16,405	-48.9		224	5.1
80	31	17,871	-48.4		180	2.9
70	31	18,749	-48.1		132	2.1
60	30	19,761	-47.8		120	3.5
50	30	20,964	-47.4		100	5.8
40	29	22,439	-46.7		89	8.4
30	28	24,353	-45.2		89	11.1
25	28	25,573	-43.8		89	12.2
20	27	27,074	-42.1		86	13.8
15	24	29,023	-39.2		90	15.7
10	6	31,808	-35.2			
7						

BISMARCK, N. DAK.
956 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	505	15.1	86	170	.6
1000	31	122				
950	31	565	16.2	78	211	.8
900	31	1,023	17.6	62	292	3.5
850	31	1,511	15.5	60	292	8.2
800	31	2,023	12.2	58	291	11.8
750	31	2,559	8.7	59	294	16.1
700	31	3,128	4.6	58	296	19.4
650	31	3,726	1.3	51	295	22.1
600	31	4,369	- 2.5	45	294	23.9
550	31	5,049	- 6.3	37	291	26.4
500	31	5,795	-10.9	31	289	28.4
450	31	6,590	-16.3	29	288	31.3
400	31	7,474	-22.4	31	287	35.4
350	31	8,441	-29.3	30	284	40.4
300	31	9,524	-37.5	31	280	45.1
250	31	10,757	-46.7		280	51.9
200	31	12,210	-54.2		276	60.2
175	31	13,062	-55.7		282	58.5
150	31	14,039	-57.6		281	48.0
125	31	15,185	-59.4		285	36.5
100	31	16,581	-59.4		296	22.7
80	31	17,981	-58.0		304	12.0
70	31	18,825	-56.8		331	8.7
60	31	19,808	-54.3		19	5.8
50	31	20,980	-52.5		64	8.7
40	31	22,430	-50.3		85	11.7
30	30	24,324	-47.2		85	13.6
25	30	25,536	-45.2		91	16.5
20	23	27,027	-42.8		92	17.5
15	6	28,968	-38.9			
10						
7						

BOISE, IDAHO
916 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	868	15.9	57	164	2.7
1000	31	114				
950	31	557				
900	31	1,022	18.6	45	180	.8
850	31	1,514	19.4	33	333	3.7
800	31	2,032	16.1	33	323	4.5
750	31	2,572	12.1	35	271	4.3
700	31	3,150	7.8	37	246	8.0
650	31	3,753	3.0	40	232	11.8
600	31	4,399	- 2.0	41	229	17.1
550	31	5,079	- 6.9	37	232	19.8
500	31	5,822	-11.9	R28	232	22.0
450	31	6,617	-17.5	R24	234	25.3
400	31	7,492	-23.9	R28	232	29.9
350	31	8,454	-30.7	R27	232	34.2
300	31	9,532	-38.4	R25	229	42.3
250	31	10,764	-46.3		228	49.1
200	31	12,226	-52.5		230	53.2
175	31	13,083	-55.5		233	50.9
150	31	14,059	-58.2		237	41.2
125	31	15,200	-60.3		237	27.6
100	31	16,586	-61.4		225	16.7
80	30	17,974	-59.6		205	5.2
70	29	18,812	-58.4		129	3.1
60	29	19,784	-56.6		103	6.6
50	28	20,947	-54.0		91	9.5
40	28	22,386	-51.8		88	13.0
30	28	24,265	-48.6		87	16.1
25	28	25,467	-47.2		87	18.6
20	26	26,951	-44.7		89	19.8
15	25	28,891	-41.0		85	23.3
10	8	31,674	-37.1			
7						
5						

* BOOTHVILLE, LA.
1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1	24.5	92	226	2.7
1000	31	143	25.6	84	232	3.3
950	31	594	22.8	81	232	5.1
900	31	1,064	19.8	75	225	5.1
850	31	1,555	17.0	67	205	3.9
800	31	2,070	13.9	66	200	2.7
750	31	2,608	11.0	60	183	1.6
700	31	3,186	7.7	57	95	1.4
650	31	3,790	4.3	51	41	1.4
600	31	4,441	.6	50	349	2.1
550	31	5,128	- 3.1	47	9	4.1
500	31	5,885	- 7.3	41	19	5.1
450	31	6,695	-12.5	39	32	5.1
400	31	7,589	-18.2	35	57	7.8
350	31	8,573	-25.0	31	54	10.3
300	31	9,675	-33.3	30	62	14.8
250	31	10,930	-43.0		61	18.8
200	31	12,396	-54.4		61	22.5
175	31	13,240	-60.0		65	21.6
150	31	14,189	-65.8		56	22.1
125	31	15,285	-70.0		59	23.5
100	31	16,610	-69.8		72	21.4
80	31	17,953	-65.6		80	18.3
70	31	18,769	-63.3		80	19.2
60	30	19,719	-59.7		85	23.3
50	30	20,869	-56.3		91	27.0
40	28	22,297	-53.7		93	29.7
30	27	24,160	-50.3		88	35.0
25	27	25,355	-48.4		86	37.7
20	26	26,830	-46.0		89	39.0
15	26	28,754	-43.7		88	39.4
10	20	31,511	-38.9		86	46.6
7	11	33,981	-34.3			
5	5	36,302	-34.8			

* BROWNSVILLE, TEXAS
1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	7	24.2	89	155	3.9
1000	31	128	24.9	88	159	8.2
950	31	581	22.5	84	170	18.8
900	31	1,049	20.1	70	169	19.0
850	31	1,542	17.9	58	168	14.8
800	31	2,059	15.0	51	158	10.5
750	31	2,601	11.9	45	139	7.8
700	31	3,178	8.3	47	126	6.4
650	31	3,783	4.5	47	119	6.0
600	31	4,434	.4	46	109	5.2
550	31	5,121	- 3.5	41	94	6.8
500	31	5,875	- 8.1	41	76	8.5
450	31	6,681	-13.1	38	76	10.5
400	31	7,574	-19.2	33	65	11.3
350	31	8,553	-26.3	33	61	11.3
300	31	9,649	-34.9	30	63	10.7
250	31	10,894	-44.6		73	12.8
200	31	12,351	-55.6		80	18.8
175	31	13,191	-60.9		78	19.0
150	31	14,137	-65.9		67	20.8
125	31	15,231	-70.5		70	24.5
100	31	16,550	-71.2		78	24.9
80	31	17,881	-67.6		86	21.8
70	31	18,688	-65.0		88	22.5
60	31	19,636	-61.8		86	25.1
50	31	20,771	-59.1		88	28.6
40	30	22,181	-55.8		87	36.7
30	30	24,028	-52.2		88	41.0
25	30	25,214	-50.0		88	42.9
20	29	26,679	-47.3		88	44.3
15	28	28,598	-43.8		86	45.8
10	26	31,343	-40.4		86	50.5
7	13	33,763	-38.8		91	63.5
5						

BUFFALO, N. Y.
991 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	218	15.6	82	204	2.9
1000	31	137				
950	31	572	15.8	61	262	6.4
900	31	1,032	13.3	56	285	9.7
850	31	1,512	10.6	54	284	12.4
800	31	2,015	7.8	50	276	17.1
750	31	2,544	5.4	47	272	18.6
700	31	3,108	3.0	39	276	21.0
650	30	3,699	.3	29	280	23.7
600	30	4,341	- 3.0	28	276	25.6
550	30	5,020	- 7.1	26	278	27.6
500	30	5,762	-11.8	25	278	30.9
450	30	6,557	-17.3	28	279	31.7
400	30	7,434	-23.4	26	280	34.6
350	30	8,397	-30.6	26	281	37.3
300	30	9,474	-38.9	27	284	39.2
250	30	10,702	-47.7		285	43.7
200	30	12,155	-53.3		286	46.4
175	29	13,013	-54.7		284	42.9
150	29	13,993	-56.9		283	38.9
125	29	15,142	-58.8		280	35.0
100	29	16,541	-58.8		280	29.1
80	29	17,945	-57.0		286	15.0
70	29	18,793	-55.4		304	7.4
60	28	19,778	-53.5		20	3.1
50	28	20,955	-51.7		89	7.0
40	28	22,407	-49.8		89	11.7
30	28	24,298	-47.3		82	13.8
25	28	25,507	-45.9		86	15.7
20	25	26,994	-43.6		82	18.6
15	14	28,930	-40.4			
10						
7						
5						

*CANTON IS., PACIFIC AREA
+ 1009 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	4	30.1	70	91	10.1
1000	31	80	28.9	70	89	11.5
950	31	527	23.6	72	93	13.6
900	31	1,004	20.7	65	96	15.0
850	31	1,497	17.7	60	96	15.0
800	31	2,013	15.1	55	94	14.4
750	31	2,555	12.9	47	90	15.0
700	31	3,135	10.0	42	89	15.2
650	31	3,741	6.6	38	90	16.9
600	31	4,400	2.7	34	91	18.8
550	31	5,092	- 1.2	29	89	20.8
500	31	5,853	- 5.5	29	90	21.4
450	31	6,670	-10.2	24	86	19.6
400	31	7,570	-15.5	23	100	18.1
350	31	8,564	-22.5	23	99	15.7
300	31	9,676	-31.1	23	106	12.8
250	31	10,941	-41.4		92	11.3
200	31	12,414	-53.6		89	11.8
175	31	13,259	-60.6		90	11.1
150	31	14,202	-68.0		80	8.7
125	31	15,276	-75.5		82	10.7
100	31	16,552	-76.3		84	5.2
80	30	17,860	-70.7		274	17.7
70	30	18,656	-68.3		273	27.2
60	30	19,586	-65.8		269	20.2
50	30	20,700	-63.4		108	6.4
40	30	22,077	-60.8		90	42.3
30	27	23,886	-55.0		92	56.9
25	26	25,050	-53.0		90	61.8
20	26	26,498	-49.8		90	63.1
15	21	28,403	-44.8		89	67.6
10	14	31,167	-38.0		86	47.2
7	5	33,635	-35.4			
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JULY 1965

Standard pressure surface (mb.)	* CAPE HATTERAS, N. C. 1016 MB						* CARIBOU, ME. 991 MB						CHARLESTON, S. C. 1015 MB						* COLD BAY, ALASKA 1014 MB						COLUMBIA, MO. 988 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	4	23.4	91	222	1.7	31	191	12.8	86	242	3.9	31	13	22.3	87	267	2.1	31	30	7.9	89	217	1.9	31	238	20.2	85	145	2.9
1000	31	140	22.9	85	239	5.4	31	112					31	145	22.8	82	248	4.3	31	147	7.3	88	231	2.3	31	130				
950	31	587	20.8	75	264	9.1	31	544	13.0	64	266	8.2	31	593	21.9	73	253	7.6	31	568	5.9	87	266	3.7	31	575	22.3	64	200	4.9
900	31	1,054	18.1	72	256	9.9	31	996	10.9	64	265	11.8	31	1,061	19.3	71	258	8.2	31	1,011	5.1	75	293	5.6	31	1,045	20.2	57	258	7.2
850	31	1,542	15.3	71	253	11.1	31	1,470	8.0	67	262	15.2	31	1,552	16.2	70	249	6.8	31	1,478	4.1	72	297	7.6	31	1,537	17.4	50	279	8.7
800	31	2,055	12.6	64	251	12.0	31	1,968	5.4	62	265	16.9	31	2,066	13.3	66	244	6.8	31	1,970	2.8	66	293	8.5	31	2,052	14.6	49	289	10.7
750	31	2,593	9.6	62	250	13.2	31	2,494	3.1	54	264	21.0	31	2,607	10.2	62	247	8.0	31	2,487	.6	62	278	8.9	31	2,589	11.3	51	294	11.3
700	31	3,165	6.5	58	250	15.0	31	3,051	.3	48	262	23.9	31	3,179	7.0	60	253	8.9	31	3,043	- 2.1	65	271	11.1	31	3,169	7.5	59	300	13.8
650	31	3,767	3.3	56	247	16.7	31	3,641	- 2.6	41	258	26.8	31	3,784	3.7	56	257	9.5	31	3,621	- 5.2	55	271	12.6	31	3,770	3.8	59	299	14.8
600	31	4,416	- .1	51	247	16.9	31	4,273	- 6.3	37	257	30.5	31	4,432	.2	52	259	9.3	31	4,254	- 8.6	52	280	14.2	31	4,422	.1	53	301	16.7
550	31	5,099	- 3.9	43	247	16.9	31	4,945	-10.5	35	257	35.2	31	5,121	- 3.8	49	264	9.1	31	4,916	-12.5	45	279	16.1	31	5,107	- 3.7	43	304	17.3
500	31	5,856	- 8.0	44	248	16.9	31	5,676	-15.0	33	257	39.0	31	5,873	- 7.7	40	267	8.0	31	5,646	-16.9	41	272	16.5	31	5,863	- 8.0	35	302	19.6
450	31	6,665	-12.8	36	252	17.5	31	6,461	-20.3	32	257	42.2	31	6,681	-12.7	34	267	7.8	31	6,417	-22.3	44	266	17.9	31	6,667	-13.3	30	304	18.5
400	31	7,558	-18.9	36	251	16.5	31	7,328	-26.5	31	257	45.3	31	7,576	-18.6	34	279	6.2	31	7,282	-28.5	44	273	20.4	31	7,563	-18.9	33	299	21.4
350	31	8,540	-25.7	35	248	16.7	31	8,279	-33.1	30	256	51.9	31	8,558	-25.6	31	308	4.1	31	8,226	-35.7	47	265	26.4	31	8,544	-25.7	33	305	25.4
300	31	9,639	-34.1	31	243	18.3	31	9,345	-40.9	35	255	58.3	31	9,657	-33.9	R29	329	5.2	31	9,281	-43.1	44	268	29.5	31	9,643	-34.0	36	304	30.1
250	31	10,889	-44.0		253	16.7	31	10,565	-47.9		259	61.0	31	10,909	-43.8		348	6.8	31	10,490	-49.6		272	31.9	31	10,896	-43.6		302	38.7
200	31	12,351	-55.1		269	16.5	31	12,021	-51.8		263	55.6	31	12,371	-55.0		343	10.5	31	11,938	-51.8		272	30.1	31	12,361	-54.1		306	42.2
175	31	13,193	-60.6		285	18.8	30	12,891	-52.4		260	48.2	31	13,214	-60.2		353	11.5	31	12,805	-51.0		273	25.3	31	13,209	-59.2		310	37.9
150	30	14,142	-65.1		302	14.6	30	13,885	-53.7		258	45.6	31	14,164	-64.9		6	11.3	31	13,807	-51.2		272	19.4	31	14,164	-64.1		309	30.5
125	30	15,244	-67.8		299	9.9	30	15,054	-54.6		263	34.2	31	15,265	-68.4		16	11.8	31	14,991	-51.2		266	12.2	30	15,272	-66.8		310	23.5
100	30	16,593	-65.8		322	4.3	30	16,484	-54.2		262	22.1	31	16,602	-68.0		46	9.1	31	16,441	-51.1		262	7.0	30	16,620	-66.3		318	13.0
80	29	17,958	-62.5		58	5.8	30	17,915	-53.4		245	12.0	30	17,954	-64.6		58	10.5	31	17,892	-50.7		217	1.7	30	17,979	-63.7		11	8.9
70	29	18,784	-60.8		75	8.9	30	18,776	-52.3		241	7.0	30	18,772	-62.6		66	13.8	31	18,762	-50.2		126	1.9	30	18,802	-61.2		42	9.3
60	29	19,748	-57.9		85	12.4	30	19,775	-51.3		195	3.9	30	19,729	-59.4		82	18.5	31	19,768	-49.8		116	4.1	30	19,766	-58.0		69	11.8
50	28	20,906	-54.9		86	17.3	30	20,961	-50.2		95	6.2	30	20,879	-55.8		92	21.6	31	20,961	-49.2		95	5.6	30	20,924	-54.5		84	13.6
40	28	22,341	-51.8		90	21.8	29	22,421	-48.7		97	9.3	30	22,308	-52.8		90	24.7	31	22,426	-48.4		92	8.4	30	22,363	-51.8		86	14.8
30	27	24,215	-48.8		88	22.9	28	24,313	-46.8		95	12.0	30	24,177	-49.7		91	26.4	31	24,324	-46.8		94	11.7	30	24,239	-49.3		86	18.5
25	27	25,416	-47.5		86	23.9	27	25,523	-45.3		97	15.2	30	25,373	-47.9		89	27.0	31	25,536	-45.5		94	13.4	28	25,438	-47.5		88	19.8
20	27	26,895	-45.5		87	28.0	27	27,017	-42.9		88	19.6	23	26,858	-45.9		89	29.9	31	27,028	-43.6		91	16.9	24	26,924	-44.9		87	23.9
15	22	28,821	-42.8		88	30.7	25	28,969	-39.6		90	21.6	13	28,805	-43.4		85	33.8	28	28,977	-40.9		84	20.8	10	28,858	-41.9			
10	8	31,610	-37.0				16	31,772	-34.5		96	28.4							26	31,755	-36.7		86	23.3						
7																			17	34,245	-33.3		83	24.5						

Standard pressure surface (mb.)	CORPUS CHRISTI, TEXAS 1014 MB						DAYTON, OHIO 982 MB						DEL RIO, TEXAS 979 MB						DENVER, COLO. 841 MB						DODGE CITY, KANS. 926 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	26	6	26.7	83	175	4.5	31	297	17.1	83	93	1.0	31	314	24.6	69	107	8.2	31	1,611	15.9	74	192	4.3	31	792	20.2	78	184	4.1
1000	26	126	23.9	87	175	7.0	31	140					31	123					31	112					31	117				
950	26	575	22.8	85	175	12.2	31	582	18.8	62	204	1.2	31	576	23.8	66	132	15.5	31	554					31	566				
900	26	1,048	20.8	71	175	12.0	31	1,043	16.7	58	298	6.0	31	1,046	21.5	63	165	19.4	31	1,027					31	1,036	22.5	57	201	11.7
850	26	1,541	18.4	62	163	9.7	31	1,529	13.7	59	289	9.5	31	1,540	19.7	55	161	17.5	31	1,522					31	1,533	21.2	49	228	14.6
800	26	2,059	15.5	59	153	8.2	31	2,038	11.3	51	285	11.8	31	2,060	16.0	57	153	12.4	31	2,041	18.3	52	235	4.5	31	2,056	18.1	48	245	12.6
750	26	2,596	12.3	56	141	5.4	31	2,571	8.7	48	284	13.6	31	2,602	12.5	54	145	8.5	31	2,589	15.7	47	246	4.5	31	2,600	14.4	49	254	8.9
700	26	3,179	9.0	54	121	4.7	31	3,143	5.8	40	284	15.3	31	3,182	9.2	45	127	7.0	31	3,175	11.9	45	246	6.2	31	3,185	10.3	48	268	6.0
650	26	3,782	5.3	55	119	5.1	31	3,741	2.6	34	289	16.1	31	3,790	5.6	40	108	8.0	31	3,790	7.2	47	264	6.8	31	3,791	5.8	51	259	4.3
600	26	4,439	1.2	57	100	5.8	31	4,390	- 1.0	34	292	18.3	31	4,444	1.9	35	105	9.7	31	4,444	2.1	52	272	8.9	31	4,448	1.4	51	259	5.1
550	26	5,127	- 2.5	52	88	7.6	31	5,072	- 4.8	30	287	20.2	31	5,133	- 2.2	30	94	8.9	31	5,135	- 3.2	54	271	13.8	31	5,135	- 3.4	54	277	6.6
500	26	5,885	- 6.7	44	81	10.5	31	5,824	- 9.3	31	291	22.1	31	5,893	- 6.7	28	86	11.7	31	5,888	- 8.1	52	261	14.6	31	5,891	- 7.8	50	291	8.2
450	26	6,691	-11.6	43	69	14.4	31	6,623	-14.7	27	292	23.7	31	6,700	-12.1	R24	74	14.4	31	6,698	-13.0	47	260	17.1	30	6,700	-12.4	43	287	11.1
400	26	7,594	-17.6	40	70	16.3	31	7,513	-20.8	25	291	26.6	31	7,600	-18.0	R23	75	15.7	31	7,587	-19.0	43	261	22.0	30	7,596	-17.9	36	288	14.6
350	26	8,578	-25.2	43	75	17.3	31	8,487	-27.9	27	292	30.7	31	8,585	-25.1	R23	78	19.0	31	8,568	-25.8	38	261	26.6	30	8,581	-24.9	33	290	18.5
300	26	9,677	-33.7	40	77	21.0	31	9,577	-36.1	26	295	34.2	31	9,688	-33.4	R24	78	21.0	31	9,667	-34.0	35	259	31.9	30	9,683	-33.3	30	288	19.2
250	25	10,926	-43.7		82	20.4	31	10,818	-45.4		298	38.5	31	10,943	-43.0		84	25.3	31	10,920	-43.2		258	36.9	30	10,937	-43.2		284	22.1
200	25	12,389	-54.6		87	22.9	31	12,274	-55.0		302	45.3	31	12,411	-54.3		89	26.0	30	12,388	-53.8		260	36.1	30	12,403	-54.4		290	23.1
175	25	13,232	-60.2		83	21.6	31	13,120	-58.2		301	42.0	31	13,255	-60.1		86	24.5	30	13,235	-59.2		259	32.6	30	13,247	-60.2		288	23.3
150	25	14,181	-65.5		68	23.9	31	14,084	-61.4		302	37.9	31	14,204	-65.6		77	22.0	30	14,190	-63.8		260	24.5	30	14,195	-65.5		291	19.2
125	25	15,278	-69.7		74	26.8	31	15,206	-64.4		301	26.8	31	15,300	-70.2		74	22.1	30	15,298	-67.4		267	16.1	30	15,292	-69.3		288	9.3
100	25	16,605	-70.4		81	25.8	31	16,570	-63.8		301	17.9	31	16,617	-71.6		79	21.2	30	16,643	-66.7		261	6.8	30	16,625	-68.4		344	3.7
80	24	17,941	-66.7		89	24.5	31	17,945	-61.2		323	7.4	31	17,946	-67.2		91	20.8	30	18,007	-62.6		60	2.9	30	17,975	-64.8		54	6.0
70	24	18,751	-64.3		89	22.3	31	18,776	-59.7		2	5.8	31	18,758	-63.7		89	18.1	30	18,834	-60.7		80	8.4	30	18,794	-62.3		68	9.5
60	22	19,707	-61.0		92	23.9	31	19,745	-56.9		45	7.8	31	19,708	-61.2		85	20.0	30	19,799	-58.4		80	11.1	30	19,752	-59.6		76	13.0
50	22	20,848	-58.3		93	25.3	31	20,907	-53.9		72	10.1	31	20,847	-58.4		86	26.2	30	20,955	-55.1		83	13.6	28	20,901	-55.9		86	15.3
40	20	22,259	-54.9				29	22,351	-51.1		86	13.6	31	22,263	-54.2		87	31.1	30	22,392	-51.7		88	15.0	28	22,332	-52.7		89	17.7
30	19	24,113	-50.9				29	24,233	-48.3		85	16.1	31	24,125	-50.5		90	33.4	29	24,266	-49.1		89	17.3	27	24,200	-50.0		88	20.6
25	18	25,302	-49.5				28	25,436	-46.7		83	18.8	31	25,319	-48.6		90	35.7	29	25,466	-47.9		81	19.4	25	25,398	-48.1		88	21.2
20	18	26,772	-46.7				26	26,924	-44.8		83	21.2	31	26,796	-45.9		90	37.1	29	26,946	-45.7		85	20.8	25	26,877	-45.8		91	24.5
15	16	28,699	-43.2				15	28,863	-41.8		83	25.3	30	28,720	-43.4		87	35.7	24	28,864	-42.4		80	23.3	17	28,813	-42.5		83	27.6
10	12	31,438	-39.5										18	31,464	-39.5		85	43.3												
7	5	33,835	-40.1																											

Standard pressure surface (mb.)	EL PASO, TEXAS 884 MB						ELY, NEV. 812 MB						* FAIRBANKS, ALASKA 999 MB						FLINT, MICH. 989 MB						FORT WORTH, TEXAS 995 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,193	22.7	52	21	1.7	31	1,908	11.0	52	194	7.6	31	135	12.4	69	303	2.1	31	234	15.9	79	200	2.1	31	180	24.6	74	202	3.9
1000	31	98					31	127					31	124			343	2.1	31	138					31	136				
950	31	555					31	569					31	555	12.6	62	266	5.8	31	575	16.5	60	246	3.9	31	593	25.1	62	211	14.8
900	31	1,036					31	1,034					31	1,008	9.6	63	246	7.6	31	1,034	14.4	57	285	8.2	31	1,061	22.9	55	206	11.1
850	31	1,533	22.6	44	88	2.1	31	1,522					31	1,479	6.2	68	231	7.2	31	1,515	11.5	55	293	11.1	31	1,558	19.6	54	198	6.2
800	31	2,058	19.6	44	167	3.5	31	2,034	15.4	44	187	7.4	31	1,974	2.7	77	219	6.2	31	2,020	9.0	51	289	14.4	31	2,077	16.2	52	172	4.1
750	31	2,606	15.7	48	178	4.7	31	2,579	14.5	38	187	8.2	31	2,492	- .5	77	211	6.0	31	2,551	6.6	46	289	18.1	31	2,615	12.7	50	136	4.1
700	31	3,193	11.3	53	146	5.1	31	3,161	10.5	39	218	11.1	31	3,042	- 3.9	78	206	7.6	31	3,116	4.1	39	286	19.4	31	3,199	9.0	49	107	4.1
650	31	3,801	6.5	56	116	6.4	31	3,769	5.8	42	218	12.8	31	3,621	- 6.9	73	195	7.4	31	3,715	1.0	37	287	22.1	31	3,803	5.1	51	85	5.1
600	31	4,459	1.4	59	101	7.2	31	4,423	.5	46	211	13.8	31	4,246	-10.6	66	192	7.0	31	4,356	- 2.4	31	288	24.1	31	4,458	.8	48	81	5.6
550	31	5,147	- 3.5	54	101	10.1	31	5,107	- 5.0	46	208	14.8	31	4,906	-14.9	62	192	8.5	31	5,036	- 6.6	32	288	26.8	31	5,148	- 2.7	40	75	5.4
500	31	5,902	- 8.0	47	110	10.1	31	5,857	- 9.9	42	214	17.3	31	5,625	-19.7	59	193	10.1	31	5,780	-11.2	27	288	30.5	31	5,905	- 6.7	34	53	7.6
450	31	6,708	-12.4	33	121	11.3	31	6,657	-15.0	R33	220	20.0	31	6,392	-25.1	58	183	11.7	31	6,577	-16.4	25	289	32.4	31	6,712	-11.8	30	47	8.5
400	31	7,606	-18.4	R28	123	11.1	31	7,543	-21.3	R30	223	24.7	31	7,245	-31.4	56	186	12.8	31	7,457	-22.6	27	291	35.2	31	7,613	-17.7	26	44	11.5
350	31	8,588	-25.5	R23	125	10.7	31	8,515	-28.3	R33	223	30.7	31	8,176	-38.7	52	192	13.2	31	8,423	-29.6	26	293	38.5	31	8,598	-24.8	26	40	13.0
300	31	9,688	-33.8	R22	123	12.2	31	9,603	-36.1	R32	220	38.7	31	9,217	-46.6		201	15.9	31	9,504	-37.8	26	294	42.2	31	9,701	-33.1	25	41	14.2
250	31	10,941	-43.5		119	13.2	31	10,846	-44.5		218	45.8	31	10,408	-52.4		217	16.9	31	10,736	-46.6		295	51.7	31	10,957	-43.0		44	15.9
200	31	12,406	-54.8		125	13.2	31	12,309	-53.6		217	48.8	31	11,853	-49.9		213	16.1	31	12,190	-53.7		295	53.4	31	12,423	-54.7		57	15.2
175	31	13,248	-60.7		125	14.6	31	13,158	-58.5		221	44.5	31	12,731	-48.0		221	11.8	31	13,044	-56.0		295	52.4	31	13,266	-60.3		55	15.2
150	31	14,194	-66.2		119	13.4	30	14,118	-62.3		226	32.6	31	13,747	-47.9		217	9.7	31	14,019	-57.8		297	43.1	31	14,214	-66.0		49	16.3
125	30	15,285	-70.4		111	12.8	30	15,235	-65.3		222	21.8	31	14,948	-48.1		216	6.4	31	15,163	-60.0		295	34.2	31	15,307	-70.2		61	15.9
100	30	16,604	-70.9		102	13.0	29	16,585	-66.0		194	11.3	31	16,419	-47.9		196	4.7	31	16,554	-60.2		297	23.5	30	16,632	-70.4		72	15.7
80	30	17,938	-66.8		90	15.0	28	17,948	-62.5		149	7.0	31	17,891	-47.2		161	2.5	31	17,951	-58.3		305	14.6	30	17,971	-65.3		84	15.7
70	30	18,750	-64.3		85	18.3	28	18,774	-61.2		106	7.4	31	18,775	-46.8		125	3.1	31	18,793	-56.5		328	7.6	30	18,788	-62.7		84	15.9
60	30	19,699	-61.2		85	20.2	28	19,736	-58.6		92	11.8	31	19,796	-46.3		104	5.1	31	19,777	-54.4		17	6.0	30	19,746	-59.6		86	17.1
50	29	20,844	-57.0		92	23.3	28	20,889	-55.7		89	15.2	31	21,008	-45.6		89	7.8	31	20,951	-52.0		72	9.1	29	20,895	-56.4		89	19.8
40	29	22,264	-53.9		90	26.6	28	22,318	-53.1		86	16.3	29	22,493	-44.8		99	9.1	31	22,404	-49.7		86	11.3	29	22,322	-53.4		90	24.9
30	28	24,124	-50.9		89	28.4	27	24,187	-49.6		86	19.8	28	24,419	-43.8		92	12.8	30	24,297	-47.5		80	14.0	29	24,187	-49.9		89	30.1
25	27	25,317	-48.6		88	29.9	26	25,382	-48.1		85	21.2	28	25,646	-42.6		83	14.6	30	25,506	-45.8		86	15.5	29	25,385	-47.5		87	29.7
20	26	26,794	-45.4		87	30.3	26	26,859	-45.8		87	23.1	27	27,154	-40.6		87	16.9	30	26,998	-43.8		83	18.3	28	26,866	-45.3		86	30.3
15	21	28,720	-43.6		85	32.2	24	28,789	-42.6		86	26.2	27	29,125	-37.5		84	18.6	27	28,947	-40.7		89	22.9	19	28,796	-42.3		93	31.3
10	16	31,469	-38.9		88	44.1	11	31,524	-39.2				25	31,956	-32.6		83	22.7	17	31,746	-35.8									
7	15	33,944	-33.7		94	52.4	8	34,020	-32.7				12	34,471	-27.9															
5	8	36,278	-32.9				6	36,399	-28.8																					

See reference note at end of table

RAWINSONDE DATA

Average monthly values

GLASGOW, MONT.
935 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	696	15.6	77	76	3.7
1000	31	121				
950	31	556				
900	31	1.023	18.2	58	14	.4
850	31	1.511	16.2	54	288	5.4
800	31	2.024	12.8	54	289	8.4
750	31	2.555	8.9	55	289	10.7
700	31	3.130	5.0	53	286	11.7
650	31	3.724	1.0	48	284	15.5
600	31	4.369	- 3.1	43	281	19.4
550	31	5.041	- 7.4	37	276	22.7
500	31	5.789	-12.3	R32	273	24.5
450	31	6.577	-17.7	R27	271	25.6
400	31	7.457	-24.0	R26	271	29.3
350	31	8.418	-31.2	R26	266	35.0
300	31	9.492	-39.3	R26	265	43.3
250	31	10.716	-47.9		262	51.7
200	31	12.165	-53.8		266	54.2
175	31	13.021	-54.7		270	48.6
150	31	14.003	-56.7		270	41.2
125	31	15.153	-58.4		273	31.7
100	31	16.555	-58.4		283	17.5
80	31	17.960	-57.4		290	9.9
70	31	18.805	-56.4		328	5.2
60	31	19.786	-54.6		19	5.1
50	31	20.958	-52.2		58	6.8
40	31	22.409	-49.8		78	10.1
30	30	24.300	-47.1		91	13.4
25	30	25.511	-45.3		95	15.7
20	28	27.006	-43.0		85	19.0
15	25	28.954	-39.6		86	21.0
10	6	31.756	-34.4			
7						

* GRAND JUNCTION, COLO.
855 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1.474	20.0	54	120	5.4
1000	31	90				
950	31	542				
900	31	1.018				
850	31	1.519	20.1	52	121	5.4
800	31	2.042	18.6	46	139	9.1
750	31	2.592	15.7	45	181	6.0
700	31	3.175	11.7	47	238	6.8
650	31	3.788	7.0	52	246	8.5
600	31	4.443	1.6	63	243	11.7
550	31	5.131	- 3.5	62	240	14.0
500	31	5.885	- 8.5	58	240	15.9
450	31	6.694	-13.1	52	243	17.3
400	31	7.583	-19.3	51	242	20.2
350	31	8.562	-26.2	39	239	25.4
300	31	9.658	-34.4	39	241	29.1
250	31	10.907	-43.8		239	31.3
200	31	12.369	-54.3		237	30.3
175	31	13.213	-59.9		239	29.5
150	31	14.164	-64.6		244	22.0
125	31	15.266	-68.2		236	13.2
100	31	16.605	-66.9		236	6.6
80	31	17.962	-63.7		119	4.7
70	31	18.784	-61.4		94	8.7
60	31	19.748	-58.5		92	10.5
50	31	20.901	-56.0		88	12.4
40	31	22.331	-52.7		91	14.4
30	30	24.204	-49.5		90	17.5
25	30	25.402	-47.7		88	19.2
20	30	26.884	-45.3		91	20.8
15	28	28.818	-42.6		89	23.1
10	26	31.583	-37.8		88	33.4
7	16	34.074	-33.4		90	36.5

* GREAT FALLS, MONT.
889 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1.123	14.3	71	234	6.0
1000	31	116				
950	31	560				
900	31	1.028				
850	31	1.510	16.7	44	237	6.6
800	31	2.023	13.4	44	249	5.8
750	31	2.561	9.4	45	267	6.4
700	31	3.131	5.1	47	268	9.3
650	31	3.732	1.0	42	261	13.2
600	31	4.370	- 3.3	42	261	16.3
550	31	5.046	- 8.1	45	259	17.5
500	31	5.787	-13.2	39	254	19.4
450	31	6.579	-18.5	36	251	22.0
400	31	7.452	-24.3	32	248	26.0
350	31	8.411	-31.6	32	249	32.4
300	31	9.483	-39.8	30	251	39.6
250	31	10.707	-47.9		247	50.1
200	31	12.159	-53.1		250	52.6
175	31	13.016	-54.4		253	50.3
150	31	13.999	-56.6		252	37.3
125	31	15.150	-58.4		255	28.0
100	31	16.552	-58.6		257	15.5
80	31	17.957	-57.4		267	7.4
70	31	18.802	-56.5		335	2.7
60	31	19.783	-54.9		61	4.3
50	31	20.955	-52.5		70	6.0
40	31	22.403	-50.4		84	10.7
30	29	24.295	-47.7		75	15.2
25	29	25.504	-45.8		90	17.1
20	29	26.999	-43.2		89	18.8
15	28	28.952	-40.2		81	21.8
10	23	31.749	-35.6		85	29.5
7	5	34.257	-30.7			

GREEN BAY, WIS.
991 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	210	15.3	86	270	1.4
1000	31	128				
950	31	568	16.7	69	266	4.9
900	31	1.024	14.2	66	282	8.4
850	31	1.505	11.3	67	288	11.1
800	31	2.009	8.9	62	289	15.2
750	31	2.536	6.3	55	294	19.2
700	31	3.104	3.5	46	297	23.5
650	31	3.698	.2	44	296	25.1
600	31	4.340	- 3.5	38	294	27.6
550	31	5.019	- 7.5	34	297	30.7
500	31	5.759	-11.9	R31	295	33.4
450	31	6.551	-17.2	R28	296	38.9
400	31	7.430	-23.0	R27	298	42.3
350	31	8.395	-29.8	R26	298	46.8
300	31	9.476	-38.0	R29	298	51.1
250	31	10.708	-46.5		300	61.8
200	31	12.161	-54.1		300	66.6
175	30	13.018	-55.8		299	61.8
150	30	13.995	-57.9		298	52.3
125	30	15.139	-59.6		299	38.3
100	30	16.531	-59.8		302	27.6
80	29	17.931	-57.9		317	14.0
70	29	18.774	-56.9		331	7.6
60	29	19.756	-54.8		25	6.4
50	29	20.928	-52.5		66	8.2
40	29	22.378	-49.9		85	13.2
30	28	24.271	-47.3		87	15.7
25	28	25.483	-45.2		94	17.5
20	27	26.982	-42.5		92	19.8
15	20	28.929	-40.0		88	21.4
10	5	31.743	-34.3			
7						

GREENSBORO, N. C.
985 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	273	20.2	96	219	1.4
1000	31	144				
950	31	591	20.6	79	287	5.1
900	31	1.055	18.3	73	306	3.9
850	31	1.544	15.6	72	290	6.0
800	31	2.057	12.6	69	279	8.7
750	31	2.595	9.4	65	276	10.5
700	31	3.168	6.2	59	276	13.2
650	31	3.771	3.0	52	278	12.8
600	31	4.418	- .2	42	280	13.0
550	31	5.106	- 3.9	35	284	12.8
500	31	5.857	- 8.2	33	274	14.2
450	31	6.667	-13.2	30	276	13.4
400	31	7.557	-19.3	28	284	15.2
350	31	8.537	-26.4	27	292	17.5
300	31	9.633	-34.8	25	288	18.5
250	31	10.882	-44.3		289	20.8
200	31	12.343	-54.8		295	23.7
175	31	13.188	-59.8		298	22.[illegible]
150	30	14.142	-63.9		312	19.6
125	30	15.249	-67.2		316	14.6
100	30	16.597	-66.3		330	6.6
80	30	17.957	-62.8		24	5.6
70	30	18.783	-60.9		62	7.8
60	30	19.747	-58.5		78	11.5
50	30	20.902	-55.0		89	16.5
40	30	22.337	-51.8		94	20.4
30	28	24.214	-48.7		89	22.0
25	26	25.413	-47.2		89	23.3
20	19	26.899	-45.5		88	26.0
15	12	28.828	-43.0			
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GUAM, MARIANA IS.
997 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	111	25.0	92	108	5.2
1000	31	83				
950	31	533	23.1	89	105	13.2
900	31	1.006	20.4	86	111	14.0
850	31	1.498	18.0	82	106	12.6
800	31	2.016	15.2	78	108	11.8
750	31	2.556	12.4	72	105	12.8
700	31	3.138	9.5	66	103	13.4
650	31	3.747	5.9	64	101	14.2
600	31	4.400	2.1	63	105	15.0
550	31	5.096	- 1.9	57	100	14.0
500	30	5.850	- 5.7	55	99	13.2
450	30	6.670	-10.6	51	98	12.8
400	30	7.566	-16.5	46	100	10.9
350	30	8.557	-23.3	43	99	9.5
300	30	9.666	-31.5	39	101	6.8
250	30	10.929	-41.8		92	3.1
200	30	12.398	-54.4		123	3.5
175	30	13.239	-61.6		106	2.7
150	30	14.176	-69.5		12	3.3
125	27	15.238	-77.2		52	10.3
100	22	16.512	-75.9		79	20.8
80	20	17.820	-70.2		82	25.8
70	20	18.618	-67.7		87	25.3
60	20	19.553	-64.5		84	28.6
50	19	20.677	-61.9		88	34.0
40	18	22.073	-58.2		88	44.3
30	18	23.901	-54.3		87	57.5
25	16	25.076	-51.6		87	64.9
20	16	26.534	-48.4		87	73.0
15	13	28.457	-44.3		90	76.0
10	6	31.188	-42.4			
7						

HILO, HAWAII
1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	11	20.9	87	242	5.6
1000	31	142	22.4	77	239	3.9
950	31	588	19.1	81	100	4.3
900	31	1.051	15.9	84	87	7.6
850	31	1.535	12.8	82	83	7.4
800	31	2.043	11.0	68	82	7.2
750	31	2.585	9.8	42	93	7.4
700	31	3.152	7.9	30	104	5.6
650	31	3.759	5.1	24	126	4.3
600	31	4.409	1.4	25	174	2.7
550	31	5.102	- 2.8	26	229	4.7
500	31	5.852	- 7.7	25	255	9.3
450	31	6.660	-13.2	24	262	13.8
400	31	7.550	-19.4	23	262	20.2
350	31	8.529	-26.6	26	265	27.2
300	31	9.623	-35.1	29	268	36.9
250	31	10.869	-44.7		270	45.8
200	30	12.325	-55.9		268	54.6
175	30	13.163	-61.7		269	55.2
150	30	14.106	-66.6		268	52.1
125	30	15.197	-71.1		262	36.3
100	30	16.516	-70.6		241	11.7
80	30	17.851	-67.1		95	12.4
70	29	18.662	-64.6		95	21.4
60	29	19.609	-62.1		92	27.6
50	29	20.741	-60.0		90	34.2
40	28	22.147	-56.7		91	42.2
30	28	23.987	-52.9		92	46.8
25	27	25.170	-50.3		90	50.9
20	27	26.636	-47.6		90	57.1
15	18	28.552	-45.4		93	61.0
10	6	31.241	-44.5			
7						

HUNTINGTON, W. VA.
988 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	246	18.5	90	190	1.0
1000	31	139				
950	31	583	20.0	72	256	3.7
900	31	1.048	18.1	67	273	7.2
850	31	1.536	15.2	62	275	9.1
800	31	2.048	11.9	61	276	10.7
750	31	2.585	9.5	46	281	12.4
700	31	3.157	6.5	42	284	13.4
650	31	3.759	3.5	40	287	14.0
600	31	4.409	- .2	40	290	15.7
550	31	5.094	- 4.2	37	290	16.3
500	31	5.847	- 8.6	32	290	16.7
450	31	6.654	-13.4	29	293	19.2
400	31	7.545	-19.7	32	291	22.1
350	31	8.523	-26.7	R30	296	26.8
300	31	9.618	-35.0	R29	298	28.7
250	30	10.865	-44.5		300	35.2
200	30	12.326	-54.3		302	40.0
175	29	13.170	-58.0		304	36.3
150	29	14.133	-61.7		304	31.1
125	29	15.254	-64.2		302	22.1
100	28	16.614	-64.2		307	13.6
80	28	17.987	-61.8		330	7.4
70	28	18.818	-59.1		19	5.2
60	28	19.790	-56.7		74	9.1
50	27	20.952	-54.1		86	11.5
40	27	22.395	-50.8		88	16.1
30	26	24.277	-48.4		89	16.7
25	24	25.483	-46.6		87	19.6
20	20	26.977	-44.5		84	23.9
15	7	28.890	-42.1			
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* INTERNAT. FALLS, MINN.
972 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	360	12.2	84	163	1.0
1000	31	122				
950	31	554	14.2	76	269	2.5
900	31	1.011	12.6	72	288	7.4
850	31	1.488	9.9	68	302	10.7
800	31	1.990	7.1	63	309	14.8
750	31	2.515	4.5	56	302	17.5
700	31	3.079	1.7	49	299	21.2
650	31	3.667	- 1.3	45	299	24.3
600	31	4.308	- 5.0	41	298	29.1
550	31	4.977	- 9.1	36	299	30.7
500	31	5.719	-13.6	35	300	34.0
450	31	6.505	-18.7	32	297	37.1
400	31	7.381	-24.7	29	298	42.3
350	31	8.339	-32.0	29	296	47.2
300	31	9.410	-40.1	31	295	53.4
250	31	10.632	-48.5		295	60.4
200	31	12.077	-53.8		295	62.4
175	31	12.935	-53.8		295	52.1
150	31	13.923	-55.2		299	45.5
125	31	15.081	-56.9		300	34.4
100	31	16.492	-56.8		304	25.6
80	31	17.909	-55.6		316	16.9
70	31	18.762	-54.1		330	10.5
60	31	19.754	-52.6		354	6.6
50	31	20.936	-51.2		27	6.2
40	31	22.392	-49.2		66	8.2
30	31	24.290	-46.7		75	9.7
25	31	25.504	-45.1		82	12.4
20	31	27.001	-43.2		84	15.9
15	30	28.950	-40.0		82	18.3
10	25	31.745	-35.4		81	24.5
7	10	34.259	-30.5			

JACKSON, MISS.
1005 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	94	22.6	92	259	1.7
1000	31	140	23.0	89	252	2.1
950	31	590	23.6	75	256	7.0
900	31	1.063	20.9	74	261	5.1
850	31	1.556	17.9	71	266	2.4
800	31	2.073	14.8	65	285	1.6
750	31	2.608	11.5	63	28	1.7
700	31	3.192	8.0	60	26	3.9
650	31	3.791	4.2	60	34	5.4
600	31	4.448	.3	61	33	5.4
550	31	5.133	- 3.3	52	44	4.1
500	31	5.891	- 7.4	42	24	6.6
450	31	6.697	-12.1	31	29	7.4
400	31	7.596	-18.0	31	27	9.3
350	31	8.580	-25.1	30	23	11.8
300	31	9.681	-33.5	R28	21	14.0
250	31	10.934	-43.5		26	16.1
200	31	12.397	-54.8		29	18.8
175	31	13.239	-60.8		31	19.8
150	31	14.185	-66.1		34	19.6
125	31	15.278	-70.2		46	19.4
100	31	16.602	-70.0		63	15.5
80	31	17.942	-65.7		79	15.7
70	31	18.757	-63.1		85	17.3
60	31	19.715	-59.0		89	18.6
50	31	20.868	-55.6		95	20.8
40	31	22.299	-52.7		88	23.9
30	30	24.166	-49.9		88	28.9
25	26	25.363	-48.4		86	32.2
20	24	26.840	-45.8		90	34.4
15	11	28.767	-43.4			
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* JACKSONVILLE, FLA.
1018 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	5	23.5	91	247	2.7
1000	31	160	23.5	85	236	4.9
950	31	604	21.9	72	236	7.6
900	31	1.076	19.1	70	240	6.4
850	31	1.565	16.1	69	243	5.1
800	31	2.079	13.0	64	234	5.1
750	31	2.613	10.1	57	232	4.9
700	31	3.190	7.0	53	246	5.8
650	31	3.788	3.7	53	259	5.4
600	31	4.441	- .2	51	268	5.8
550	31	5.122	- 3.8	46	272	5.2
500	31	5.879	- 8.1	39	282	4.5
450	31	6.685	-13.1	31	284	3.3
400	31	7.578	-18.9	27	318	3.3
350	31	8.558	-26.1	28	344	5.1
300	31	9.654	-34.4	27	348	5.1
250	31	10.903	-44.1		21	8.5
200	31	12.362	-55.4		23	12.0
175	31	13.202	-61.1		29	14.4
150	31	14.147	-66.3		32	16.5
125	31	15.240	-70.2		47	18.1
100	31	16.567	-69.0		63	14.8
80	30	17.913	-65.4		74	15.5
70	30	18.729	-63.0		77	19.4
60	30	19.685	-60.1		87	24.7
50	30	20.831	-56.7		94	28.7
40	30	22.256	-53.2		97	31.1
30	29	24.122	-50.2		91	30.7
25	29	25.316	-48.5		86	33.8
20	29	26.789	-46.9		86	36.1
15	27	28.703	-44.0		89	40.4
10	18	31.435	-39.0		93	48.2
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4						

JOHN F. KENNEDY INT. ARPT.NY
1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	5	20.3	74	310	3.5
1000	31	140	20.0	65	316	4.3
950	31	580	18.7	52	305	4.9
900	31	1.044	15.9	52	269	7.8
850	31	1.527	13.0	55	264	11.7
800	31	2.034	9.8	54	267	14.4
750	31	2.570	7.1	44	268	17.3
700	31	3.133	4.3	39	268	20.2
650	31	3.731	1.3	33	271	22.3
600	31	4.373	- 1.9	30	270	24.3
550	31	5.052	- 5.8	30	265	26.4
500	31	5.800	-10.4	29	264	28.2
450	31	6.602	-15.6	25	264	30.5
400	31	7.481	-21.9	23	263	33.2
350	31	8.451	-28.7	23	262	36.5
300	31	9.537	-36.8	23	258	39.4
250	31	10.773	-46.1		260	45.1
200	31	12.226	-54.6		268	45.8
175	31	13.075	-57.9		271	42.5
150	31	14.040	-60.2		268	36.5
125	30	15.169	-61.8		266	28.7
100	30	16.551	-61.0		276	20.6
80	30	17.946	-58.3		285	7.4
70	30	18.788	-56.7		281	1.6
60	30	19.769	-54.8		101	4.1
50	30	20.941	-52.4		96	8.0
40	30	22.391	-50.0		92	11.7
30	29	24.282	-47.5		87	15.2
25	29	25.490	-46.0		84	16.1
20	27	26.977	-44.1		87	21.0
15	18	28.918	-40.9		86	23.3
10	6	31.681	-35.8			
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4						

JOHNSTON IS., PACIFIC AREA
1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	3	26.1	76	106	13.8
1000	31	125	25.0	77	96	15.3
950	31	584	21.4	80	84	17.9
900	31	1.041	18.1	80	86	18.8
850	31	1.530	15.2	75	87	17.5
800	31	2.042	13.0	63	90	12.8
750	31	2.588	11.3	43	95	10.1
700	31	3.158	8.8	34	92	6.8
650	31	3.766	5.5	28	91	3.3
600	31	4.417	1.4	27	117	1.2
550	31	5.107	- 2.9	28	240	2.9
500	31	5.861	- 7.9	31	253	5.8
450	31	6.672	-12.8	31	260	9.9
400	31	7.562	-18.5	30	264	15.9
350	30	8.545	-25.7	R27	259	23.3
300	30	9.642	-34.2	R27	259	31.5
250	30	10.891	-44.1		255	41.4
200	30	12.348	-56.0		256	46.2
175	30	13.185	-62.3		259	46.6
150	30	14.121	-68.9		256	43.5
125	30	15.194	-74.9		254	34.8
100	29	16.487	-74.4		240	10.5
80	27	17.805	-68.9		96	13.0
70	27	18.608	-66.3		87	20.2
60	27	19.547	-63.4		88	27.8
50	27	20.674	-60.6		87	33.8
40	27	22.074	-57.5		90	41.8
30	24	23.909	-53.9		92	49.7
25	22	25.084	-51.5		89	55.6
20	17	26.541	-49.0		92	62.9
15	9	28.448	-47.0			
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5						
4						

KEY WEST, FLORIDA
1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	27	3	27.2	78	131	3.5
1000	27	147	25.8	81	123	5.8
950	27	597	21.9	87	132	7.6
900	27	1.068	19.4	72	129	7.0
850	27	1.558	16.8	66	131	6.0
800	27	2.073	14.1	59	129	5.4
750	27	2.610	11.0	55	121	5.4
700	27	3.189	7.8	53	129	4.1
650	27	3.789	4.1	50	142	3.1
600	27	4.444	.2	51	110	2.3
550	27	5.129	- 3.5	46	87	2.3
500	27	5.886	- 8.1	43	53	2.5
450	27	6.692	-13.3	42	25	2.9
400	27	7.586	-19.1	35	33	3.5
350	27	8.565	-26.3	33	23	3.9
300	27	9.661	-35.1	31	34	5.8
250	27	10.907	-45.2		32	7.0
200	27	12.358	-57.1		46	9.9
175	27	13.192	-62.6		47	12.0
150	27	14.133	-67.0		44	15.0
125	27	15.226	-69.6		56	16.3
100	27	16.556	-68.7		67	15.3
80	27	17.895	-67.3		79	19.6
70	26	18.701	-65.2		80	25.1
60	26	19.646	-61.9		90	29.5
50	26	20.783	-58.7		94	34.0
40	26	22.193	-55.9		93	37.5
30	26	24.044	-51.1		90	42.3
25	25	25.237	-48.5		91	43.5
20	25	26.713	-45.8		83	41.6
15	25	28.636	-43.8		84	46.8
10	23	31.375	-39.6		90	53.4
7	18	33.845	-34.3		88	58.1
5	11	36.185	-32.3			
4	5	37.740	-31.6			

KING SALMON, ALASKA
1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	15	8.7	89	146	2.9
1000	31	127	9.5	82	131	2.3
950	31	554	7.8	78	138	2.3
900	31	997	5.5	78	164	1.2
850	31	1.463	3.3	78	190	2.3
800	31	1.953	1.0	71	188	1.9
750	31	2.470	- 1.5	68	271	.8
700	31	3.017	- 4.1	65	298	2.3
650	31	3.598	- 7.1	61	309	3.3
600	31	4.219	-10.5	56	295	4.3
550	31	4.882	-14.7	51	301	7.0
500	31	5.600	-19.3	46	308	8.5
450	31	6.371	-24.6	47	302	10.1
400	31	7.222	-30.7	49	295	12.0
350	31	8.158	-37.5	48	302	15.5
300	31	9.206	-44.5		295	20.4
250	31	10.407	-50.4		290	24.5
200	31	11.863	-49.6		281	19.6
175	31	12.739	-48.8		277	15.9
150	31	13.752	-48.8		271	13.0
125	30	14.949	-49.3		267	7.6
100	30	16.412	-49.6		255	4.5
80	30	17.873	-49.2		202	1.7
70	30	18.749	-48.9		140	3.1
60	29	19.765	-48.6		116	4.5
50	28	20.962	-48.3		93	6.6
40	27	22.438	-47.7		95	10.5
30	27	24.344	-46.0		94	13.8
25	27	25.560	-44.7		97	15.0
20	27	27.060	-42.7		94	14.8
15	19	29.010	-40.4		93	20.2
10						
7						
5						
4						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JULY 1965

Standard pressure surface (mb.)	KOROR, CAROLINE IS. + 1006 MB						KOTZEBUE, ALASKA 1014 MB						KWAJALEIN, MARSHALL IS. 1010 MB						LAKE CHARLES, LA. 1016 MB						LANDER, WYO. 833 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed					Direction	Speed					Direction	Speed					Direction	Speed					Direction	Speed
SURFACE	31	30	26.1	87	257	6.4	31	5	9.7	86	280	3.7	20	4	27.1	79	71	10.3	31	5	22.4	94	21	1.2	31	1,696	14.9	57	246	3.3
1000	31	86	25.7	84	258	7.8	31	116	9.7	76	268	2.9	20	91	26.5	79	74	11.5	31	142	25.2	83	277	3.3	31	108				
950	31	533	22.5	82	257	18.1	31	540	7.7	71	211	3.1	20	543	23.2	87	77	14.4	31	596	23.4	76	234	7.2	31	553				
900	31	1,006	19.7	80	259	20.4	31	985	4.9	74	197	4.7	20	1,015	20.4	83	84	15.7	31	1,065	20.6	70	203	5.1	31	1,023				
850	31	1,498	17.1	75	267	18.6	31	1,450	2.3	73	196	6.6	20	1,508	17.7	80	85	14.8	31	1,558	17.6	68	168	3.9	31	1,518				
800	31	2,014	14.6	71	271	15.7	31	1,939	- .1	70	186	7.8	20	2,026	15.1	73	86	14.8	31	2,075	14.4	64	147	3.3	31	2,035	16.5	44	272	2.1
750	31	2,557	11.8	69	267	14.4	31	2,453	- 3.1	66	185	8.9	20	2,571	12.5	71	88	14.4	31	2,614	11.1	61	117	3.7	31	2,575	13.2	46	265	3.7
700	31	3,133	9.0	67	263	13.4	31	2,997	- 6.2	63	184	11.1	20	3,149	9.6	68	88	14.2	31	3,191	7.7	61	94	3.7	31	3,159	9.4	47	248	7.4
650	31	3,745	5.8	67	262	12.0	31	3,575	- 9.5	58	190	12.8	20	3,761	6.1	65	90	13.2	31	3,798	4.1	59	79	4.5	31	3,762	4.9	46	255	12.2
600	31	4,397	2.2	67	259	10.9	31	4,189	-13.2	52	195	14.0	20	4,414	2.1	69	90	14.6	31	4,447	.6	55	71	5.6	31	4,418	.1	43	254	16.1
550	31	5,090	- 1.7	66	257	7.8	31	4,845	-17.6	53	197	15.7	20	5,112	- 1.8	68	94	14.0	31	5,140	- 3.1	45	57	6.2	31	5,102	- 4.8	42	254	18.8
500	31	5,849	- 6.1	64	231	5.4	31	5,555	-22.2	48	197	16.3	20	5,865	- 5.9	62	105	12.6	31	5,892	- 7.2	39	58	7.0	31	5,853	- 9.9	43	255	22.1
450	31	6,662	-10.8	56	209	2.7	31	6,317	-27.7	45	199	17.9	20	6,683	-11.0	61	108	11.5	31	6,704	-12.1	36	55	10.1	31	6,653	-14.9	R35	250	24.3
400	31	7,564	-16.4	48	96	5.4	31	7,158	-34.1	46	199	18.3	20	7,579	-16.4	56	112	8.2	31	7,600	-17.9	33	56	12.6	31	7,542	-21.0	R35	250	29.5
350	31	8,555	-23.2	43	84	9.5	31	8,080	-40.9	42	205	19.0	20	8,573	-22.1	50	104	5.4	31	8,586	-24.6	R28	59	16.1	31	8,514	-28.2	R31	252	36.9
300	31	9,666	-31.4	37	76	14.8	31	9,113	-47.6		213	19.6	20	9,687	-31.0	45	185	4.1	31	9,688	-33.0	R27	60	17.9	31	9,601	-36.2	R28	250	43.1
250	31	10,929	-41.7		66	21.6	31	10,306	-50.8		221	15.9	20	10,952	-41.4	44	210	8.5	31	10,944	-43.0		60	19.2	31	10,842	-45.0		248	50.9
200	30	12,400	-54.6		63	29.7	31	11,772	-46.6		221	10.7	20	12,426	-53.9	42	225	10.7	31	12,410	-54.3		68	24.5	31	12,303	-53.8		248	59.6
175	30	13,240	-61.8		64	33.2	31	12,659	-46.1		212	8.5	20	13,268	-61.6	42	236	11.8	31	13,254	-60.1		69	23.9	30	13,150	-57.9		252	56.3
150	30	14,177	-69.2		65	35.0	31	13,684	-46.2		210	7.8	20	14,205	-69.7	43	235	12.2	31	14,202	-65.5		66	23.9	30	14,114	-61.4		258	44.1
125	30	15,247	-75.7		70	28.6	31	14,895	-46.7		199	6.0	20	15,270	-77.1		206	10.7	31	15,299	-69.0		65	23.5	30	15,236	-64.0		259	28.2
100	30	16,532	-74.3		72	14.8	31	16,374	-47.0		179	3.7	17	16,538	-77.3		121	4.3	31	16,624	-70.2		70	19.4	30	16,600	-63.9		261	16.1
80	30	17,844	-70.7		78	11.7	31	17,854	-46.4		161	3.3	16	17,834	-71.8		106	5.2	30	17,962	-65.9		83	20.4	30	17,976	-61.1		326	2.9
70	30	18,639	-68.4		86	13.2	31	18,740	-46.2		135	3.9	16	18,627	-69.0		88	7.6	30	18,777	-63.3		86	19.2	30	18,806	-59.8		59	5.4
60	30	19,570	-65.3		88	17.5	31	19,767	-45.8		108	5.4	16	19,555	-66.4		84	16.9	30	19,733	-60.2		86	20.2	29	19,774	-57.2		75	9.5
50	30	20,688	-62.6		90	28.7	31	20,982	-45.5		98	6.6	16	20,668	-63.3		90	26.8	30	20,882	-56.5		88	24.9	29	20,935	-54.3		82	13.0
40	30	22,074	-59.8		89	50.5	31	22,471	-45.0		93	9.1	16	22,052	-59.6		86	44.3	30	22,308	-53.6		90	27.4	29	22,374	-51.4		83	15.7
30	28	23,883	-55.9		91	66.8	31	24,397	-44.1		89	12.2	15	23,864	-55.9		87	59.2	30	24,173	-50.6		86	33.0	29	24,254	-48.7		83	18.3
25	25	25,053	-53.3		92	72.3	31	25,625	-42.6		93	12.4	14	25,037	-52.9		87	64.5	30	25,367	-48.7		89	34.2	29	25,457	-46.8		85	20.2
20	22	26,497	-50.2		93	79.8	31	27,141	-40.4		92	14.8	13	26,469	-49.3		87	72.1	28	26,841	-46.4		89	38.5	25	26,949	-44.2		85	23.1
15	14	28,375	-46.8		93	80.6	30	29,116	-37.6		91	16.1	12	28,371	-46.5		91	75.2	23	28,770	-43.2		88	38.5	11	28,889	-40.9		88	22.7
10	5	31,088	-40.0				14	31,944	-33.6				10	31,096	-41.1		87	71.5												
7													7	33,532	-37.4															
	LAS VEGAS, NEV. 936 MB						* LIHUE, HAWAII 1013 MB						LITTLE ROCK, ARK. 1007 MB						MCGRATH, ALASKA 1003 MB						MAJURO, MARSHALL IS. + 1010 MB					
SURFACE	31	660	26.1	28	217	6.0	31	36	23.4	77	60	8.9	31	79	22.6	86	244	1.2	31	103	10.4	82	231	2.3	31	3	28.2	81	79	7.4
1000	31	72					31	149	23.0	77	63	11.7	31	138	23.2	83	220	1.7	31	132			251	2.5	31	88	26.9	74	81	8.4
950	31	523					31	593	19.6	87	71	15.3	31	590	24.3	66	232	4.3	31	559	9.9	73	214	3.1	31	536	22.8	74	83	10.7
900	31	1,009	27.9	26	221	6.6	31	1,060	16.3	84	72	15.5	31	1,061	21.6	64	255	6.2	31	1,007	7.1	78	192	6.6	31	1,010	20.4	69	89	11.1
850	31	1,513	24.9	27	222	6.2	31	1,545	13.2	84	73	14.8	31	1,555	18.4	64	276	6.0	31	1,475	4.1	81	189	7.8	31	1,502	17.9	67	94	10.7
800	31	2,041	20.6	31	203	9.1	31	2,054	11.0	70	82	12.6	31	2,073	15.2	58	296	5.8	31	1,966	1.1	84	191	6.4	31	2,020	15.3	62	96	11.3
750	31	2,591	16.0	38	190	11.5	31	2,590	9.3	40	86	9.7	31	2,613	11.9	52	309	5.2	31	2,478	- 2.1	81	191	7.0	31	2,560	12.6	59	95	11.5
700	31	3,175	11.1	43	186	13.4	31	3,161	7.1	32	87	7.0	31	3,193	8.3	48	328	5.2	31	3,029	- 4.8	73	185	5.4	31	3,142	9.5	57	99	11.8
650	31	3,784	6.1	47	184	13.0	31	3,764	3.9	24	84	4.3	31	3,797	4.4	47	339	5.6	31	3,605	- 7.5	68	182	6.2	31	3,751	6.0	53	97	13.4
600	31	4,439	1.0	48	189	14.0	31	4,414	.2	19	85	1.2	31	4,449	.5	46	341	5.8	31	4,230	-11.2	66	191	6.2	31	4,406	2.4	51	94	13.6
550	31	5,124	- 3.7	47	197	16.1	31	5,100	- 4.1	20	253	2.9	31	5,136	- 3.0	38	349	5.6	31	4,888	-15.5	63	188	5.4	31	5,101	- 1.4	47	102	13.6
500	31	5,880	- 8.8	42	207	15.9	31	5,851	- 9.2	20	258	6.6	31	5,893	- 7.1	34	356	7.0	31	5,606	-20.2	57	186	7.2	31	5,860	- 5.3	45	101	13.4
450	31	6,684	-13.9	R33	214	19.0	31	6,655	-14.7	20	264	12.6	31	6,701	-11.7	R30	347	8.2	31	6,370	-25.6	51	185	7.8	31	6,682	-10.1	38	103	12.8
400	31	7,575	-19.9	R31	215	21.6	31	7,539	-21.0	21	265	17.9	31	7,603	-17.8	R26	355	10.5	31	7,223	-31.9	48	176	8.2	31	7,581	-15.4	35	101	11.1
350	31	8,551	-26.8	R27	211	24.7	31	8,512	-28.0	22	271	23.3	31	8,588	-24.6	R26	353	13.0	31	8,153	-38.6	46	187	7.4	31	8,576	-22.3	29	97	9.7
300	31	9,647	-34.3	R26	207	32.6	31	9,599	-36.5	24	271	32.6	31	9,692	-32.9	R25	347	16.3	31	9,195	-46.0		194	8.0	31	9,690	-30.7	24	109	8.0
250	31	10,898	-43.4		206	39.2	31	10,837	-46.1		269	44.5	31	10,949	-42.5		352	18.8	31	10,391	-51.1		204	9.1	31	10,958	-40.9	22	127	7.4
200	31	12,363	-53.7		206	40.4	31	12,285	-56.9		267	56.9	31	12,420	-53.7		358	21.2	31	11,848	-48.4		239	6.2	31	12,435	-53.8		139	7.2
175	31	13,212	-58.5		214	35.2	31	13,119	-62.4		268	61.0	31	13,267	-59.7		1	21.8	31	12,730	-47.2		243	6.4	31	13,278	-61.2		150	4.1
150	31	14,170	-62.8		218	22.5	30	14,063	-66.5		268	57.7	31	14,218	-65.1		8	18.1	31	13,750	-47.3		233	5.8	31	14,218	-69.1		157	3.5
125	31	15,280	-67.0		207	14.6	30	15,157	-69.1		265	39.6	31	15,316	-69.3		17	14.8	31	14,955	-47.7		233	3.5	30	15,284	-77.0		153	7.0
100	31	16,623	-67.4		181	9.1	28	16,491	-67.5		253	6.8	31	16,644	-68.9		43	11.7	31	16,427	-47.9		195	2.9	28	16,557	-76.4		142	6.4
80	31	17,978	-63.9		127	9.7	28	17,839	-66.1		97	12.8	30	17,990	-64.8		64	12.0	31	17,899	-47.4		145	1.7	27	17,860	-70.7		348	1.9
70	31	18,799	-61.6		110	12.8	28	18,652	-64.0		95	20.6	30	18,809	-62.4		70	12.4	31	18,782	-47.1		113	2.9	27	18,657	-67.4		91	5.2
60	31	19,760	-58.8		91	14.6	28	19,600	-61.8		91	27.2	30	19,769	-59.0		78	15.9	31	19,802	-46.8		102	4.3	26	19,591	-64.3		92	12.4
50	31	20,911	-56.1		87	18.6	28	20,733	-59.9		93	33.8	29	20,924	-55.4		84	16.7	31	21,010	-46.3		96	6.4	25	20,712	-61.3		92	26.4
40	31	22,341	-52.3		86	19.6	27	22,137	-56.5		93	39.6	29	22,357	-52.7		86	18.8	30	22,491	-45.6		89	10.3	25	22,102	-59.4		91	48.4
30	29	24,212	-49.6		89	22.7	26	23,982	-52.8		93	46.2	28	24,226	-49.7		86	23.1	30	24,413	-44.0		89	10.9	23	23,929	-54.3		92	62.0
25	27	25,409	-47.4		91	24.1	26	25,164	-50.9		92	48.6	27	25,427	-47.8		85	26.2	30	25,639	-42.7		88	12.8	17	25,102	-51.3		91	64.3
20	27	26,893	-44.9		87	25.6	25	26,627	-48.5		93	53.0	23	26,909	-45.4		83	28.0	30	27,149	-41.0		89	15.0	10	26,566	-47.6			
15	23	28,837	-42.0		85	30.1	24	28,536	-45.1		93	55.2	11	28,826	-43.5				30	29,117	-37.8		91	16.9						
10							19	31,258	-42.2		91	58.5							23	31,933	-33.8		87	21.2						
7							5	33,687	-39.1										9	34,422	-30.7									
	MARCUS IS., N. PACIFIC + 1012 MB						* MEDFORD, OREG. 970 MB						* MIAMI, FLA. 1017 MB						* MIDLAND, TEXAS 917 MB						MONTGOMERY, ALA. 1010 MB					
SURFACE	31	9	29.9	66	122	4.9	31	401	13.8	71	315	1.6	31	4	24.2	88	59	.8	31	874	21.7	57	155	5.2	31	61	22.3	96	220	1.6
1000	31	119	27.5	66	118	5.1	31	138					31	152	25.2	82	133	3.3	31	112					31	144	22.5	92	231	1.9
950	31	567	23.0	71	121	5.1	31	578	17.2	56	288	2.5	31	597	22.2	80	150	9.7	31	569					31	595	22.3	78	259	5.1
900	31	1,042	20.1	63	115	5.2	31	1,035	16.3	53	283	2.5	31	1,072	19.5	69	151	8.7	31	1,037	22.7	54	166	13.2	31	1,062	19.9	73	264	4.9
850	31	1,534	17.3	60	108	4.3	31	1,520	14.6	49	110	1.4	31	1,563	16.6	62	147	7.4	31	1,534	21.1	50	182	20.2	31	1,554	17.1	71	262	4.7
800	31	2,050	14.7	54	103	4.3	31	2,030	12.9	39	180	3.5	31	2,077	13.7	58	148	6.2	31	2,057	17.9	48	168	9.9	31	2,069	14.1	66	278	2.9
750	31	2,590	12.3	46	92	4.7	30	2,570	9.9	33	212	6.0	31	2,613	10.5	54	144	5.4	31	2,599	14.6	46	117	6.2	31	2,611	10.9	63	305	2.5
700	31	3,170	9.5	40	87	5.2	30	3,140	6.0	31	216	8.4	31	3,191	7.3	49	147	5.6	31	3,187	10.7	46	103	8.5	31	3,186	7.7	57	323	3.5
650	31	3,774	6.1	38	73	5.6	30	3,738	1.7	31	224	10.5	31	3,794	3.5	50	155	4.5	31	3,793	6.6	47	87	9.1	31	3,793	4.3	54	337	4.7
600	31	4,434	2.5	33	63	6.6	30	4,382	- 2.9	32	234	13.0	31	4,443	- .4	54	152	2.9	31	4,453	2.3	45	86	8.9	31	4,442	.6	51	332	4.5
550	31	5,126	- 1.7	33	60	8.0	30	5,056	- 7.4	24	238	14.6	31	5,124	- 4.1	45	140	1.9	31	5,145	- 2.0	42	89	9.3	31	5,131	- 3.2	44	341	5.2
500	31	5,885	- 6.4	33	56	8.4	30	5,801	-12.4	23	244	15.0	31	5,881	- 8.6	43	98	1.4	31	5,903	- 6.5	35	79	8.9	31	5,886	- 7.2	40	341	7.0
450	31	6,695	-11.2	29	64	8.5	30	6,586	-18.4	23	248	15.9	31	6,685	-13.6	38	40	1.9	31	6,713	-11.6	29	86	9.5	31	6,696	-12.1	34	350	8.0
400	31	7,596	-17.0	25	62	9.5	30	7,466	-25.0	26	247	19.0	31	7,577	-19.5	34	22	3.3	31	7,612	-17.5	29	82	10.1	31	7,593	-18.2	35	349	8.5
350	31	8,585	-23.7	23	63	10.7	30	8,423	-32.2	27	241	22.5	31	8,556	-26.5	30	25	4.3	31	8,598	-24.6	30	85	10.7	31	8,576	-25.3	33	2	9.3
300	31	9,693	-32.0	23	64	12.2	30	9,493	-40.1	26	235	26.6	31	9,651	-35.1	28	32	7.2	31	9,701	-33.2	31	85	14.4	31	9,677	-33.3	R27	2	11.7
250	31	10,955	-41.9		60	16.3	30	10,717	-47.7		230	35.0	31	10,896	-45.3		32	9.3	31	10,956	-43.1		92	15.0	31	10,932	-43.1		5	14.4
200	31	12,429	-53.5		60	21.2	30	12,171	-52.6		228	43.7	31	12,346	-57.1		41	12.4	31	12,422	-54.5		99	15.3	31	12,399	-54.5		6	18.6
175	31	13,275	-60.3		55	24.9	30	13,031	-54.2		228	42.5	31	13,180	-62.7		49	16.1	29	13,266	-60.7		95	14.0	30	13,241	-60.1		13	18.8
150	30	14,221	-67.1		53	26.8	30	14,015	-56.5		229	36.5	31	14,119	-67.3		49	18.1	29	14,211	-66.6		83	12.2	30	14,191	-65.2		16	18.8
125	30	15,304	-72.6		57	25.3	30	15,164	-59.1		229	25.4	31	15,211	-69.5		57	17.7	27	15,302	-71.0		73	15.0	30	15,289	-69.7		30	17.5
100	30	16,609	-73.2		62	22.5	30	16,558	-60.1		219	14.2	31	16,542	-68.7		71	15.9	27	16,617	-70.9		87	15.2	30	16,617	-68.5		56	15.0
80	30	17,933	-68.0		72	22.7	30	17,953	-58.8		172	5.4	31	17,881	-67.0		77	20.2	27	17,953	-66.3		89	17.7	30	17,963	-65.6		65	14.8
70	30	18,741	-64.6		77	25.3	30	18,792	-57.9		125	6.6	31	18,691	-64.5		81	23.9	26	18,769	-63.9		88	17.1	30	18,778	-63.1		74	17.7
60	30	19,691	-61.3		87	30.7	30	19,767	-56.3		101	8.9	31	19,640	-61.6		86	30.1	26	19,720	-61.5		84	19.2	30	19,737	-59.0		81	21.2
50	30	20,831	-58.0		93	33.6	30	20,928	-54.6		92	11.3	31	20,778	-58.8		95	36.3	26	20,858	-58.0		87	24.1	30	20,890	-55.4		92	22.9
40	28	22,248	-54.6		92	39.4	30	22,363	-52.2		90	13.0	31	22,188	-55.8		96	38.3	26	22,278	-53.9		93	28.2	30	22,324	-52.2		91	24.1
30	22	24,112	-50.1		94	45.3	30	24,237	-49.0		88	15.9	31	24,036	-51.6		93	42.5	26	24,143	-50.0		92	28.2	30	24,197	-49.5		87	28.0
25	18	25,317	-47.6		93	46.6	30	25,437	-47.4		85	19.2	31	25,227	-48.8		91	43.9	26	25,337	-48.8		88	32.1	29	25,397	-47.9		85	29.3
20	8	26,808	-45.0				29	26,916	-45.1		87	22.0	29	26,703	-45.8		86	44.5	26	26,809	-46.4		88	34.8	29	26,875	-45.9		85	32.4
15							29	28,850	-41.6		87	23.7	29	28,626	-44.0		84	47.8	26	28,732	-43.6		87	37.3	27	28,806	-42.3		82	37.9
10							26	31,623	-36.6		91	27.4	22	31,360	-40.8		92	52.8	25	31,479	-39.6		89	46.4	25	31,578	-37.4		90	42.7
7							10	34,093	-32.3										10	33,942	-35.0				23	34,059	-33.9		89	48.0
5																			6	36,291	-31.6				14	36,451	-28.7			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JULY 1965

Standard pressure surface (mb.)	* NANTUCKET, MASS. 1014 MB						* NASHVILLE, TENN. 996 MB						NOME, ALASKA 1014 MB						NORFOLK, VA. 1015 MB						* NORTH PLATTE, NEBR. 918 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	14	19.0	88	238	3.5	31	177	20.4	93	130	1.4	31	7	7.2	90	221	3.1	30	9	21.9	88	188	3.7	31	848	16.7	90	151	2.5
1000	31	133	19.1	73	233	5.6	31	146					31	118	7.7	85	212	4.3	30	140	21.7	81	217	4.1	31	111				
950	31	570	18.5	53	252	8.4	31	594	21.1	73	283	1.6	31	538	6.1	82	190	7.4	30	586	20.7	69	258	5.6	31	554				
900	31	1,036	15.8	50	262	9.3	31	1,058	18.8	70	291	6.0	31	982	4.0	81	177	9.5	30	1,052	18.3	63	268	5.2	31	1,019	18.9	71	150	4.5
850	31	1,518	12.6	52	267	12.2	31	1,547	15.9	65	295	7.4	31	1,445	1.6	82	183	11.3	30	1,541	15.5	59	264	6.2	31	1,512	19.5	54	218	6.4
800	31	2,025	9.5	48	270	14.0	31	2,061	13.1	55	299	8.9	31	1,932	- .5	76	184	11.5	30	2,053	12.5	58	267	9.1	31	2,032	17.0	52	245	10.1
750	31	2,553	6.8	40	271	17.3	31	2,602	10.1	56	296	10.3	31	2,440	- 2.9	69	186	12.8	30	2,591	9.5	55	266	11.3	31	2,576	14.4	53	264	11.7
700	31	3,122	4.6	30	268	19.6	31	3,173	7.1	55	300	10.9	31	2,990	- 5.5	64	190	13.4	30	3,162	6.3	51	265	13.0	31	3,158	9.7	49	275	13.2
650	31	3,719	1.9	27	262	22.5	31	3,778	3.6	52	305	12.4	31	3,560	- 8.7	56	195	14.4	30	3,764	3.1	47	264	14.4	31	3,763	5.3	52	280	16.3
600	31	4,365	- 1.7	24	260	26.2	31	4,426	.2	46	308	13.6	31	4,185	-12.4	58	196	14.8	30	4,413	- .4	43	261	16.1	31	4,417	.5	52	284	16.9
550	31	5,044	- 5.9	20	255	28.7	31	5,112	- 3.6	41	302	13.0	31	4,835	-16.5	59	198	15.9	30	5,097	- 4.1	35	258	17.9	31	5,100	- 4.3	51	282	19.2
500	31	5,793	-10.5	18	256	31.1	31	5,867	- 7.8	32	299	14.8	31	5,554	-21.2	50	202	14.0	30	5,851	- 8.2	30	260	19.6	31	5,855	- 9.2	45	287	21.2
450	31	6,590	-15.7	24	254	34.8	31	6,677	-12.9	31	311	16.5	31	6,310	-26.7	46	207	15.9	30	6,658	-13.2	R29	258	19.8	31	6,658	-14.1	41	281	23.5
400	31	7,476	-21.7	24	253	36.5	31	7,568	-18.9	30	313	18.5	31	7,163	-32.9	46	212	16.5	30	7,548	-19.3	R26	259	20.4	31	7,548	-19.7	33	285	26.6
350	31	8,446	-28.5	27	251	40.4	31	8,548	-25.9	27	320	21.6	31	8,090	-39.6	53	213	18.3	30	8,527	-26.3	R26	261	21.0	31	8,526	-26.6	31	279	32.4
300	31	9,534	-36.3	22	249	44.3	31	9,646	-34.2	26	325	25.3	31	9,129	-46.2		228	19.6	30	9,623	-34.6	R27	254	23.5	31	9,621	-34.7	31	278	38.9
250	31	10,774	-45.7		249	48.4	31	10,896	-43.7		332	29.9	31	10,328	-50.4		242	22.7	30	10,871	-44.0		258	26.6	31	10,870	-43.7		277	41.6
200	31	12,227	-55.7		249	51.1	31	12,359	-54.5		331	34.0	31	11,790	-47.0		236	16.7	30	12,332	-54.6		265	29.5	31	12,336	-54.4		274	42.5
175	31	13,070	-59.2		257	46.0	31	13,204	-59.7		333	34.0	31	12,677	-46.1		235	12.6	30	13,175	-60.2		273	29.7	31	13,180	-59.7		272	42.2
150	31	14,031	-60.7		261	36.5	31	14,156	-64.2		336	30.3	31	13,700	-46.7		237	8.5	30	14,129	-63.2		278	26.2	30	14,131	-63.8		279	36.7
125	31	15,163	-61.7		263	29.9	31	15,261	-67.6		334	20.0	31	14,908	-47.1		221	6.6	30	15,242	-65.6		285	17.5	30	15,241	-66.2		285	26.2
100	31	16,548	-60.7		265	18.1	31	16,601	-67.3		347	10.9	30	16,386	-47.1		192	3.7	30	16,599	-64.5		289	10.5	30	16,593	-65.7		286	13.4
80	31	17,942	-58.5		253	8.7	31	17,956	-64.1		35	7.6	30	17,863	-46.9		141	3.3	30	17,971	-61.4		349	3.5	30	17,959	-62.8		4	5.8
70	30	18,781	-57.0		237	4.9	31	18,778	-61.2		63	10.3	30	18,747	-46.6		112	3.7	30	18,802	-59.6		60	6.8	30	18,784	-61.0		37	6.6
60	30	19,761	-55.0		140	3.7	31	19,741	-58.1		79	13.8	30	19,770	-46.4		96	6.4	30	19,771	-57.2		79	11.7	30	19,749	-58.4		63	9.3
50	30	20,931	-52.7		118	6.2	31	20,899	-54.5		90	15.9	30	20,981	-46.1		96	8.2	30	20,932	-54.0		85	16.7	30	20,904	-55.4		77	10.3
40	29	22,378	-50.4		103	8.4	31	22,338	-51.6		92	18.1	30	22,466	-45.6		86	10.7	29	22,374	-50.9		90	20.6	30	22,339	-51.9		89	13.4
30	27	24,266	-48.2		90	14.4	30	24,214	-49.4		84	21.4	30	24,387	-44.4		85	14.2	29	24,258	-48.4		88	21.6	30	24,214	-49.6		89	16.5
25	26	25,471	-46.4		89	16.5	29	25,413	-48.0		87	23.9	29	25,611	-42.9		89	15.5	26	25,465	-46.8		87	24.3	29	25,415	-47.6		86	17.7
20	25	26,959	-44.4		88	19.4	29	26,891	-45.5		89	27.2	29	27,122	-40.7		87	16.9	18	26,942	-44.9		82	27.4	28	26,898	-45.2		82	21.2
15	21	28,901	-41.1		91	23.5	29	28,824	-42.5		90	30.1	26	29,097	-38.0		89	18.5	12	28,866	-42.1		87	30.7	28	28,834	-42.0		87	25.1
10	13	31,680	-36.5		94	31.3	28	31,587	-38.3		84	35.4	17	31,913	-33.6										20	31,615	-37.7		90	32.6
7	5	34,189	-31.8				11	34,082	-34.5																					

Standard pressure surface (mb.)	* OAKLAND, CALIF. 1014 MB						OKLAHOMA CITY, OKLA. 970 MB						OMAHA, NEBR. 968 MB						* PEORIA, ILL. 993 MB						* PITTSBURGH, PA. 976 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	6	14.3	84	291	5.6	31	392	23.7	74	159	5.8	31	403	19.2	88	142	1.7	30	200	18.0	87	115	1.4	31	353	16.5	86	267	1.2
1000	31	127	12.3	89	277	5.2	31	125					31	125					30	136					31	147				
950	31	569	14.0	68	269	5.8	31	576	24.7	64	188	12.8	31	570	21.2	71	182	3.7	30	582	20.3	62	259	4.3	31	586	18.0	66	266	3.7
900	31	1,021	20.3	32	284	6.0	31	1,051	23.4	55	216	17.3	31	1,037	20.4	60	232	8.0	30	1,044	18.0	61	276	8.9	31	1,048	15.8	59	283	7.4
850	31	1,513	18.5	28	248	4.3	31	1,549	20.3	54	228	13.8	31	1,530	17.9	57	265	9.9	30	1,531	15.1	58	278	10.7	31	1,531	12.7	58	278	10.9
800	31	2,029	15.6	26	202	3.9	31	2,070	17.1	50	235	8.9	31	2,046	14.7	56	276	11.1	30	2,043	12.2	53	286	12.0	31	2,038	10.1	48	277	14.2
750	31	2,571	12.4	26	193	5.2	31	2,614	13.6	49	241	4.9	31	2,587	11.6	52	283	13.0	30	2,580	9.4	49	297	13.2	31	2,571	7.7	41	279	15.9
700	31	3,148	8.7	27	195	6.8	31	3,196	9.8	48	235	2.1	31	3,163	7.9	56	287	14.6	30	3,151	6.3	49	295	16.9	31	3,138	4.9	33	278	17.3
650	31	3,751	4.3	30	195	7.4	31	3,803	5.7	50	260	1.6	31	3,768	4.1	58	286	16.9	30	3,754	2.8	46	299	17.7	31	3,735	2.0	29	281	19.6
600	31	4,403	- .4	31	197	8.0	31	4,458	1.4	51	274	.8	31	4,418	.1	55	290	19.0	30	4,399	- .9	40	298	20.6	31	4,381	- 1.7	25	281	21.4
550	31	5,081	- 5.4	29	210	9.1	31	5,148	- 2.9	49	263	.6	31	5,103	- 3.9	45	292	19.8	30	5,084	- 4.9	34	299	21.4	31	5,058	- 5.6	25	280	21.8
500	31	5,835	-10.7	27	216	11.3	31	5,904	- 7.2	43	304	2.9	31	5,857	- 8.3	41	290	21.6	29	5,836	- 9.1	30	307	24.1	31	5,811	- 9.9	23	281	22.9
450	31	6,631	-16.5	29	221	13.6	31	6,711	-11.9	37	313	5.6	31	6,665	-13.4	35	289	21.8	29	6,640	-14.0	26	308	27.4	31	6,609	-15.4	25	282	24.1
400	31	7,513	-23.0	26	217	17.7	31	7,612	-17.6	32	320	9.7	31	7,555	-19.4	33	292	28.0	29	7,528	-20.3	26	306	29.9	31	7,495	-21.7	24	285	28.7
350	31	8,478	-30.3	26	224	22.1	31	8,597	-24.7	33	320	11.8	31	8,535	-26.2	29	291	34.2	29	8,504	-27.1	25	308	34.8	31	8,465	-28.8	24	284	31.9
300	31	9,556	-38.3	25	219	28.2	31	9,700	-32.8	32	333	13.8	31	9,633	-34.1	29	289	39.4	29	9,596	-35.3	27	306	43.5	31	9,550	-36.9	22	286	36.5
250	31	10,788	-46.3		216	35.4	31	10,957	-42.7		337	15.0	31	10,884	-43.6		283	45.1	28	10,840	-44.4		302	51.5	31	10,787	-45.9		289	42.5
200	31	12,249	-52.8		211	42.0	31	12,425	-54.3		347	11.7	31	12,350	-53.9		284	50.3	28	12,302	-54.6		302	56.9	31	12,244	-54.2		291	44.3
175	31	13,104	-55.8		215	42.0	31	13,270	-60.0		345	10.7	31	13,197	-58.9		288	49.3	28	13,148	-58.7		303	51.5	31	13,094	-57.2		294	42.0
150	30	14,079	-59.9		216	36.3	31	14,219	-65.6		345	11.5	31	14,155	-62.6		291	41.4	28	14,107	-62.4		304	42.0	31	14,062	-59.9		292	34.0
125	30	15,208	-63.2		219	23.7	31	15,315	-69.8		360	9.1	30	15,271	-65.2		292	28.6	28	15,225	-64.5		307	30.1	31	15,194	-62.0		288	25.8
100	30	16,576	-63.9		194	11.1	31	16,639	-69.8		62	6.8	30	16,629	-64.4		299	19.8	28	16,588	-63.9		316	16.1	31	16,574	-61.6		290	18.6
80	30	17,948	-61.8		135	8.5	31	17,983	-64.9		71	11.5	29	18,000	-62.2		326	11.7	28	17,963	-61.6		334	9.3	31	17,960	-59.7		308	8.0
70	30	18,777	-60.2		118	9.3	31	18,802	-62.4		82	12.0	29	18,827	-60.5		9	10.1	28	18,793	-59.8		12	7.6	30	18,798	-57.3		6	3.9
60	30	19,743	-58.1		101	12.2	29	19,760	-59.3		86	14.8	29	19,794	-57.2		49	9.5	28	19,763	-56.6		61	9.3	30	19,776	-54.9		63	5.1
50	30	20,898	-55.7		91	14.8	29	20,910	-56.1		83	16.9	29	20,954	-54.2		73	11.8	28	20,928	-53.6		75	12.2	29	20,948	-52.7		77	8.2
40	30	22,326	-53.1		88	17.7	29	22,337	-53.2		86	19.0	28	22,396	-51.3		88	13.0	28	22,373	-50.9		86	13.6	29	22,394	-50.6		83	11.3
30	28	24,190	-50.1		90	19.2	29	24,205	-49.7		89	24.5	27	24,278	-48.4		89	14.6	28	24,256	-48.4		90	16.5	28	24,276	-47.9		88	14.6
25	28	25,384	-48.5		91	22.1	27	25,400	-47.6		86	26.6	24	25,487	-46.7		83	17.3	27	25,461	-47.3		87	17.5	28	25,482	-46.2		87	18.3
20	27	26,856	-46.2		90	23.5	23	26,877	-45.4		85	26.6	20	26,970	-44.7		82	19.8	27	26,944	-44.9		82	19.8	27	26,970	-43.8		86	22.1
15	21	28,793	-43.0		86	25.8	17	28,801	-43.3				11	28,891	-42.4				26	28,881	-41.5		82	25.6	26	28,915	-40.6		91	26.6
10	14	31,551	-38.6		94	31.1													18	31,644	-37.6		86	30.3	19	31,691	-36.3		96	29.3
7	7	34,022	-33.8																10	34,150	-33.0				9	34,198	-33.4			

Standard pressure surface (mb.)	+ PONAPE, CAROLINE IS. 1004 MB						PORTLAND, ME. 1013 MB						RAPID CITY, S. DAK. 906 MB						ST. CLOUD, MINN. 978 MB						ST. PAUL IS., ALASKA 1016 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	39	26.9	85	49	1.2	31	20	16.9	82	272	3.7	31	966	16.5	78	304	1.9	31	316	16.0	88	205	.8	30	10	6.4	96	225	3.7
1000	31	75	26.5	83	69	2.1	31	132	17.2	69	276	4.7	31	111					31	125					30	137	5.9	96	239	4.5
950	31	518	23.0	79	50	3.5	31	569	16.5	57	265	6.2	31	553					31	567	17.6	73	271	2.1	30	555	4.6	96	240	8.4
900	31	998	20.4	77	73	2.9	31	1,029	13.9	57	261	8.0	31	1,019	17.7	71	298	2.1	31	1,026	16.4	66	287	7.0	30	997	4.2	87	234	9.9
850	31	1,492	17.9	72	82	3.5	31	1,509	11.0	56	261	12.0	31	1,511	18.7	57	263	3.9	31	1,512	14.0	62	293	10.7	30	1,462	3.3	78	232	10.5
800	31	2,010	15.4	67	84	4.1	31	2,013	7.8	54	266	17.1	31	2,030	15.9	56	273	5.2	31	2,021	11.1	58	300	13.2	30	1,953	1.8	67	237	11.8
750	31	2,552	12.6	65	82	4.9	31	2,539	5.0	46	267	20.8	31	2,568	12.5	54	285	8.9	31	2,556	8.3	49	300	16.7	30	2,472	- .6	58	239	12.6
700	31	3,133	9.4	63	96	6.8	31	3,104	2.7	36	267	22.9	31	3,151	8.6	53	284	11.8	31	3,126	5.0	45	300	19.6	30	3,022	- 2.9	60	245	13.8
650	31	3,743	6.0	63	104	8.4	31	3,699	- .1	32	264	27.8	31	3,749	4.2	51	281	13.4	31	3,724	1.6	43	300	21.8	30	3,604	- 6.1	56	245	14.6
600	31	4,398	2.4	62	102	11.3	31	4,338	- 3.5	R29	261	31.5	31	4,406	- .3	52	278	15.9	31	4,369	- 2.1	36	297	24.9	30	4,229	- 9.6	51	251	15.9
550	31	5,095	- 1.2	60	102	12.2	31	5,014	- 7.5	R23	262	33.4	31	5,086	- 5.0	48	275	18.6	31	5,047	- 6.1	34	297	29.1	30	4,893	-13.7	47	254	16.7
500	31	5,853	- 5.2	55	102	12.2	31	5,758	-12.1	R23	261	37.1	31	5,839	- 9.6	42	273	20.6	31	5,796	-10.9	R31	295	32.8	30	5,615	-18.2	44	257	17.9
450	31	6,676	- 9.9	48	95	14.4	31	6,549	-17.5	R23	261	40.0	31	6,637	-15.0	40	274	23.3	31	6,594	-16.2	R31	296	32.2	30	6,394	-23.6	44	259	18.8
400	31	7,577	-15.1	41	95	14.4	31	7,429	-23.7	R26	260	42.0	31	7,525	-21.1	37	275	30.5	31	7,477	-22.0	31	296	37.9	30	7,246	-29.9	40	258	17.9
350	31	8,573	-21.9	35	101	12.8	31	8,392	-30.4	R26	256	46.0	31	8,498	-28.1	35	271	36.1	31	8,446	-29.0	R30	296	43.1	30	8,184	-36.8	40	256	20.0
300	31	9,690	-30.2	30	102	12.0	31	9,471	-38.2	R28	256	48.8	31	9,586	-36.4	R31	268	42.9	31	9,531	-37.0	R28	296	49.1	30	9,234	-44.2		256	22.6
250	31	10,960	-40.6	33	109	11.1	31	10,703	-46.9		254	55.4	31	10,826	-45.4		270	50.5	31	10,766	-46.4		294	56.3	30	10,438	-50.9		258	26.6
200	31	12,439	-53.5		113	11.8	31	12,156	-54.0		258	54.2	31	12,287	-53.4		268	57.1	31	12,222	-54.1		289	65.1	30	11,887	-51.0		261	26.8
175	31	13,284	-60.8		104	12.4	31	13,009	-55.7		260	49.3	31	13,138	-57.2		268	54.8	31	13,074	-56.1		292	59.1	30	12,757	-50.4		259	23.8
150	31	14,225	-68.8		94	12.8	30	13,985	-57.0		261	42.7	31	14,105	-61.0		274	45.6	31	14,050	-58.1		295	51.3	30	13,763	-50.5		252	16.3
125	31	15,293	-76.6		100	13.4	29	15,136	-58.8		265	33.8	31	15,233	-63.0		279	30.5	31	15,193	-59.6		296	37.3	30	14,950	-50.7		250	11.7
100	31	16,570	-75.7		96	6.0	28	16,540	-58.0		262	21.0	31	16,606	-62.6		280	20.0	31	16,587	-60.1		302	26.2	30	16,404	-50.5		236	5.4
80	31	17,882	-69.7		83	4.3	28	17,951	-56.2		255	6.8	31	17,988	-60.5		306	8.4	31	17,986	-57.9		315	14.8	30	17,861	-50.0		208	3.9
70	30	18,681	-66.7		98	7.2	28	18,801	-54.9		223	2.9	31	18,822	-58.7		14	3.7	30	18,832	-57.0		324	9.3	30	18,733	-49.7		167	2.4
60	28	19,617	-64.4		92	12.2	28	19,790	-53.3		109	4.1	31	19,795	-57.0		58	6.0	30	19,813	-54.6		6	7.0	30	19,744	-49.3		126	4.5
50	27	20,740	-62.0		89	26.6	28	20,969	-51.5		99	6.6	31	20,957	-53.9		74	9.5	30	20,986	-52.4		51	7.4	30	20,940	-48.7		113	6.6
40	25	22,130	-58.9		90	47.2	27	22,424	-49.5		93	8.9	31	22,399	-51.2		75	14.0	26	22,438	-50.2		74	11.5	30	22,409	-47.8		99	8.4
30	23	23,948	-54.8		91	64.9	25	24,313	-47.2		90	13.6	30	24,281	-48.1		85	15.3	24	24,334	-47.0		90	13.8	30	24,313	-46.1		97	12.8
25	18	25,118	-52.0		91	66.4	21	25,525	-45.6		87	16.5	30	25,489	-46.1		88	16.3	24	25,544	-45.7		93	14.8	29	25,532	-44.6		95	14.2
20	12	26,570	-48.7				14	27,005	-43.6		89	18.1	30	26,981	-43.8		90	18.8	24	27,040	-43.1		69	19.0	29	27,032	-42.7		94	15.7
15							10	28,935	-40.5				22	28,911	-40.6		87	22.1	23	28,992	-40.2		87	21.6	28	28,981	-40.4		91	18.4
10							6	31,753	-34.6										16	31,766	-35.2		85	28.6	17	31,756	-36.4		89	17.9
7																			5	34,269	-32.2									

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JULY 1965

SALEM, OREG.
1011 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	61	12.2	90	199	.4
1000	31	149	13.5	80	15	1.4
950	31	582	14.7	68	22	5.4
900	31	1,040	14.4	60	17	3.9
850	31	1,522	12.8	50	305	1.2
800	31	2,029	10.2	45	250	2.5
750	31	2,555	7.3	40	259	4.7
700	31	3,129	4.4	33	247	7.6
650	31	3,720	.5	33	241	10.1
600	31	4,366	- 3.8	31	238	12.4
550	31	5,035	- 8.6	30	241	13.4
500	31	5,779	-13.8	31	242	15.2
450	31	6,561	-19.7	31	244	16.3
400	31	7,435	-26.2	33	247	17.9
350	31	8,386	-33.3	R28	245	20.6
300	31	9,450	-41.1	R27	240	24.9
250	31	10,668	-48.5		233	29.7
200	31	12,118	-52.5		233	35.0
175	31	12,979	-53.3		233	35.9
150	31	13,969	-54.5		234	32.2
125	31	15,129	-56.5		232	23.5
100	31	16,539	-57.8		222	13.4
80	31	17,946	-57.3		193	5.1
70	31	18,790	-56.7		134	4.5
60	31	19,770	-55.6		97	7.2
50	31	20,936	-53.9		90	9.9
40	31	22,375	-51.8		86	12.6
30	29	24,251	-48.8		84	15.2
25	26	25,453	-46.7		83	18.8
20	24	26,940	-44.1		88	20.8
15	14	28,882	-41.4			
10						
7						
5						

SALT LAKE CITY, UTAH
873 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,288	17.6	58	162	4.9
1000	31	102				
950	31	550				
900	31	1,018				
850	31	1,514	21.0	42	160	8.5
800	31	2,037	18.6	37	181	8.7
750	31	2,584	14.8	37	207	6.6
700	31	3,166	10.5	40	231	7.8
650	31	3,772	5.6	44	242	10.3
600	31	4,427	.4	50	236	12.8
550	31	5,111	- 5.2	54	231	15.2
500	31	5,860	-10.1	47	228	17.7
450	31	6,662	-15.0	41	233	22.9
400	31	7,546	-21.2	39	234	27.2
350	31	8,518	-28.0	R35	232	33.0
300	31	9,607	-35.6	R30	231	40.8
250	31	10,852	-44.2		229	47.6
200	31	12,317	-53.5		230	51.3
175	31	13,167	-58.2		235	48.0
150	30	14,130	-62.1		239	34.8
125	30	15,248	-65.3		234	21.8
100	30	16,605	-64.7		221	11.8
80	29	17,975	-62.1		145	4.7
70	29	18,803	-60.4		99	6.2
60	29	19,768	-58.2		90	10.5
50	29	20,923	-55.3		87	13.6
40	27	22,357	-52.9		88	14.8
30	27	24,226	-49.6		83	18.5
25	26	25,426	-47.6		84	20.0
20	23	26,903	-45.9		92	20.8
15	17	28,827	-42.6		87	23.5
10						
7						
5						

SAN ANTONIO, TEXAS
989 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	243	23.8	83	177	4.1
1000	31	141				
950	31	590	21.9	79	187	12.6
900	31	1,060	20.4	60	186	15.9
850	31	1,552	18.2	53	169	10.1
800	31	2,069	15.0	57	146	6.4
750	31	2,607	11.8	50	130	5.2
700	31	3,188	8.3	50	115	5.4
650	31	3,791	4.8	46	103	7.0
600	31	4,445	1.1	44	87	10.3
550	31	5,131	- 2.7	41	86	11.3
500	31	5,890	- 7.1	35	74	12.8
450	31	6,696	-12.1	30	69	14.8
400	31	7,596	-18.1	R25	69	16.9
350	31	8,580	-25.1	R23	67	20.6
300	31	9,681	-33.7	R24	66	22.5
250	31	10,934	-43.5		68	23.5
200	31	12,398	-55.2		71	25.3
175	31	13,239	-60.8		72	26.0
150	31	14,185	-66.3		70	25.4
125	31	15,276	-70.7		70	25.8
100	31	16,596	-71.1		78	21.6
80	31	17,929	-66.9		89	19.0
70	31	18,740	-64.4		88	18.1
60	31	19,689	-61.2		84	21.2
50	31	20,831	-57.7		85	24.9
40	31	22,248	-54.5		88	29.1
30	30	24,110	-50.0		89	34.4
25	30	25,308	-47.6		89	34.8
20	27	26,784	-45.4		87	36.5
15	16	28,715	-42.7		84	36.5
10	■	31,450	-40.2			
7						
5						

SAN DIEGO, CALIF.
999 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	124	15.8	90	331	2.7
1000	31	118			341	2.7
950	31	559	16.8	69	344	3.1
900	31	1,020	22.1	27	320	3.5
850	31	1,516	21.6	25	271	3.9
800	31	2,039	18.8	28	226	4.5
750	31	2,583	15.0	30	199	7.2
700	31	3,169	10.6	35	190	8.5
650	31	3,774	6.1	35	190	9.3
600	31	4,434	1.8	33	195	10.3
550	31	5,122	- 3.2	34	198	10.7
500	31	5,877	- 8.4	31	198	12.4
450	31	6,682	-13.7	R29	199	12.4
400	31	7,573	-20.2	R27	201	14.0
350	31	8,550	-26.8	R25	198	17.9
300	31	9,646	-34.4	R23	193	22.5
250	31	10,897	-43.3		190	28.9
200	31	12,368	-53.0		190	30.5
175	31	13,219	-58.1		199	26.6
150	31	14,178	-63.5		208	20.2
125	31	15,284	-67.7		204	14.4
100	31	16,621	-68.4		168	8.0
80	29	17,966	-65.2		114	11.5
70	29	18,782	-63.1		102	14.0
60	29	19,735	-60.4		95	18.1
50	29	20,880	-56.7		91	20.8
40	29	22,304	-53.6		90	23.3
30	29	24,167	-50.5		87	27.0
25	28	25,360	-49.0		90	29.7
20	26	26,829	-46.6		90	31.7
15	20	28,744	-43.6		89	31.1
10	13	31,510	-39.5		91	40.6
7	13	33,974	-34.7		93	49.7
5	11	36,348	-29.0			

* SAN JUAN, P. R.
1017 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	6	25.9	84	117	5.2
1000	31	153	25.0	81	105	13.6
950	31	596	21.6	79	97	20.0
900	31	1,070	18.8	73	100	21.0
850	31	1,560	16.1	66	101	20.2
800	31	2,074	13.7	53	102	18.1
750	31	2,608	11.3	38	103	16.9
700	31	3,189	7.9	36	107	13.6
650	31	3,791	4.5	32	108	11.1
600	31	4,445	.9	30	101	11.5
550	31	5,129	- 3.1	29	101	10.3
500	31	5,888	- 7.4	28	107	8.0
450	31	6,691	-12.7	25	122	8.4
400	31	7,590	-19.1	25	153	6.6
350	31	8,568	-26.6	24	182	6.8
300	31	9,662	-35.1	24	212	8.4
250	30	10,907	-45.0		225	12.6
200	28	12,360	-56.5		247	17.7
175	28	13,196	-62.7		248	19.6
150	28	14,135	-67.0		259	16.1
125	28	15,230	-69.2		246	7.8
100	28	16,553	-71.7		84	6.4
80	28	17,878	-68.0		83	19.8
70	28	18,683	-65.8		85	27.8
60	28	19,623	-63.3		91	33.8
50	28	20,752	-59.9		91	36.7
40	28	22,157	-56.5		92	43.9
30	28	23,997	-52.4		90	49.1
25	27	25,180	-49.7		90	52.6
20	27	26,649	-46.8		89	60.8
15	24	28,571	-43.2		88	66.0
10	11	31,303	-39.7			
7						
5						

SANTA MONICA, CALIF.
1009 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	38	15.8	88	187	.8
1000	31	116	15.1	89	140	1.2
950	31	560	17.6	62	57	1.7
900	31	1,018	21.2	30	342	1.9
850	31	1,512	20.1	27	257	1.6
800	31	2,032	17.5	29	216	5.2
750	31	2,580	14.2	30	208	7.4
700	31	3,159	10.3	33	195	8.2
650	31	3,769	6.1	34	189	9.7
600	31	4,422	1.3	37	201	9.5
550	31	5,110	- 3.7	36	213	11.1
500	31	5,863	- 8.9	35	211	12.8
450	31	6,664	-14.6	32	207	15.2
400	31	7,554	-21.0	31	206	17.7
350	31	8,527	-27.9	29	207	22.7
300	31	9,617	-35.8	27	205	28.2
250	31	10,863	-44.1		200	33.4
200	31	12,329	-53.3		199	36.3
175	31	13,179	-58.1		205	33.0
150	31	14,139	-63.0		210	26.8
125	30	15,249	-67.2		207	17.9
100	30	16,589	-68.6		171	8.0
80	30	17,937	-65.0		116	10.3
70	30	18,756	-62.5		103	13.2
60	30	19,711	-60.0		94	16.7
50	30	20,858	-56.8		91	19.8
40	30	22,281	-53.9		90	22.9
30	30	24,142	-50.7		89	25.3
25	30	25,335	-48.9		91	27.8
20	28	26,808	-46.8		93	28.4
15	25	28,723	-43.9		87	31.5
10	15	31,450	-41.0			
7						

* SAULT STE. MARIE, MICH.
989 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	221	11.5	91	24	1.7
1000	31	128				
950	31	555	12.6	69	257	4.9
900	31	1,011	10.9	68	272	10.5
850	31	1,486	8.2	68	280	14.4
800	31	1,985	5.8	64	284	17.1
750	31	2,510	3.3	55	286	20.2
700	31	3,069	.8	51	286	23.7
650	31	3,657	- 2.3	49	287	25.6
600	31	4,294	- 5.6	47	289	28.7
550	31	4,967	- 9.3	39	291	31.5
500	31	5,703	-13.9	35	288	35.2
450	31	6,490	-19.5	34	290	37.1
400	31	7,359	-25.7	33	291	42.5
350	31	8,313	-32.6	31	292	47.0
300	31	9,381	-40.5	30	295	52.8
250	31	10,601	-48.6		296	60.4
200	31	12,049	-53.2		298	55.9
175	31	12,909	-53.4		298	53.2
150	31	13,898	-54.9		297	44.7
125	31	15,058	-56.5		296	35.4
100	31	16,473	-56.6		299	23.7
80	31	17,891	-55.3		301	14.2
70	31	18,744	-54.2		315	8.2
60	31	19,736	-53.0		348	5.1
50	31	20,917	-51.2		34	5.2
40	31	22,374	-49.3		72	8.4
30	30	24,272	-47.2		82	11.8
25	29	25,482	-45.4		86	15.2
20	29	26,978	-43.4		89	19.0
15	28	28,930	-40.4		88	22.7
10	25	31,727	-35.7		83	26.2
7	12	34,245	-31.9		88	29.3

SHEMYA, ALASKA
1009 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	38	7.3	97	187	5.2
1000	31	110			194	8.7
950	31	535	7.1	83	199	8.0
900	31	978	6.9	79	193	8.7
850	31	1,447	5.6	76	206	6.4
800	31	1,942	3.6	75	221	7.2
750	31	2,466	1.4	72	233	8.4
700	31	3,019	- 1.2	67	248	7.4
650	31	3,607	- 3.8	62	254	9.9
600	31	4,237	- 7.5	60	249	13.0
550	30	4,911	-11.7	56	260	14.0
500	30	5,641	-16.4	53	260	17.3
450	30	6,421	-21.7	49	261	18.5
400	30	7,277	-28.0	41	267	19.0
350	30	8,229	-35.1	42	269	22.7
300	30	9,286	-43.0	43	275	25.1
250	30	10,492	-51.3		283	28.9
200	30	11,928	-54.2		271	28.9
175	30	12,786	-53.4		266	24.7
150	30	13,779	-53.1		268	20.8
125	30	14,953	-53.3		269	15.7
100	30	16,389	-53.1		257	9.1
80	30	17,829	-52.3		241	3.7
70	30	18,693	-51.7		196	1.0
60	30	19,694	-51.2		100	2.9
50	30	20,880	-50.4		98	5.4
40	30	22,339	-49.3		94	9.5
30	30	24,232	-47.5		92	11.5
25	30	25,441	-45.9		89	13.6
20	28	26,931	-44.0		88	15.0
15	25	28,878	-41.3		90	16.7
10	16	31,645	-37.7			
7						

* SHREVEPORT, LA.
1007 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	79	23.3	90	204	3.3
1000	31	139	23.6	86	215	5.1
950	31	595	24.2	66	241	8.9
900	31	1,062	21.1	69	225	4.9
850	31	1,556	17.6	71	216	2.3
800	31	2,072	14.5	65	174	1.9
750	31	2,616	11.2	59	110	2.9
700	31	3,189	7.6	57	87	3.5
650	31	3,797	3.8	59	65	4.7
600	31	4,442	.0	57	56	5.2
550	31	5,132	- 3.6	48	50	7.0
500	31	5,883	- 7.5	40	46	8.4
450	31	6,695	-12.5	37	36	9.5
400	31	7,586	-17.9	31	36	12.2
350	31	8,570	-25.0	28	35	14.4
300	31	9,671	-33.5	29	37	15.7
250	31	10,924	-43.2		37	16.3
200	30	12,385	-54.8		41	19.2
175	30	13,226	-60.7		40	18.8
150	30	14,172	-66.1		45	19.6
125	29	15,263	-70.3		54	19.8
100	29	16,584	-70.1		69	16.9
80	29	17,925	-65.5		82	15.3
70	28	18,741	-62.8		85	15.9
60	28	19,697	-59.6		88	17.1
50	28	20,845	-56.6		87	20.0
40	28	22,268	-53.9		87	23.1
30	27	24,128	-50.8		87	30.1
25	26	25,317	-49.3		90	30.5
20	26	26,790	-46.1		91	34.0
15	26	28,714	-43.3		85	35.9
10	25	31,473	-39.0		88	41.2
7	5	33,931	-35.2			

SPOKANE, WASH.
933 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	722	14.9	60	152	3.7
1000	31	126				
950	31	568				
900	31	1,028	18.7	46	193	5.4
850	31	1,516	16.0	44	224	6.6
800	31	2,028	11.9	48	242	6.6
750	31	2,556	7.7	51	238	8.0
700	31	3,128	3.6	48	241	9.3
650	30	3,719	- .2	45	239	11.3
600	30	4,363	- 4.2	40	239	14.6
550	30	5,035	- 8.7	34	233	16.5
500	30	5,776	-13.8	34	233	18.6
450	30	6,561	-19.2	R31	233	21.0
400	30	7,435	-25.8	R32	235	22.3
350	30	8,388	-33.2	R29	234	26.2
300	30	9,453	-40.9	R25	233	31.7
250	30	10,672	-48.5		233	37.3
200	30	12,124	-52.6		235	42.9
175	29	12,985	-52.8		235	40.8
150	29	13,979	-54.1		237	33.0
125	29	15,143	-55.8		239	23.5
100	29	16,559	-57.0		238	13.0
80	29	17,974	-56.4		235	6.6
70	29	18,821	-55.5		229	2.1
60	29	19,806	-54.3		84	3.3
50	29	20,979	-52.5		75	7.4
40	29	22,428	-50.4		84	11.7
30	29	24,317	-47.3		83	15.0
25	29	25,527	-45.6		84	17.3
20	29	27,021	-43.5		86	19.4
15	23	28,968	-40.2		83	22.5
10						
7						

SWAN ISLAND, W. I.
1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	10	26.8	84	84	8.2
1000	30	122	26.0	83	80	12.6
950	30	572	22.9	84	90	17.3
900	30	1,044	20.1	74	96	21.4
850	30	1,536	17.4	64	98	22.0
800	30	2,052	15.1	47	99	21.2
750	30	2,595	12.2	42	100	20.8
700	30	3,172	9.1	34	105	17.9
650	30	3,777	5.5	33	105	15.5
600	30	4,431	1.7	28	109	12.8
550	30	5,119	- 2.5	23	111	9.9
500	30	5,877	- 7.3	28	106	8.0
450	30	6,683	-12.5	28	106	6.4
400	30	7,579	-18.5	28	68	6.0
350	30	8,561	-25.4	26	9	4.9
300	30	9,661	-33.7	25	333	6.2
250	30	10,913	-43.9		309	11.7
200	30	12,370	-56.1		300	17.9
175	30	13,206	-62.7		305	19.4
150	30	14,142	-68.6		308	18.3
125	29	15,225	-71.2		333	9.5
100	29	16,545	-71.1		72	12.8
80	28	17,870	-68.9		89	21.8
70	28	18,673	-66.3		87	26.2
60	28	19,614	-63.6		87	32.1
50	28	20,741	-60.4		91	38.9
40	28	22,142	-57.0		94	43.7
30	27	23,981	-52.5		95	52.8
25	25	25,158	-49.9		95	57.7
20	19	26,627	-46.5		93	64.7
15	■	28,545	-42.9			
10						
7						

TAMPA, FLA.
1017 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	8	24.2	90	115	3.3
1000	31	152	24.2	83	135	4.5
950	31	601	22.3	75	196	6.0
900	31	1,071	19.6	71	202	7.2
850	31	1,562	16.8	68	205	6.6
800	31	2,077	13.8	65	205	4.9
750	31	2,615	10.7	62	207	4.3
700	31	3,192	7.5	57	205	3.9
650	31	3,800	4.1	57	210	2.7
600	31	4,447	.3	56	221	1.6
550	31	5,138	- 3.6	53	276	1.4
500	31	5,889	- 7.8	48	349	1.6
450	31	6,700	-12.6	43	5	2.7
400	31	7,594	-18.5	38	358	2.9
350	31	8,575	-25.6	32	5	3.1
300	31	9,675	-33.8	R28	28	3.5
250	31	10,927	-43.6		27	6.6
200	31	12,388	-55.2		40	13.4
175	31	13,230	-60.6		47	17.5
150	31	14,177	-65.7		46	20.8
125	31	15,274	-69.2		55	22.1
100	31	16,605	-68.6		67	17.7
80	31	17,951	-65.8		75	16.7
70	31	18,765	-63.9		74	21.2
60	30	19,720	-60.6		83	26.6
50	30	20,864	-57.5		95	31.5
40	30	22,285	-54.0		96	34.4
30	29	24,149	-49.9		89	35.5
25	28	25,349	-47.7		86	35.0
20	26	26,826	-46.1		85	38.1
15	18	28,755	-42.7		83	42.7
10	10	31,517	-38.3			
7	7	33,974	-34.2			

* TATOOSH IS., WASH
1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	31	11.4	95	194	6.4
1000	31	153	11.6	90	213	5.6
950	31	584	12.3	75	281	5.1
900	31	1,037	11.5	65	272	4.3
850	31	1,514	9.9	55	253	3.7
800	31	2,016	7.5	50	247	4.7
750	31	2,541	4.6	45	238	5.4
700	31	3,104	1.4	40	247	6.4
650	31	3,694	- 2.0	36	243	8.4
600	31	4,330	- 5.7	32	244	9.7
550	31	5,000	-10.2	35	249	10.3
500	31	5,735	-15.4	36	248	10.1
450	31	6,512	-21.2	32	247	11.5
400	31	7,381	-27.9	33	248	11.8
350	31	8,326	-35.3	34	250	14.6
300	31	9,383	-42.6	32	248	16.1
250	31	10,594	-49.6		247	18.8
200	30	12,039	-52.7		250	19.4
175	30	12,902	-52.5		242	19.8
150	30	13,897	-53.0		243	18.6
125	30	15,069	-54.1		236	16.5
100	30	16,496	-55.1		234	11.1
80	29	17,923	-55.0		216	5.6
70	29	18,775	-54.8		179	2.7
60	29	19,763	-53.9		103	4.3
50	29	20,938	-52.5		100	6.8
40	28	22,388	-50.7		83	8.2
30	27	24,275	-48.2		85	14.0
25	27	25,481	-46.4		84	16.7
20	25	26,969	-44.4		86	20.0
15	25	28,909	-41.1		88	21.6
10	20	31,695	-36.4		85	26.8
7	7	34,200	-31.7			

TOPEKA, KANS.
984 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	269	20.9	88	122	2.9
1000	31	130				
950	31	579	22.1	72	159	4.5
900	31	1,047	21.0	60	222	6.2
850	31	1,540	18.5	60	250	8.9
800	31	2,058	15.6	54	268	11.5
750	31	2,599	12.3	55	276	12.4
700	31	3,179	8.4	57	271	14.4
650	31	3,783	4.6	55	279	14.6
600	31	4,437	.5	54	289	17.7
550	31	5,124	- 3.8	53	293	17.9
500	31	5,878	- 8.1	48	299	18.8
450	31	6,688	-12.8	43	300	20.4
400	31	7,581	-18.4	39	304	22.0
350	31	8,565	-25.3	37	303	25.4
300	31	9,666	-33.5	34	300	28.6
250	30	10,921	-43.0		295	31.3
200	30	12,389	-54.0		292	32.6
175	30	13,235	-59.6		297	31.9
150	30	14,188	-64.3		301	29.5
125	30	15,294	-67.5		300	19.0
100	30	16,637	-66.7		323	9.9
80	29	17,996	-63.1		25	7.0
70	29	18,820	-61.3		48	8.5
60	29	19,785	-58.1		70	11.3
50	29	20,942	-54.9		87	13.6
40	29	22,380	-51.6		92	15.0
30	29	24,257	-49.2		86	17.5
25	28	25,456	-47.6		86	20.0
20	21	26,950	-45.6		87	25.1
15	6	28,907	-42.5			
10						
7						

TRUK, CAROLINE IS.
+ 1009 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	2	27.3	81	318	3.5
1000	31	84	26.5	75	316	3.1
950	31	529	23.0	73	283	2.5
900	31	1,006	20.5	69	268	3.9
850	31	1,500	18.0	65	282	2.9
800	31	2,017	15.3	63	298	1.6
750	31	2,562	12.4	62	274	.6
700	31	3,139	9.0	63	75	1.6
650	31	3,747	5.4	63	76	3.5
600	31	4,401	2.1	60	96	6.2
550	31	5,097	- 1.6	59	101	8.9
500	31	5,854	- 5.5	55	103	11.3
450	31	6,674	-10.1	49	103	11.5
400	31	7,575	-15.7	44	101	12.6
350	31	8,569	-22.2	37	100	12.6
300	31	9,685	-30.5	30	94	14.6
250	31	10,954	-40.8	24	95	14.2
200	31	12,432	-53.6		94	15.5
175	31	13,277	-60.8		88	17.3
150	31	14,218	-68.7		86	20.0
125	31	15,290	-75.8		87	17.5
100	31	16,573	-75.1		85	9.9
80	30	17,889	-68.8		89	8.9
70	30	18,693	-66.3		97	10.9
60	29	19,634	-63.7		97	15.0
50	29	20,760	-61.0		94	28.0
40	29	22,153	-59.0		94	47.8
30	25	23,974	-54.5		96	61.6
25	23	25,149	-52.2		98	67.0
20	18	26,608	-48.8		99	70.9
15	8	28,508	-44.5			
10						
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JULY 1965

* TUCSON, ARIZ.
924 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	789	23.9	61	140	5.8
1000	31	88				
950	31	538				
900	31	1,018	25.4	45	145	4.7
850	31	1,519	23.3	41	70	1.7
800	31	2,045	19.6	43	41	2.9
750	31	2,592	15.4	48	78	2.5
700	31	3,177	10.8	55	118	3.3
650	31	3,785	6.1	64	136	5.1
600	31	4,442	1.3	71	143	7.4
550	31	5,125	- 3.4	75	151	8.2
500	31	5,885	- 7.9	66	154	9.9
450	31	6,691	-12.9	62	163	10.7
400	31	7,585	-18.6	59	164	13.6
350	31	8,567	-25.7	55	165	14.2
300	31	9,666	-34.0	50	160	16.3
250	31	10,916	-43.9		152	15.9
200	31	12,378	-54.8		145	14.4
175	31	13,220	-60.4		156	12.8
150	31	14,169	-65.8		162	11.8
125	31	15,264	-69.9		146	10.5
100	30	16,585	-70.9		133	10.5
80	30	17,922	-65.8		92	14.0
70	30	18,736	-63.7		92	17.5
60	30	19,688	-60.7		92	20.8
50	30	20,832	-57.3		95	23.9
40	30	22,253	-54.4		91	27.2
30	30	24,109	-51.2		89	30.3
25	30	25,299	-49.0		90	30.9
20	29	26,769	-47.1		87	30.3
15	29	28,687	-44.0		89	32.1
10	25	31,427	-39.7		90	42.2
7	12	33,878	-35.6		97	44.3

* VANDENBERG AFB, CALIF.
1002 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	113	13.1	98	311	4.1
1000	31	128	12.9	98	318	3.9
950	31	567	13.5	67	349	8.4
900	31	1,021	20.3	35	10	6.6
850	31	1,513	19.2	32	36	3.1
800	31	2,032	16.6	29	189	1.4
750	31	2,578	13.6	29	197	4.9
700	31	3,156	9.9	31	195	6.2
650	31	3,764	5.8	33	202	7.8
600	31	4,417	1.4	34	212	10.1
550	31	5,104	- 3.8	34	218	11.1
500	31	5,856	- 9.2	34	216	13.2
450	31	6,659	-15.1	31	215	14.2
400	31	7,542	-21.5	32	207	18.5
350	31	8,512	-28.9	31	207	23.7
300	31	9,596	-36.7	28	206	28.2
250	31	10,837	-44.9		208	33.4
200	31	12,302	-53.1		205	36.9
175	31	13,155	-56.9		208	36.1
150	31	14,121	-61.7		214	31.9
125	31	15,238	-65.7		212	22.7
100	31	16,589	-66.4		180	9.9
80	31	17,945	-64.3		123	10.5
70	31	18,765	-62.4		107	12.2
60	31	19,721	-59.8		98	14.8
50	31	20,868	-56.5		93	18.6
40	31	22,293	-53.4		89	22.0
30	30	24,152	-51.2		88	23.7
25	30	25,341	-49.6		89	26.8
20	29	26,808	-47.2		91	28.0
15	29	28,721	-44.8		89	28.6
10	22	31,450	-40.9		88	35.5
7	8	33,844	-38.6			

* WAKE IS., PACIFIC AREA
1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	5	27.4	80	76	9.5
1000	31	129	26.0	81	81	11.7
950	31	578	21.8	84	90	14.2
900	31	1,049	18.9	76	94	13.6
850	31	1,539	16.1	70	91	13.2
800	31	2,053	13.6	60	87	12.6
750	31	2,594	11.1	47	83	11.3
700	31	3,169	8.4	35	83	10.1
650	31	3,777	5.3	27	82	9.3
600	31	4,428	1.4	27	85	8.2
550	31	5,122	- 2.5	25	85	8.2
500	31	5,875	- 6.9	25	74	7.8
450	31	6,689	-12.1	23	64	7.4
400	31	7,583	-18.1	23	50	5.6
350	31	8,567	-25.1	26	3	5.2
300	31	9,668	-33.7	26	338	8.7
250	31	10,920	-43.8		311	10.3
200	31	12,380	-55.7		289	12.4
175	30	13,219	-62.3		298	14.8
150	29	14,157	-68.6		295	12.0
125	27	15,234	-73.4		328	6.6
100	27	16,536	-72.6		63	11.1
80	27	17,860	-68.5		82	19.0
70	27	18,663	-66.1		87	23.5
60	26	19,605	-62.9		89	29.1
50	26	20,735	-60.3		89	34.2
40	25	22,136	-57.4		88	39.4
30	25	23,969	-53.7		87	48.4
25	25	25,147	-51.2		87	52.6
20	23	26,611	-48.6		87	58.1
15	21	28,515	-45.2		89	60.8
10	18	31,241	-41.8		91	66.2
7	5	33,654	-38.8			

* WALLOPS IS. VA. NASA
1017 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	21	3	19.2	90	233	1.2
1000	21	150	20.6	79	249	1.4
950	21	593	19.9	64	345	2.3
900	21	1,059	17.3	62	331	3.3
850	21	1,545	14.2	61	303	4.9
800	21	2,056	11.5	60	281	9.5
750	21	2,593	8.6	59	273	12.6
700	21	3,161	5.4	58	272	15.5
650	21	3,764	2.1	51	267	16.7
600	21	4,408	- 1.2	44	266	19.4
550	21	5,092	- 4.9	33	263	19.4
500	21	5,842	- 9.0	28	265	21.8
450	21	6,647	-14.1	24	264	22.1
400	21	7,535	-20.1	25	258	24.1
350	21	8,511	-27.4	23	260	25.8
300	21	9,601	-36.1	25	255	29.5
250	21	10,843	-45.0		249	34.2
200	21	12,300	-55.3		260	37.5
175	21	13,144	-59.4		269	35.4
150	21	14,103	-62.1		279	29.3
125	21	15,223	-64.3		280	21.0
100	21	16,588	-63.3		284	14.2
80	20	17,962	-60.9		315	3.7
70	20	18,795	-58.9		63	2.7
60	20	19,766	-56.6		80	6.8
50	20	20,929	-53.7		83	10.3
40	19	22,373	-51.1		90	15.9
30	19	24,254	-48.5		88	18.6
25	19	25,457	-47.1		85	21.4
20	19	26,939	-45.2		85	23.9
15	19	28,872	-42.1		90	28.7
10	12	31,649	-37.3			
7						

WASHINGTON, D. C.
1007 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	84	18.6	89	318	1.2
1000	31	140	19.1	83	323	1.6
950	31	585	19.7	63	324	4.1
900	31	1,047	17.2	59	249	5.4
850	31	1,533	14.1	63	282	7.6
800	31	2,043	10.9	65	267	10.9
750	31	2,578	8.0	56	264	13.8
700	31	3,146	5.3	52	264	15.9
650	31	3,745	2.0	50	267	16.9
600	31	4,391	- 1.2	42	271	19.0
550	31	5,075	- 4.8	37	272	20.6
500	31	5,824	- 9.4	31	269	21.6
450	31	6,629	-14.4	28	267	21.8
400	31	7,515	-20.5	28	269	26.0
350	31	8,491	-27.4	26	272	29.7
300	31	9,581	-35.9	27	271	32.6
250	31	10,824	-45.3		274	34.2
200	30	12,280	-54.3		280	35.9
175	30	13,129	-57.8		283	35.0
150	29	14,089	-60.9		279	30.3
125	29	15,215	-63.5		279	25.3
100	29	16,585	-62.9		286	15.2
80	29	17,967	-60.4		330	4.1
70	29	18,802	-58.3		43	3.3
60	29	19,777	-56.0		79	5.4
50	28	20,945	-53.5		83	8.0
40	27	22,391	-50.4		87	11.8
30	27	24,279	-47.8		85	15.3
25	26	25,487	-46.3		85	18.6
20	23	26,975	-44.2		87	23.9
15	17	28,918	-41.3		88	29.9
10	11	31,700	-35.6		94	28.6
7	8	34,179	-32.2			

WINNEMUCCA, NEV.
870 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	1,310	14.6	48	89	2.1
1000	30	112				
950	30	557				
900	30	1,027				
850	30	1,513	18.8	31	53	2.9
800	30	2,031	16.8	29	357	1.6
750	30	2,575	13.1	30	278	2.3
700	30	3,152	8.9	32	223	6.0
650	30	3,759	4.4	34	216	10.3
600	30	4,407	- .7	38	212	15.3
550	30	5,087	- 5.9	38	211	18.5
500	30	5,835	-11.2	R37	219	21.0
450	30	6,631	-16.6	R29	225	22.7
400	30	7,512	-22.8	R28	228	26.2
350	30	8,478	-29.8	R28	229	31.7
300	30	9,559	-37.4	R27	225	39.0
250	30	10,796	-45.3		219	49.0
200	30	12,260	-52.2		221	52.6
175	30	13,117	-55.5		224	48.8
150	30	14,091	-59.4		228	40.4
125	30	15,222	-62.6		230	26.0
100	30	16,594	-63.2		215	13.2
80	30	17,975	-61.0		156	5.8
70	29	18,805	-59.4		122	6.4
60	29	19,773	-57.6		97	8.7
50	28	20,930	-55.2		87	13.4
40	28	22,364	-52.3		89	14.6
30	27	24,240	-49.2		84	18.5
25	27	25,440	-47.6		87	20.8
20	26	26,919	-45.4		84	21.0
15	18	28,848	-42.2		90	23.3
10						
7						

WINSLOW, ARIZ.
854 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,492	18.0	65	180	2.9
1000	31	108				
950	31	558				
900	31	1,028				
850	31	1,528	18.4	63	185	3.1
800	31	2,050	19.4	47	241	3.5
750	31	2,600	15.9	48	242	3.3
700	31	3,185	11.5	52	212	4.7
650	31	3,793	6.8	56	199	6.6
600	31	4,452	1.8	60	193	9.5
550	31	5,142	- 3.3	63	193	12.2
500	31	5,896	- 8.1	59	199	13.4
450	31	6,701	-13.1	51	203	12.2
400	31	7,596	-18.7	42	203	14.6
350	31	8,578	-25.7	38	203	17.1
300	31	9,677	-33.7	34	201	21.4
250	31	10,930	-43.4		203	23.7
200	31	12,394	-54.6		202	23.9
175	31	13,238	-60.1		209	21.4
150	31	14,187	-65.4		204	16.3
125	31	15,285	-69.7		192	10.9
100	31	16,610	-69.8		163	7.4
80	31	17,950	-66.4		105	11.5
70	31	18,763	-63.6		99	15.0
60	31	19,715	-60.8		93	17.5
50	29	20,860	-57.1		90	20.2
40	29	22,284	-53.9		87	23.3
30	29	24,144	-51.1		91	24.5
25	29	25,336	-48.9		92	26.8
20	29	26,810	-46.4		91	27.6
15	28	28,731	-43.7		91	31.1
10	8	31,479	-40.6			
7						

YAKUTAT, ALASKA
1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	12	7.9	98	99	3.3
1000	31	144	8.9	91	110	4.9
950	31	568	8.7	82	133	8.0
900	31	1,016	7.0	79	137	8.4
850	31	1,484	4.6	78	141	9.5
800	31	1,976	2.3	75	148	9.1
750	31	2,496	- .5	71	150	9.1
700	31	3,045	- 3.0	66	158	8.9
650	30	3,631	- 6.0	68	161	10.1
600	30	4,256	- 9.8	66	163	10.7
550	30	4,919	-14.2	62	175	10.7
500	30	5,639	-18.9	56	178	12.0
450	30	6,414	-24.2	52	181	11.7
400	30	7,267	-30.1	46	183	13.2
350	30	8,204	-37.2	48	189	13.8
300	30	9,252	-44.9		195	14.6
250	30	10,454	-50.5		202	15.7
200	30	11,902	-51.5		217	11.3
175	30	12,771	-50.5		225	9.9
150	30	13,778	-49.8		220	8.7
125	30	14,970	-49.8		225	6.6
100	30	16,428	-50.2		216	4.5
80	30	17,885	-49.9		168	2.5
70	30	18,758	-49.5		116	2.9
60	30	19,769	-49.0		97	4.1
50	30	20,968	-48.3		93	7.2
40	30	22,440	-47.4		95	8.9
30	30	24,347	-46.0		88	12.6
25	30	25,563	-44.8		85	15.2
20	29	27,060	-43.0		86	16.9
15	29	29,011	-40.0		86	20.2
10	23	31,809	-35.6		90	25.8
7	9	34,292	-33.3			

+ YAP, CAROLINE IS.
1007 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	17	26.5	87	273	3.3
1000	31	75	25.9	84	265	3.3
950	31	515	22.5	81	258	7.8
900	31	996	19.8	78	259	8.2
850	31	1,488	17.2	74	257	6.0
800	31	2,004	14.5	72	260	6.4
750	31	2,544	11.6	71	259	3.5
700	31	3,123	8.4	69	263	2.1
650	31	3,729	5.2	67	239	2.3
600	31	4,385	1.7	69	217	2.7
550	31	5,080	- 2.0	66	164	1.7
500	31	5,835	- 6.1	61	154	3.1
450	31	6,651	-10.8	56	92	5.8
400	31	7,552	-16.2	49	96	6.6
350	31	8,543	-22.8	43	84	11.1
300	31	9,654	-31.0	35	78	11.8
250	31	10,920	-41.1		77	12.8
200	31	12,394	-54.0		73	16.7
175	31	13,235	-61.5		73	17.5
150	31	14,176	-69.3		64	20.8
125	31	15,242	-77.3		61	24.5
100	31	16,517	-76.4		68	19.2
80	31	17,823	-70.3		79	18.5
70	31	18,621	-67.8		87	21.4
60	30	19,554	-65.6		86	23.5
50	30	20,671	-62.5		86	31.1
40	30	22,059	-59.2		85	45.3
30	25	23,880	-56.0		86	56.3
25	20	25,059	-53.5		88	60.4
20	12	26,495	-49.3			
15						
10						
7						

YUCCA FLAT, NEV.
881 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	1,196	15.4	36	30	1.7
1000	30	93				
950	30	536				
900	30	1,008				
850	30	1,502	22.5	27	170	2.3
800	30	2,027	19.5	28	194	11.1
750	30	2,575	15.6	30	197	14.0
700	30	3,159	10.9	34	187	13.6
650	30	3,769	6.0	39	183	13.2
600	30	4,422	1.0	41	179	12.6
550	30	5,110	- 4.1	40	194	13.6
500	30	5,861	- 9.2	39	208	16.9
450	30	6,665	-14.6	33	216	19.2
400	30	7,551	-20.6	R30	217	22.0
350	30	8,525	-27.6	R29	218	28.9
300	30	9,616	-35.4	R31	214	34.0
250	30	10,864	-43.9		210	42.9
200	30	12,329	-53.9		207	45.1
175	30	13,177	-58.7		214	39.0
150	30	14,134	-63.0		221	29.3
125	30	15,245	-66.7		217	20.4
100	30	16,592	-67.0		202	11.5
80	30	17,947	-63.9		147	8.9
70	30	18,770	-61.2		108	11.1
60	30	19,732	-58.9		91	14.8
50	29	20,884	-55.9		85	17.1
40	28	22,311	-53.3		88	18.8
30	28	24,175	-50.4		92	22.1
25	27	25,366	-48.7		90	23.1
20	25	26,838	-46.3		90	24.3
15	22	28,762	-43.7		89	27.0
10	16	31,512	-40.3		93	36.5
7						

YUMA, ARIZ.
995 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	21	131	26.9	40	71	.6
1000	21	84				
950	21	539	29.6	38	224	5.2
900	21	1,021	27.4	36	218	7.0
850	21	1,525	24.1	36	201	7.2
800	21	2,051	20.1	39	176	9.3
750	21	2,596	15.6	43	168	11.8
700	21	3,185	10.9	49	165	14.2
650	21	3,791	6.0	59	162	14.8
600	21	4,449	1.5	61	172	13.0
550	21	5,138	- 3.2	59	177	12.2
500	21	5,892	- 8.1	47	181	9.5
450	21	6,695	-13.4	42	186	11.5
400	21	7,589	-19.1	37	185	16.1
350	21	8,569	-26.0	36	181	22.5
300	21	9,666	-34.0	40	183	27.4
250	21	10,917	-43.4		178	32.2
200	19	12,383	-54.7		185	29.9
175	18	13,227	-60.4		195	22.9
150	18	14,176	-65.1		207	13.6
125	12	15,282	-69.1		179	13.0
100	7	16,603	-68.7			

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Relative humidity averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.
The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Relative humidity data are not published for standard pressure surfaces for which less than 5 observations are available.
Relative humidity data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from lithium chloride hygristors.
These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature in degrees Celsius, relative humidity in percent, and resultant winds in degrees and knots

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. They were also equipped with carbon hygristors. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes

+ Observations for these stations are scheduled at 0000 G C T

R More than half of the observations are from statistical values

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun. JULY 1965

Date	Sun's zenith distance								
	A M				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	ALBUQUERQUE, N. MEX.								
	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Jul.									
1-----	----	----	----	----	1.33	----	----	----	----
2-----	----	----	----	0.98	1.31	----	----	----	----
3-----	----	----	----	----	1.33	----	----	----	----
4-----	0.79	0.87	1.00	1.17	1.40	----	----	----	----
5-----	.70	.77	.87	.97	1.32	----	----	----	----
6-----	----	----	.79	.95	1.25	----	----	----	----
7-----	----	----	----	----	1.22	----	----	----	----
8-----	----	----	----	1.01	1.26	----	----	----	----
9-----	----	.86	1.01	1.18	1.41	1.20	----	----	----
10----	----	----	----	----	1.32	----	----	----	----
11----	.62	.75	.81	1.01	1.31	1.11	0.92	0.81	0.69
12----	.68	.98	----	----	----	----	----	----	----
13----	----	----	----	----	1.35	----	----	----	----
14----	----	----	----	1.08	1.31	----	----	----	----
15----	----	----	----	1.09	1.33	----	----	----	----
16----	----	----	1.00	1.16	1.38	----	----	----	----
17----	.70	.80	.93	1.10	----	1.12	.95	.83	----
18----	----	----	----	1.12	1.33	1.12	.96	.80	----
19----	----	----	----	----	1.35	----	----	----	----
20----	----	----	----	----	1.32	----	----	----	----
21----	----	----	----	----	1.29	----	----	----	----
23----	.71	----	----	----	1.37	----	----	----	----
24----	----	.84	----	----	----	----	----	----	.53
25----	.71	.81	.95	1.10	1.28	----	----	----	----
26----	----	----	----	----	1.29	----	----	----	----
28----	----	----	----	----	1.25	----	----	----	----
29----	----	.73	----	----	----	----	----	----	----
30----	.65	.74	.89	1.05	1.30	1.12	.76	----	----
31----	----	----	----	1.01	----	----	----	----	----
Averages	0.70	0.82	0.92	1.07	1.32	1.13	0.89	0.81	0.61
	BLUE HILL OBS., MASS.								
	Air mass								
	4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
Jul.									
20----	----	----	----	----	----	1.08	0.90	0.77	0.67
21----	0.74	0.83	0.94	1.12	1.32	1.00	.78	.69	.55
26----	----	----	.94	1.15	1.36	1.12	.99	.89	.79
28----	----	.79	.88	1.04	----	----	----	----	----
29----	.49	.72	.86	1.05	1.30	----	----	----	----
30----	.62	.72	.87	1.04	----	----	----	----	----
31----	.62	.75	.87	1.03	----	----	----	----	----
Averages	0.62	0.76	0.89	1.07	1.33	1.07	0.89	0.78	0.67
	OMAHA, NEBR.								
	Air mass								
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Jul.									
2-----	----	----	----	----	HS1.29	HS1.00	HS0.90	----	----
3-----	HS0.74	HS0.85	HS0.98	HS1.13	HS1.34	----	----	----	----
4-----	----	----	----	HS1.13	HS1.30	----	----	----	----
7-----	HS .79	HS .94	HS1.01	HS1.10	HS1.29	----	HS .90	HS0.76	HS0.64
8-----	HM .61	HM .70	HM .91	HM .99	----	----	----	----	----
11----	----	----	----	----	HS1.25	----	----	----	----
12----	----	----	----	----	HM1.21	HM .58	HM .34	HM .28	HM .22
14----	----	----	----	HM1.15	----	----	----	----	----
16----	----	----	----	HM1.02	HS1.44	----	----	----	----
17----	----	----	----	HS1.01	----	----	----	----	----
22----	HM .48	HM .57	HS .74	HS .96	HS1.19	HS .98	HS .82	HS .63	HS .52
23----	HS .57	HS .68	HS .81	----	HS1.21	HS .96	HS .77	HS .60	HS .47
25----	HS .65	----	HS .90	HS1.02	----	----	----	----	----
29----	----	----	----	----	----	----	.86	.75	.62
Averages	0.64	0.75	0.89	1.06	1.28	0.88	0.77	0.60	0.49

( )	Clouds present	S	Slight haze-indeterminable
HS	Slight haze	M	Moderate haze-indeterminable
HM	Moderate haze	*	Values corresponding to true solar noon

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	MADISON, WIS.								
	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Jul.									
3-----	----	----	----	S 1.15	----	----	----	----	----
11----	S 0.82	S 0.92	S 1.03	S 1.20	----	----	S 0.99	S 0.87	S 0.74
15----	S .84	S .95	S 1.05	S 1.21	----	----	----	----	----
25----	M .82	M .92	M 1.07	----	----	----	----	----	----
28----	----	----	M .99	----	----	----	----	----	----
Averages	0.83	0.93	1.04	1.19	----	----	0.99	0.87	0.74
	TUCSON, ARIZ.								
	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Jul.									
2-----	0.54	0.67	----	----	----	----	----	----	0.60
3-----	----	.74	----	----	----	----	----	----	.58
4-----	.55	.65	0.77	----	----	----	----	0.55	----
12----	----	----	----	----	----	----	0.96	.84	.74
13----	----	----	----	----	----	----	.83	.72	----
14----	----	----	----	----	----	----	----	----	.52
16----	----	.58	----	----	----	----	----	----	----
17----	----	----	----	----	----	----	----	.62	.51
18----	----	----	----	----	----	----	----	.73	.64
19----	.70	.80	----	----	----	----	----	----	----
22----	.69	.78	----	----	----	----	----	----	----
30----	----	.65	----	----	----	----	----	----	----
31----	.50	.60	.74	----	----	----	----	----	----
Averages	0.59	0.68	0.75	----	----	----	0.89	0.69	0.60
	MAUNA LOA OBS., HAWAII								
	Air mass								
	3.36	2.69	2.01	1.34	*	1.34	2.01	2.69	3.36
Jul.									
1-----	1.11	1.19	1.29	1.40	1.55	1.38	1.26	1.16	1.08
2-----	1.07	1.16	1.27	1.38	1.54	1.38	1.26	1.16	1.08
3-----	1.08	1.16	1.26	1.38	1.53	(1.34)	(1.22)	(1.13)	(1.05)
4-----	1.09	1.17	----	1.39	1.53	(1.34)	(1.22)	(1.12)	(1.05)
5-----	1.09	1.17	1.26	----	----	----	----	(1.12)	(1.04)
8-----	----	----	----	1.37	(1.50)	----	----	----	----
9-----	1.09	1.16	1.26	1.38	(1.51)	1.34	1.23	1.11	1.02
10----	1.07	1.15	1.25	1.37	----	----	----	----	----
12----	1.08	1.16	1.25	1.38	1.52	----	----	----	----
13----	1.07	1.14	1.24	1.36	1.53	1.36	1.24	1.16	(1.06)
14----	1.06	1.15	1.25	1.36	1.53	----	----	1.15	1.07
15----	1.08	1.16	1.26	1.39	1.53	----	----	----	----
16----	1.06	1.15	1.24	1.36	----	----	----	----	----
17----	1.04	1.15	1.23	1.35	----	----	----	----	----
22----	(1.01)	(1.10)	(1.20)	----	----	----	----	----	----
23----	(1.03)	(1.12)	(1.22)	----	(1.50)	1.33	1.21	1.12	1.03
24----	1.03	1.13	1.22	1.34	(1.50)	----	----	----	----
26----	(1.06)	(1.15)	(1.24)	----	----	----	----	----	----
27----	----	----	----	----	(1.51)	----	----	----	----
28----	1.08	1.17	1.25	1.37	----	----	----	----	----
30----	1.08	1.17	1.26	1.37	(1.50)	1.32	----	----	----
31----	1.07	1.16	1.25	1.37	----	----	----	----	----
Averages	1.07	1.16	1.25	1.37	1.53	1.35	1.24	1.14	1.06
	GUAM, M. I.								
	Air mass								
	4.92	3.93	2.95	1.97	*	1.97	2.95	3.93	4.92
	No observations due to cloudiness								

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

JULY 1965

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	512	662	619	722	678	618	538	643	713	661	724	610	645	587	462	---	681	720	701	655	660	622	577	642	577	644	---	---	---	684	477	631
AMES IOWA	257	666	669	507	638	394	669	670	536	370	591	517	426	699	601	653	649	399	109	119	408	637	---	---	---	---	587	660	617	408	369	512
APALACHICOLA FLORIDA	597	271	504	646	647	518	645	451	369	268	414	410	287	152	585	403	356	658	560	391	589	649	627	663	670	379	395	664	380	128	366	472
ARGONNE NAT. LAB.	691	402	735	630	657	396	428	658	295	551	637	620	624	585	753	584	638	645	582	611	376	623	564	666	703	558	606	590	632	574	139	573
ASTORIA OREGON	327	566	253	571	481	686	334	419	372	430	508	654	686	607	495	560	453	733	506	362	589	538	693	684	247	381	672	689	628	588	531	524
ATLANTA GEORGIA	587	572	409	458	551	609	467	301	511	416	655	429	484	563	312	633	686	667	645	273	458	643	355	482	521	617	471	---	379	482	669	510
BARROW ALASKA	287	444	328	263	227	395	542	639	207	709	650	383	333	676	270	349	496	196	291	---	444	508	538	423	643	520	450	171	526	586	274	426
BETHEL ALASKA	471	220	175	164	257	105	224	134	143	170	307	453	504	178	94	101	98	370	273	425	390	313	78	211	442	457	537	495	371	489	282	288
BISMARCK N.DAK.	694	703	674	668	258	711	459	502	571	327	251	475	737	694	616*	681	628	608	329	277	501	467	442	668	654	645	659	643	616	527	645	559*
BLUE HILL MASS.	770	672	275	726	588	738	620	491	605	182	236	727	654	652	475	735	463	175	707	719	662	575	312	494	427	719	355	606	692	621	622	558
BOISE IDAHO	478	758	693	769	770	714	717	700	732	754	748	770	752	745	736	581	611	556	413	474	699	757	738	714	480	613	698	700	703	578	672	672
BOSTON MASSACHUSETTS	---	---	---	---	---	---	612	502	604	198	---	---	642	630	447	729	417	172	668	698	498	532	282	485	449	683	341	581	666	651	633	527
BROWNSVILLE TEXAS	690	749	746	763	555	650	686	746	754	699	777	720	736	701	599	519	686	659	718	731	694	573	642	656	717	657	602	691	436	273	496	655
BURLINGTON VERMONT	681	609	263	578	493	706	460	416	611	432	559	631	606	183	616	656	240	143	683	231	557	392	252	454	523	507	540	443	529	649	594	491
CAPE HATTERAS N.C.	629	737	661	483	545	639	653	602	304	640	668	559	692	615	562	538	658	464	365	489	648	671	702	646	650	505	554	65	124	114	657	543
CARIBOU MAINE	741	709	178	628	728	673	677	110	572	300	565	610	570	349	---	707	439	62	211	552	---	557	430	460	662	396	532	553	282	642	653	502
CHARLESTON S.C.	534	641	610	617	494	669	549	678	655	375	526	231	520	630	379	514	541	544	552	562	698	730	573	494	688	701	683	479	187	362	551	547
CLEVELAND OHIO	698	313	705	624	560	671	338	579	395	732	709	705	653	369	704	661	504	538	559	620	649	321	563	401	663	624	555	592	562	534	529	569
COLUMBIA MISSOURI	440	351	667	396	682	382	721	630	528	666	430	560	654	386	702	680	639	183	75	191	510	396	641	606	620	636	430	674	684	640	637	530
DAVIS CALIFORNIA	701	696	699	703	725	740	738	723	728	725	721	707	713	692	681	679	602	685	726	717	722	706	694	689	647	704	701	692	681	373	502	684
DODGE CITY KANSAS	633	642	627	641	552	597	655	628	525	629	630	654	608	256	535	628	646	605	503	409	624	625	627	613	588	596	430	495	643	605	345	574
E. LANSING MICHIGAN	739	340	597	615	424	666	159	658	---	719	726	701	632	442	658	308	394	612	615	602	678	453	610	490	702	592	610	461	536	635	248	554
EL CENTRO CALIF. NPF	624	522	444	397	492	604	615	628	603*	603*	561	617	467	388	402	596	435	551	601	308	340	532	576	562	539	258	283	200	427	577	483	491*
EL PASO TEXAS	803	802	710	770	800	765	794	794	686	741	776	758*	716	752	758	645	710	764	688	743	757	615	643	670	643	661	549	667	454	712	729	712*
ELY NEVADA	730	713*	782	784	601	504	594	732*	734	767	753	777	777	579	492	424	376	356	560	657	738	644	487	324	629	657	720	740	374	455	402	608*
EPPLEY NEWPORT R.I.	725	714	232	701	477	684	645	522	594	239	162	628	678	574	463	705	570	156	646	662	685	528	325	519	318	681	277	659	559	613	570	533
FAIRBANKS ALASKA	697	407	681	352	470	605	634	547	258	588	544	593	477	354	354	584	585	265	281	337	509	615	612	176	282	635	652	514	554	620	490	493
FLAMING GORGE UTAH	705	683	664	460	702	706	358	539	615	444	428	527	585	562	583	360	320	202	440	629	539	285	459	360	410	319	570	641	521	246	269	488
FORT WORTH TEXAS	726	773	767	761	768	722	655	752	681	726	757	752	704	535	391	741	700	647	730*	734	674	593*	655	621	326	551	705	513	644	728	673	668*
FRESNO CALIFORNIA	737	712	724	735	697	706	726	725	721	752	746	733	716	685	676	640	409	668	679	716	716	699	678	649	676	692	703	697	558	196	629	671
GAINESVILLE FLORIDA	598	480	608	562	347	679	401	468	537	375	432	546	535	300	297	306	614	585	522	531	329	572	669	596	374	---	---	---	---	---	---	491
GLASGOW MONTANA	757	770	748	649	480	707	673	397	622	688	628	463	656	749	688	692	668	645	676	511	667	476	740	675	620	641	632	689	583	672	645	642
GRAND JUNCTION COLO.	384	772	775	782	736	733	547	681	653	618	466	464	759	747	697	574	695	576	740	---	658	587	574	606	455	501	687	714	647	419	421	622
GREAT FALLS MONTANA	695	688	650	493	645	666	466	522	578	480	349	337	644	661	579	651	355	529	582	456	566	657	645	638	525	585	533	572	405	576	545	557
GREENSBORO N.C.	665	605	395	467	511	676	510	584	627	362	267	285	504	618	465	613	667	522	511	425	530	535	558	614	415	388	222	397	296	457	361	486
INDIANAPOLIS INDIANA	791	226	767	524	555	550	437	756	292	661	759	736	769	---	---	711	526	504	636	723	514	500	649	650	735	739	562	650	654	650	310	605
LAKE CHARLES LA.	530	520	438	242	412	496	547	630	484	673	608	563	546	316	434	446	618	487	633	606	443	610	411	468	385	395	571	459	257	646	612	500
LAKELAND FLORIDA	598	457	600	459	517	570	584	361	722	597	414	581	359	475	620	455	273	584	474	359	526	599	576	536	628	519	683	606	324	205	95	495
LANDER WYOMING	768	695	761	675	664	742	618	656	457	694	658	736	740	736	660	553	533	405	412	736	751	550	445	523	220	694	294	576	546	531	645	602
LARAMIE WYOMING	575	612	678	597	613	680	538	478	555	547	440	442	584	673	669	532	379	393	417	495	540	327	473	389	464	560	476	535	621	264	394	514
LAS VEGAS NEVADA	793	790	774	765	696	447	749	760	748	735	708	765	706	467	504	659	306	542	675	737	674	532	580	347	704	720	726	464	455	448	687	634
LITTLE ROCK ARKANSAS	564	660	711	668	426	585	545	549	529	672	377	652	716	621	530	634	628	564	617	375	532	573	608	643	328	833	388	345	669	705	593	575
LOS ANGELES CALIF.U	686	711	746	718	704	680	680	636	649	604	700	690	669	628	508	615	678	704	668	680	684	651	674	650	184	554	717	687	318	560	652	635
LOS ANGELES CALIF.WB	724	687	731	713	685	638	530	563	566	534	680	655	496	535	391	588	697	689	644	682	650	643	639	638	164	564	714	717	337	629	672	606
MANHATTAN KANSAS	565	430	564	601	365	556	602	509	589	578	267	581	571	534	597	561	443	391	192	513	544	515	364	477	568	514	179	587	561	490	518	494
MATANUSKA ALASKA	217	209	173	133	254	430	448	270	208	447	319	285	345	245	250	323	155	124	204	254	287	234	245	175	328	475	368	275	405	357	298	281
MAUNA LOA OB.HAWAII	870	867	864	858	853	807	756	855	861	662	588	767	865	863	844	711	629	807	784	453	341	316	823	761	856	822	715	551	633	736	718	737
MEDFORD OREGON	747*	741*	745*	780*	754*	746*	749*	771*	761	640	753*	768*	736*	725*	739*	722	732	747	619	529	692	735	711	695	423	641	705	710	711	547	385	692*
MIAMI FLORIDA	553	525	573	556	528	466	554	513	525	388	403	548	576	697	690	421	519	323	414	250	330	487	656	542	702	684	672	580*	741	517	637	535*
MIDLAND TEXAS	---	763	757	735	730	753	738	737	736	731	---	665	755	667	355	678	659	667	721	724	728	713	734	644	679	384	616	608	380	722	702	672
NASHVILLE TENNESSEE	660	566	324	594	593	629	669	531	473	439	529	672	635	523	509	632	461	656	586	694	411	571	402	563	239	406	564	643	673	673	619	553
NEW YORK N.Y.U	776	715	380	720	343	732	542	614	575	292	113	648	669	607	413	656	---	---	---	713	687	299	507	396	398	621	202	488	573	387	427	518
NORTH OMAHA NEBRASKA	355	765	780	672	681	750	763	681	719	312	650	678	418	756	---	717	641	344	101	515	180	721	723	583	571	155	651	647	701	---	352	572
OAK RIDGE TENNESSEE	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	390	262	392	256	327	207	496	499	543	532	---
OKLAHOMA CITY OKLA.	641	646	545	573	496	446	646	356	512	619	643	649	643	386	---	628	458	610	459	565	527	613	635	503	455	317	---	---	641	615	193	536

Note. --Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

JULY 1965

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
PAGE ARIZONA	501	593	574	534	497	364	454	545	571	412	422	458	552	468	332	480	378	293	456	518	313	239	361	246	472	415	488	376	318	410	464	436
PHOENIX ARIZONA	653	658	645	634	620	585	566	628	598	627	364	632	622	546	576	509	451	574	589	617	536	422	506	444	619	478	575	532	579	587	597	567
PORTLAND MAINE	746	685	152	639	486	734	711	432	683	278	520	689	707	519	564	713	530	215	500	580	516	625	261	522	412	649	538	562	517	693	548	546
PROSSER WASHINGTON	739	725	474	767	775	688	723	783	633	696	597	767	724	719	739	755	741	760	684	332	307	706	711	685	629	508	665	675	622	673	611	665
RAPID CITY S.DAK.	550	514	594	612	233	666	595	647	380	601	586	563	653	584	644	576	326	220	364	625	618	555	273	528	376	436	604	569	491	562	613	521
RICHLAND 25 NW WASH.	694	685	419	703	725	691	623	748	620	536	563	722	705	694	710	706	703	727	610	302	201	696	686	686	626	446	661	659	615	667	629	628
RIVERSIDE CALIFORNIA	---	---	---	---	---	---	---	---	135	678	758	721	690	547	581	670	702	757	749	776	784	752	717	716	595	573	754	676	331	702	718	656
RUSTON LOUISIANA	590	657	561	574	484	530	515	619	691	---	---	---	667	398	476	429	571	624	610	531	439	551	599	494	610	558	411	486	548	617	649	553
SAINT CLOUD MINN.	404	706	688	736	755	76	670	214	974	772	574	362	693	743	656	631	560	676	281	308	177	640	382	710	702	432	738	641	580	501	417	561
SALT LAKE CITY UTAH	817	810	824	780	835	761	539	694	791	521	682	799	793	696	520	506	516	567	635	749	778	583	642	552	547	754	733	767	652	360	466	667
SAN ANTONIO TEXAS	697	700	668	687	543	568	563	486	584	593	663	570	575	516	474	536	516	581	583	572	539	560	526	540	483	513	635	688	427	683	667	579
SANTA MARIA CALIF.	633	690	635	652	644	585	---	592	626	712	716	559	598	609	590	589	570	564	593	644	618	562	656	630	489	701	696	681	486	580	619	617
SAULT STE MARIE MICH	706	423	385	604	788	663	318	578	323	767	762	703	308	747	706	325	696	546	541	658	468	411	615	555	709	710	576	583	533	691	117	565
SEATTLE WASH. UNIV.	700	559	632	619	666	703	160	183	349	410	426	638	656	509	509	673	323	533	507	281	412	516	678	660	624	620	498	667	655	660	590	536
SEATTLE TACOMA WASH.	745	569	683	637	738	734	290	231	376	429	412	620	704	641	516	722	492	580	539*	360	393	664	691	710	639	677	554	697	685	676	582	580*
SPOKANE WASHINGTON	770	653	561	520	799	790	683	810	684	522	687	588	755	747	784	708	755	802	767	220	133	566	761	757	725	497	677	710	647	740	722	663
STATE COLLEGE PENN.	884	722	692	767	402	755	175	582	688	503	484	787	738	682	653	691	461	497	618	775	778	237	416	401	354	656	400	613	537	631	528	584
STERLING VIRGINA	736*	697	396	634	407	614	299	554	591	436	81	475	482	596	278	511	607	557	615	573	597	608	452	549	549	673	433	403	483	383	517	509*
STILLWATER OKLAHOMA	699	634	547	603	596	316	671	382	663	667	683	687	679	299	685	674	673	608	431	467	499	659	645	522	502	446	465	352	700	664	230	560
SWAN ISLAND W.I.	652	638	582	626	596	679	692	620	646	669	651	---	652	668	659	674	648	600	645	631	614	647	631	316	648	661	661	643	614	655	668	612
TAMPA FLORIDA	643	542	395	424	601	662	605	397	587	464	463	612	400	518	753	644	161	662	608	399	484	608	704	641	661	618	722	447	278	206	80	516
TUCSON ARIZONA	557	564	679	---	---	537	693	613	342	605	581	705	632	521	558	346	---	---	248	466	626	572	462	369	427	676	508	432	550	599	646	538
WAKE ISLAND,PACIFIC	561	456	386	575	---	582	602	584	604	580	592	617	597	589	513	529	604	612	608	607	606	586	597	604*	592	606	602	604	612	563	485	575*

Note. --Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (midnight to midnight) at Huntley, Mont.

JULY 1965

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	393	447	403	†	287	439	256	†	†	422	†	221	436	436	433	448	†	†	360	422	367	268	422	432	320	355	392	415	294	401	421	---

The measurement is made with a Beckman and Whitley net exchange radiometer over a plot of sod. **The value represents the total incoming minus the total outgoing radiation of all wave lengths.**

† recorder malfunction

These data are of an experimental nature and are published as received from the Huntley Exp. Station. **The instrument with which they were measured has not been checked by the Weather Bureau.**

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λ s Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3
															Data will be delayed																

The spectrophotometer measures the total amount of ozone in the atmosphere, i e , the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e g., 350 milli-atmo-cm ozone implies an ozone layer 0 350 centimeter thick The code λ s designates the type of measurement made.

DESCRIPTION of CHARTS

CHART I., A. AVERAGE TEMPERATURE (°F.) AT SURFACE. B. DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL. -The average monthly temperature presented in Chart I-A is computed from the average daily maximum and the average daily minimum temperatures reported by some 870 Weather Bureau and cooperative stations. The departures from normal are presented in Chart I-B. They are based on the 30-year normals (1931-60) for the first-order Weather Bureau stations.

CHART II. TOTAL PRECIPITATION. - Chart II is based on daily precipitation records at about 870 Weather Bureau and cooperative stations.

CHART III. PERCENTAGE OF NORMAL PRECIPITATION. -In this chart the anomaly in the month's precipitation is shown as a percentage of the normal total. This anomaly shows the deviation from the 30-year normal (1931-60) for about 270 first-order Weather Bureau stations.

CHART IV. TOTAL SNOWFALL. CHART V. A. PERCENTAGE OF MEAN MONTHLY SNOWFALL. B. DEPTH OF SNOW ON GROUND.-Chart IV gives the total depth in inches of unmelted snowfall as reported during the month by Weather Bureau and cooperative stations. This is converted in Chart V-A into a percentage of the mean monthly total amount computed for each Weather Bureau station having at least 10 years of record. The depth of snow on ground is that reported by both Weather Bureau and cooperative stations as of 7:00 a. m. Eastern Standard Time on the Monday nearest the end of the month. This is reported only for the months December through March. The snowfall charts are presented each month November through April.

> Isolines for Charts I, II, III, IV, and V, are drawn through points of approximately equal value. Caution should be used in interpolating on these charts, particularly in mountainous areas.

CHART VI. A. PERCENTAGE OF POSSIBLE SUNSHINE. B. PERCENTAGE OF MEAN MONTHLY SUNSHINE. -CHART VI-A shows the amount of sunshine received in terms of percentage of the total hours of sunshine possible during the month. In Chart VI-B this is shown as a percentage of the mean number of hours of sunshine received. Means are computed for Weather Bureau stations having at least 10 years of record.

CHART VII. A. AVERAGE DAILY VALUES OF SOLAR RADIATION, LANGLEYS. B. PERCENTAGE OF MEAN DAILY SOLAR RADIATION. -Shown on Chart VII-A are the monthly averages of daily total solar radiation, both direct and diffuse, in langleys (gm. cal. cm. $^{-2}$) for all Weather Bureau stations which record this element.

CHART VII-B shows the percentages of the mean based on at least 5 years of record during the period 1950-1960, and corrected to the International Pyrheliometer Scale of 1956.

CHART VIII. -TRACKS OF CENTERS OF ANTICYCLONES AT SEA LEVEL.

CHART IX. TRACKS OF CENTERS OF CYCLONES AT SEA LEVEL. -Centers which can be identified for 24 hours or more are tracked in these charts. Semi-permanent features such as the Great Basin and Pacific Highs and Colorado and Mexico Lows are not shown. The 7:00 a. m. EST positions are shown by open circles, with the intermediate positions at 6-hour intervals shown by solid dots. The date is given above the circle and the central pressure to whole millibars below. A dashed track indicates a regeneration rather than actual movement to the next position. Solid squares indicate position of stationary center for period shown beside it.

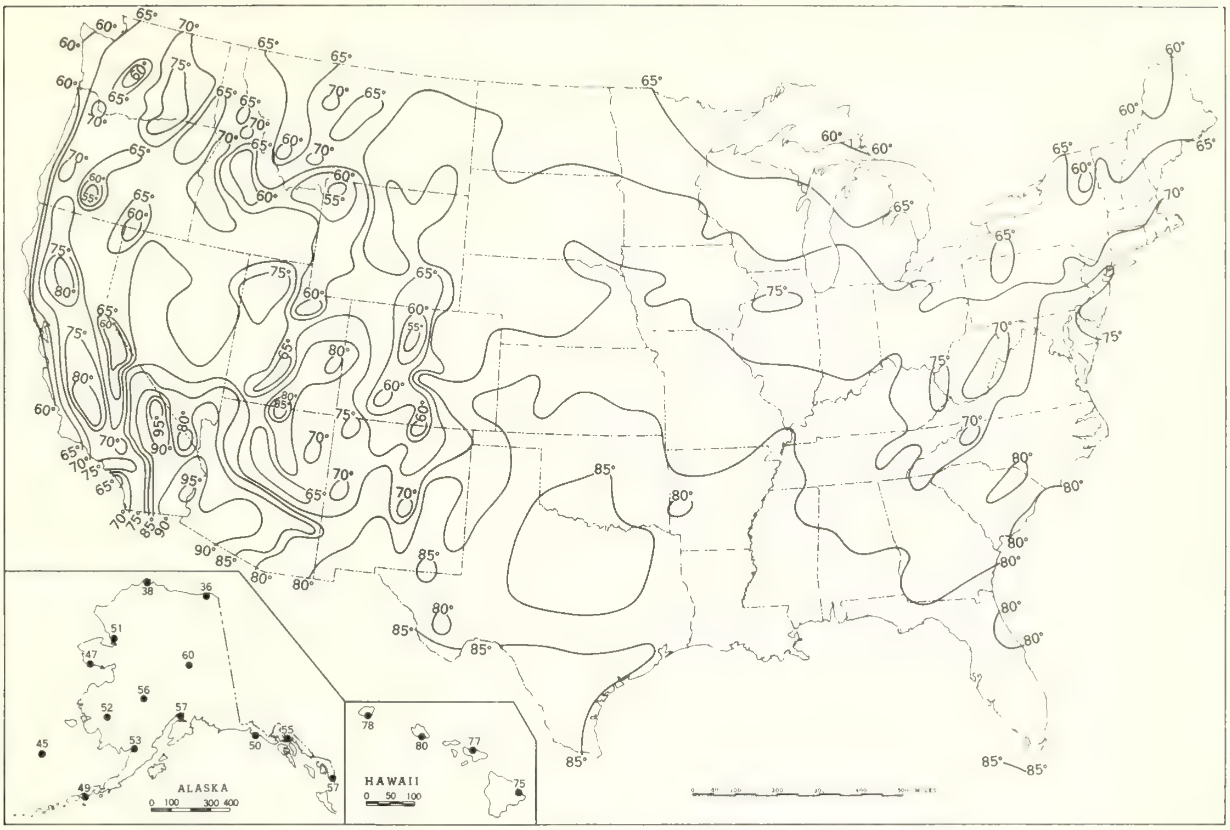
CHART X. AVERAGE SEA LEVEL PRESSURE (mb.) AND RESULTANT SURFACE WIND.-The average monthly sea level pressures are obatined from the eight daily 3-hourly observations reported at Weather Bureau Stations. Resultant surface wind directions (to 36 points of the compass) for the month are shown by arrows. Resultant speeds are indicated by the length of arrow shafts. Constancy ratios (resultant surface wind divided by average surface wind for month) are shown to two decimal places. The inset shows the departure of the average pressure based on 30-year normals for first-order Weather Bureau Stations, other stations having at least 10 years of record; and for each 10° intersection in a diamond grid over the oceans.

CHARTS XI-XVI. AVERAGE HEIGHT, TEMPERATURE, AND RESULTANT WINDS, 850, 700, 500, 300, 200, and 100 mb. -Height is given in geopotential meters and temperature in degrees Celsius. These are the averages of the 1200 GMT radiosonde reports. Wind speeds are given in knots; flag represents 50 knots, full feather 10 knots, and half feather 5 knots. Directions are shown to 360° of the compass. Winds are based on rawins at the indicated pressure surface and at 1200 GMT.

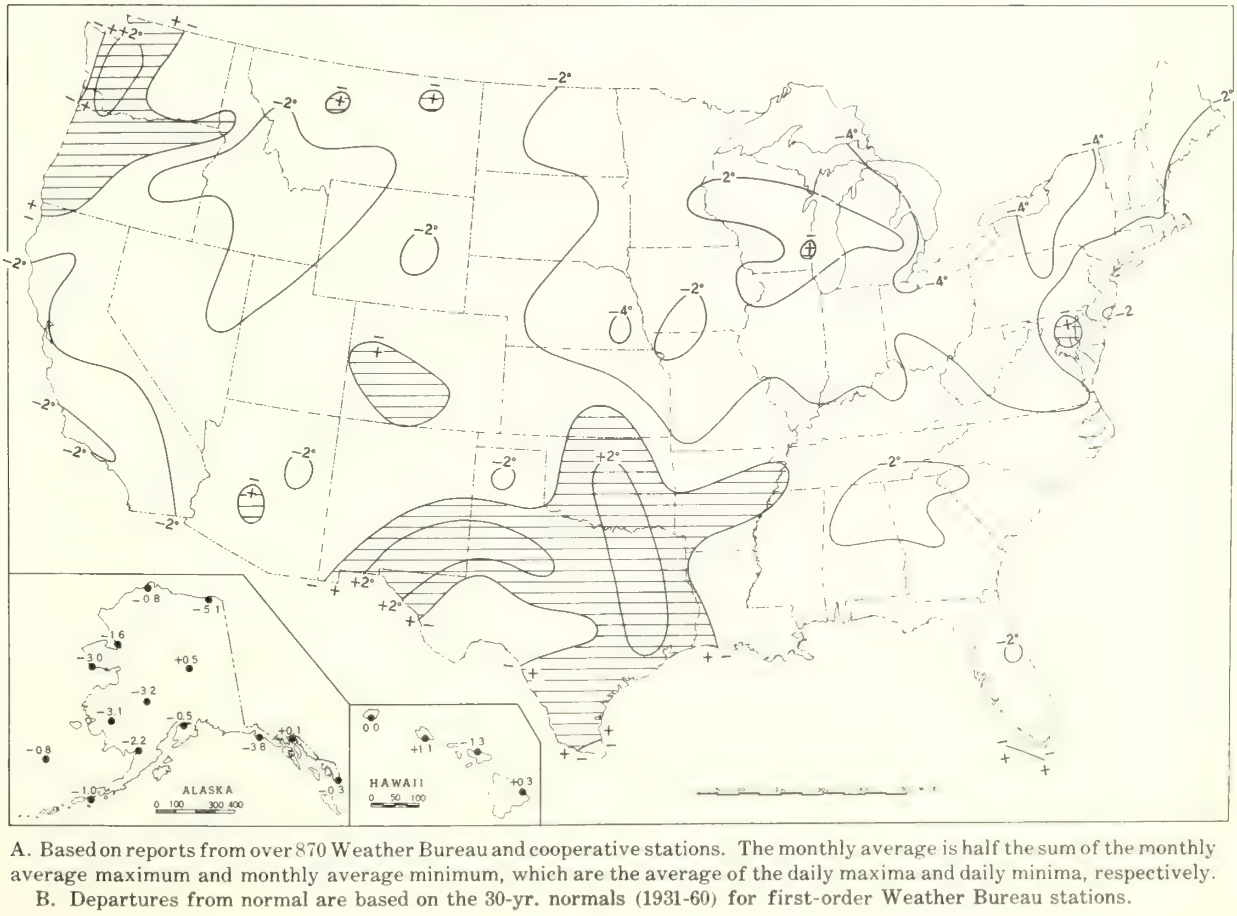
CHART XVII. A. 50-MB. RESULTANT WINDS. B. 30-MB. RESULTANT WINDS. -Wind speed (isotachs) in knots. Arrows show resultant wind direction. Winds are based on rawins at the indicated pressure surface and at 1200 GMT.

Exact values of most of these charted elements for Weather Bureau stations are printed each month in tabular form in CLIMATOLOGICAL DATA, NATIONAL SUMMARY. Extreme values of temperature and precipitation for each state are included in the tables, Condensed Climatological Summary. Annual averages for surface elements are presented in the CDNS Annual Issue each year.

Chart I. A. Average Temperature (°F.) at Surface, July 1965.



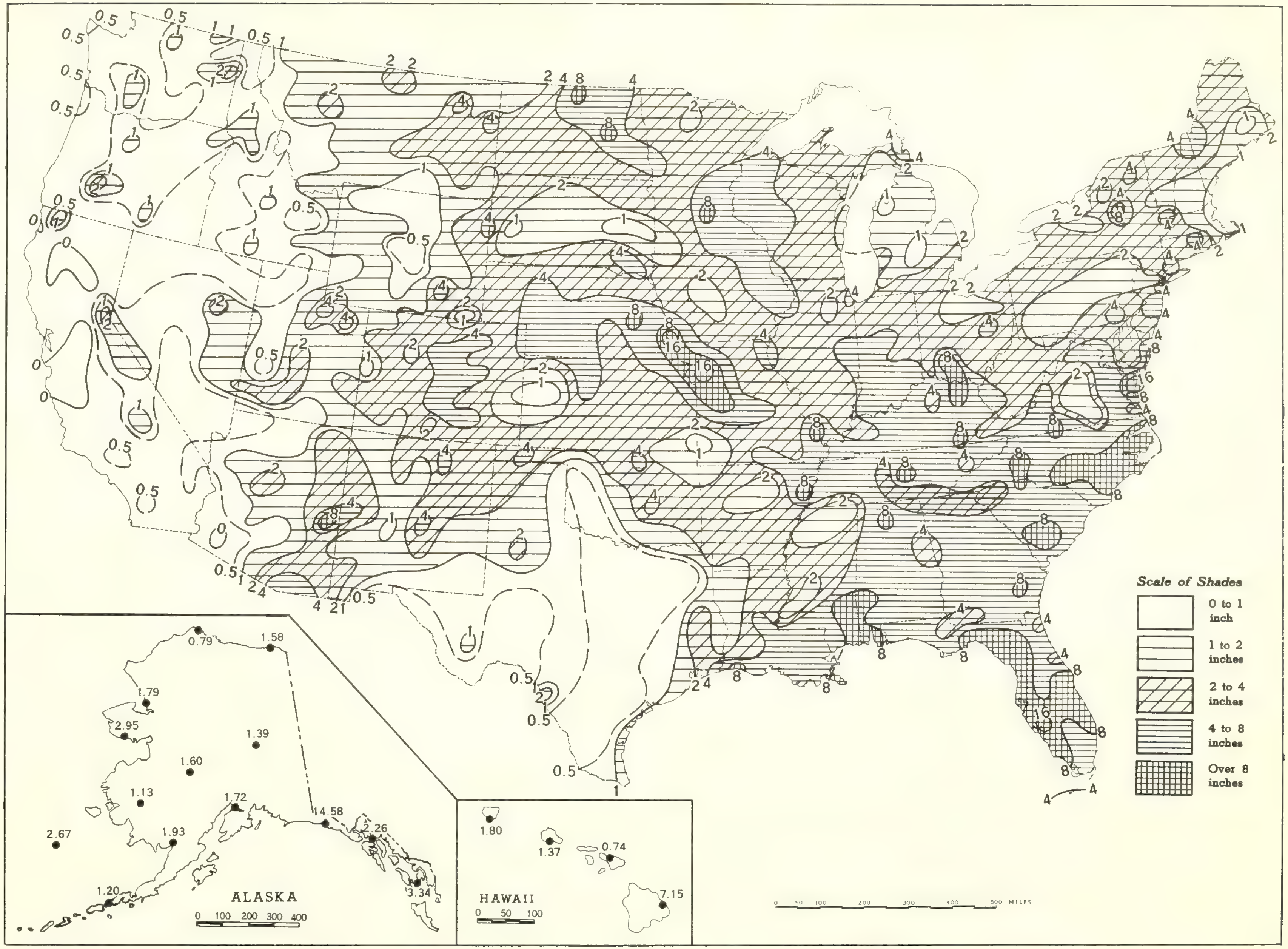
B. Departure of Average Temperature from Normal (°F.), July 1965.



A. Based on reports from over 870 Weather Bureau and cooperative stations. The monthly average is half the sum of the monthly average maximum and monthly average minimum, which are the average of the daily maxima and daily minima, respectively.

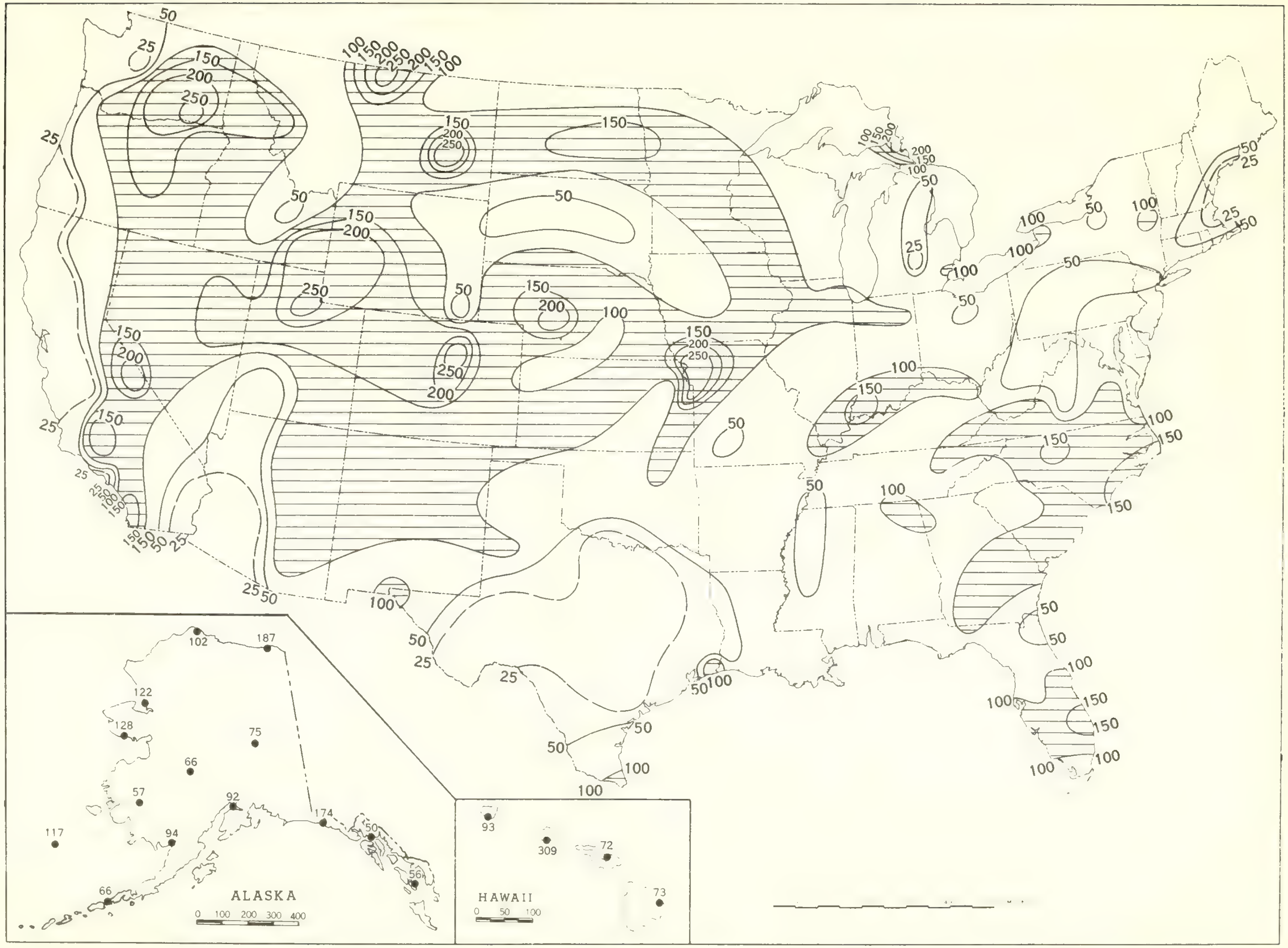
B. Departures from normal are based on the 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart II. Total Precipitation (Inches), July 1965.



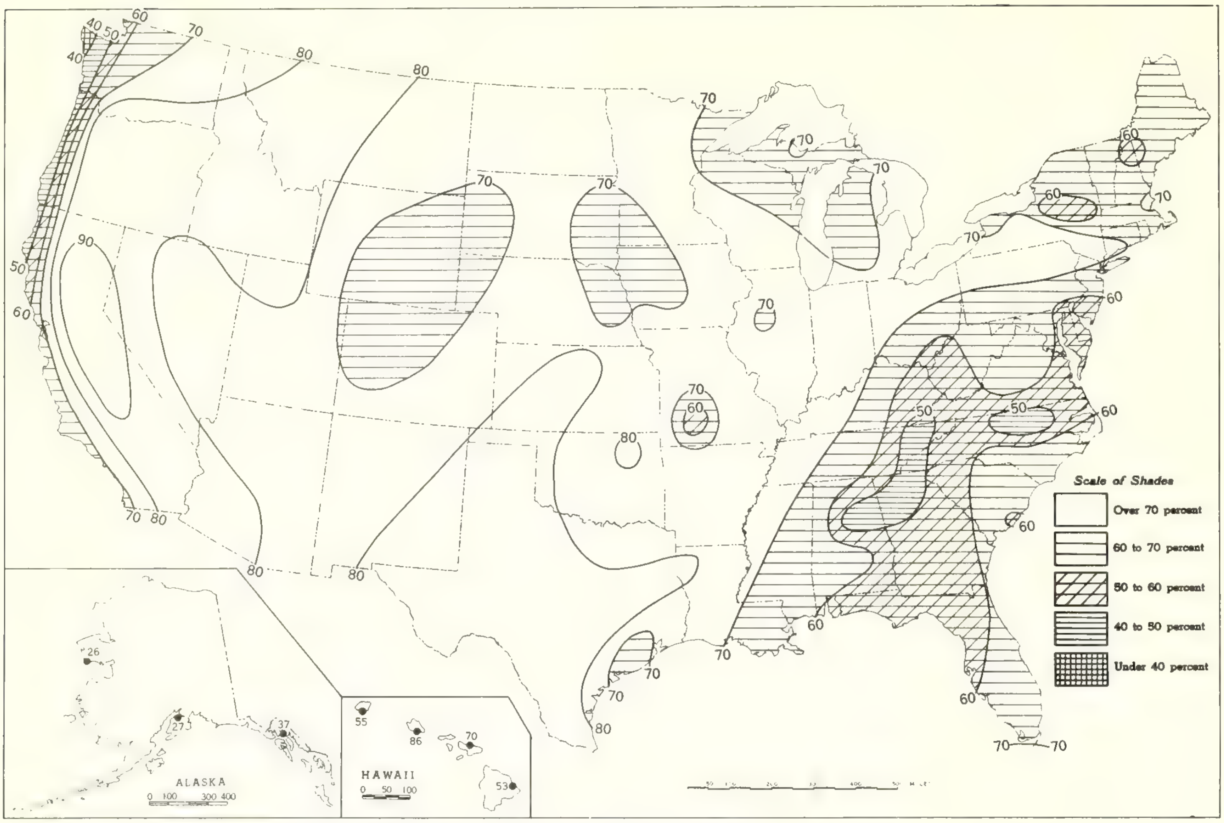
Based on daily precipitation records at about 870 Weather Bureau and cooperative stations.

Chart III. Percentage of Normal Precipitation, July 1965.

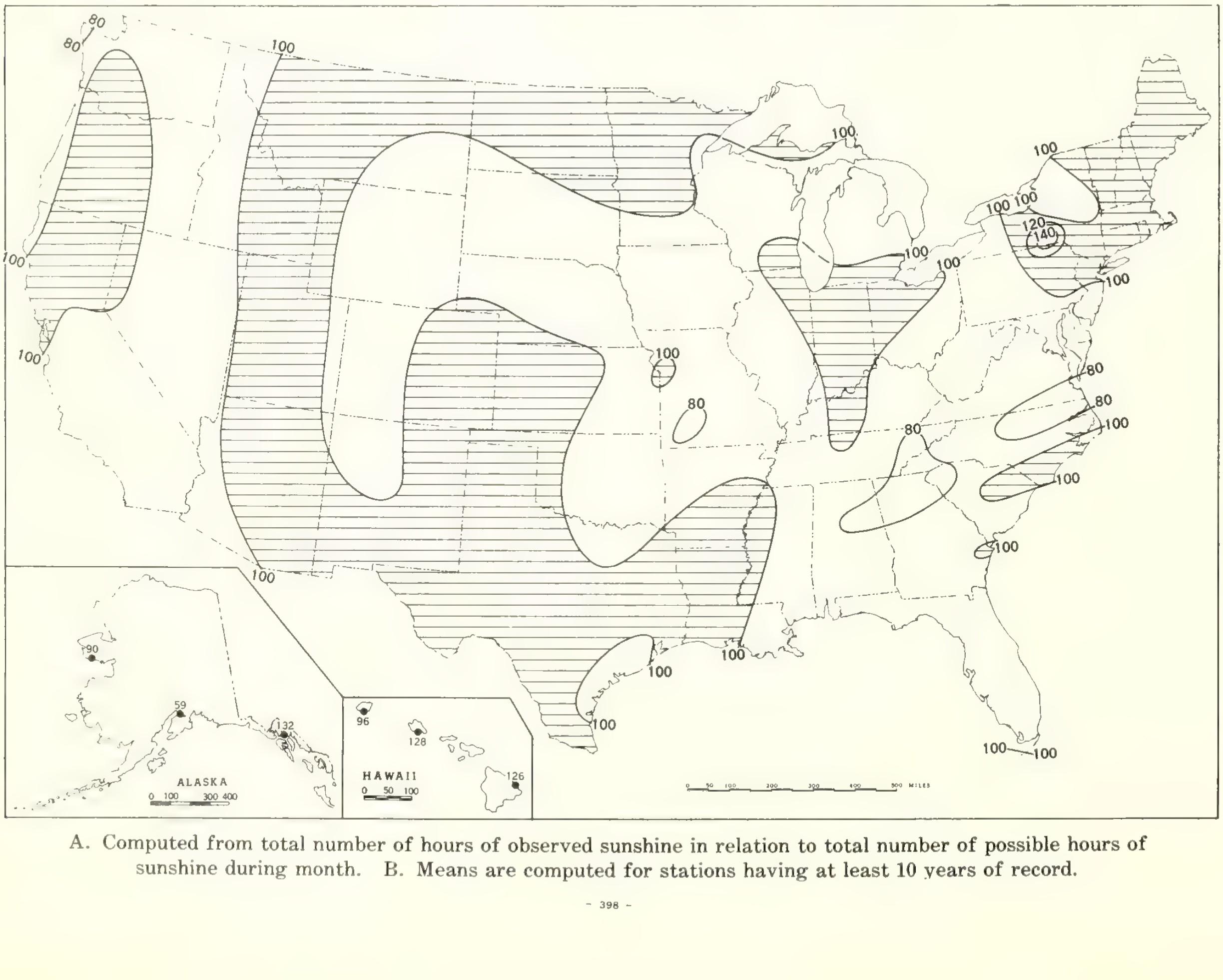


Normal monthly precipitation amounts are computed from 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart VI. A. Percentage of Possible Sunshine, July 1965.

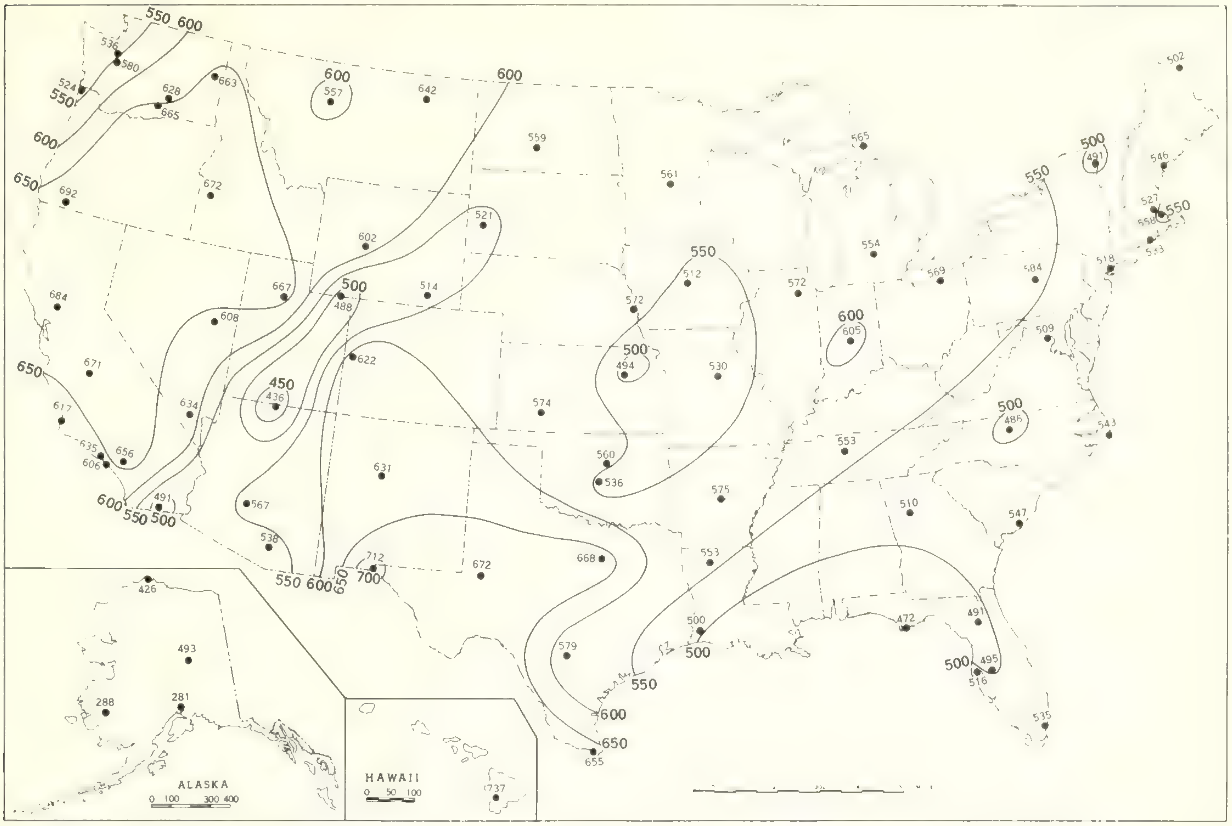


B. Percentage of Mean Monthly Sunshine, July 1965.

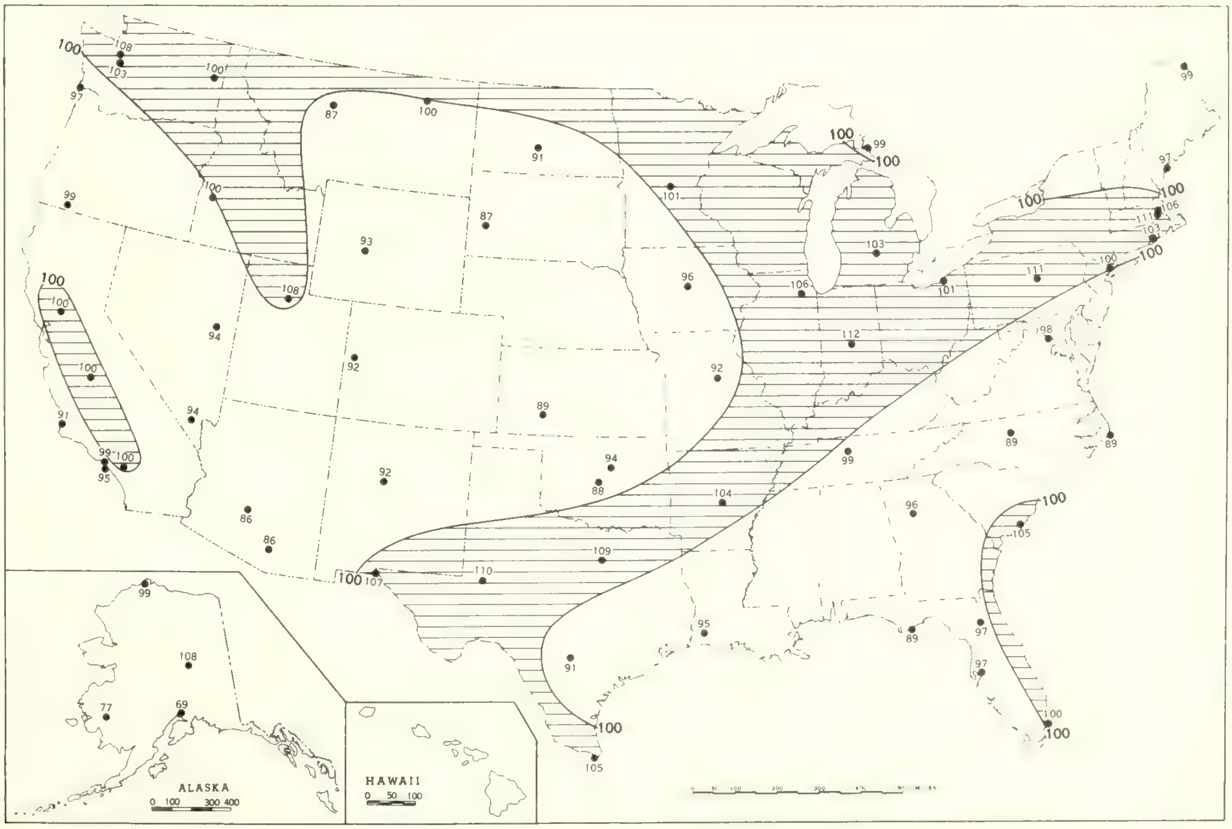


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, July 1965.

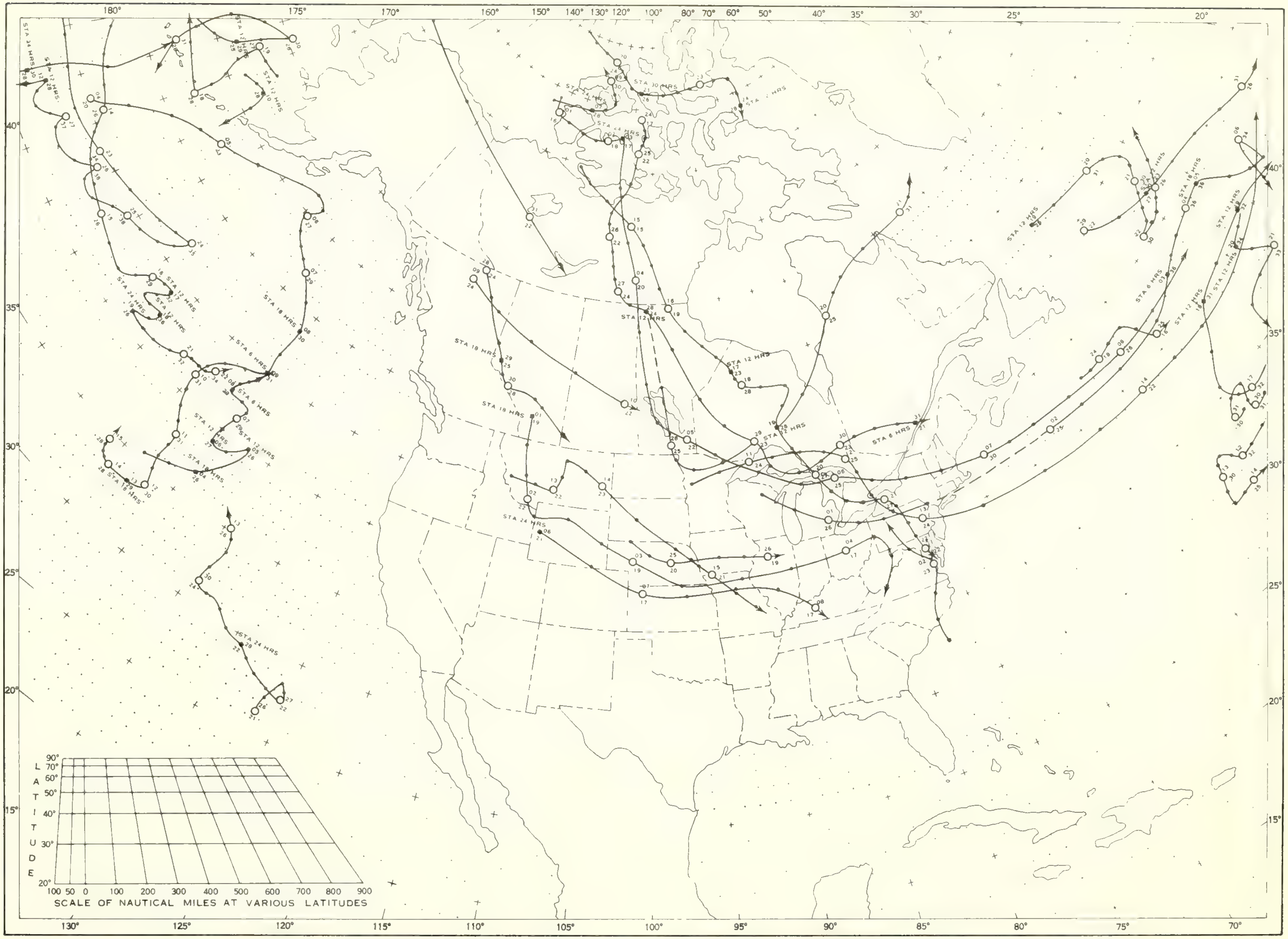


B. Percentage of Mean Daily Solar Radiation, July 1965.



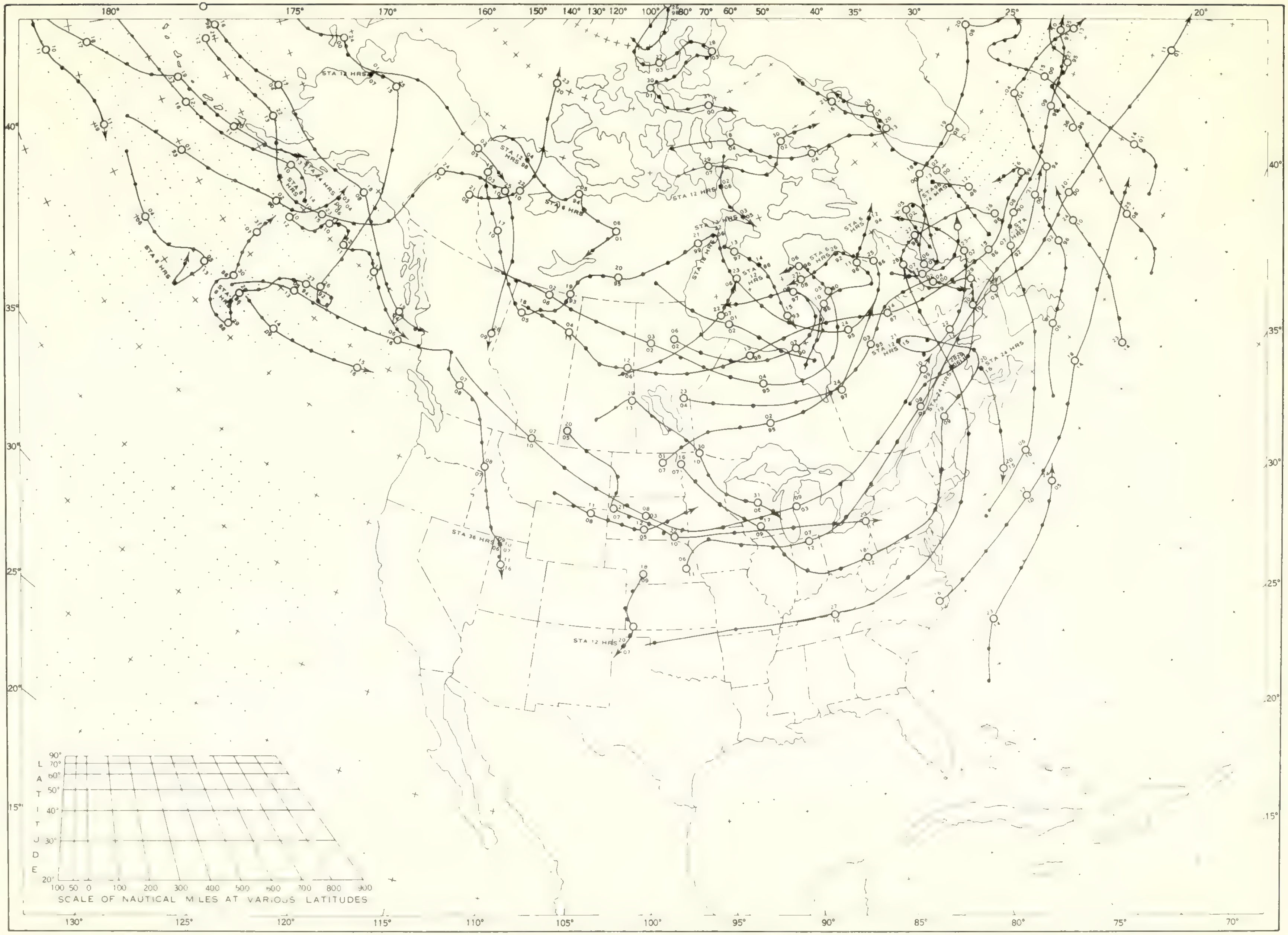
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm. $^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, July 1965.



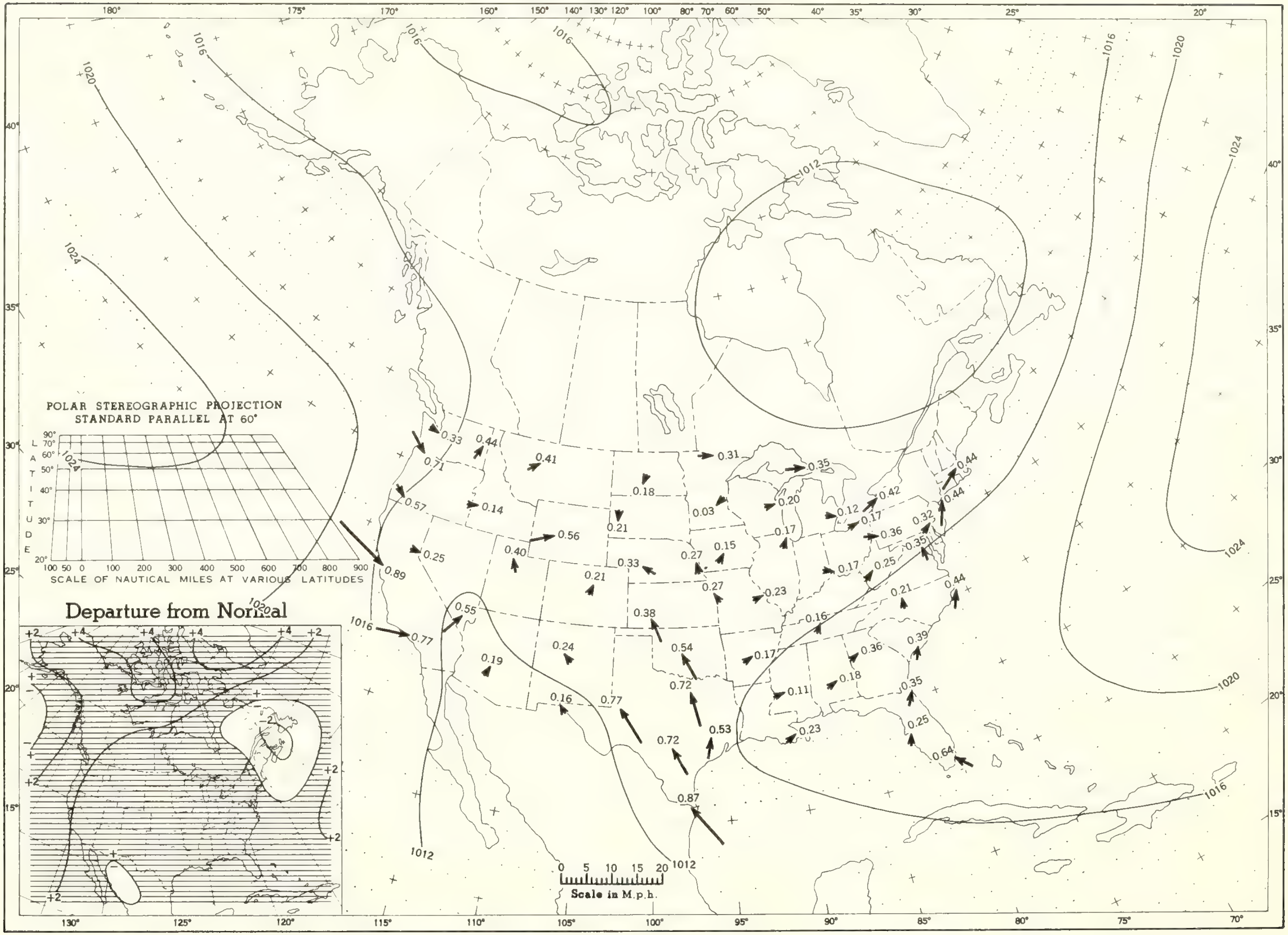
Circle indicates position of center at 7:00 a. m. E. S. T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, July 1965.



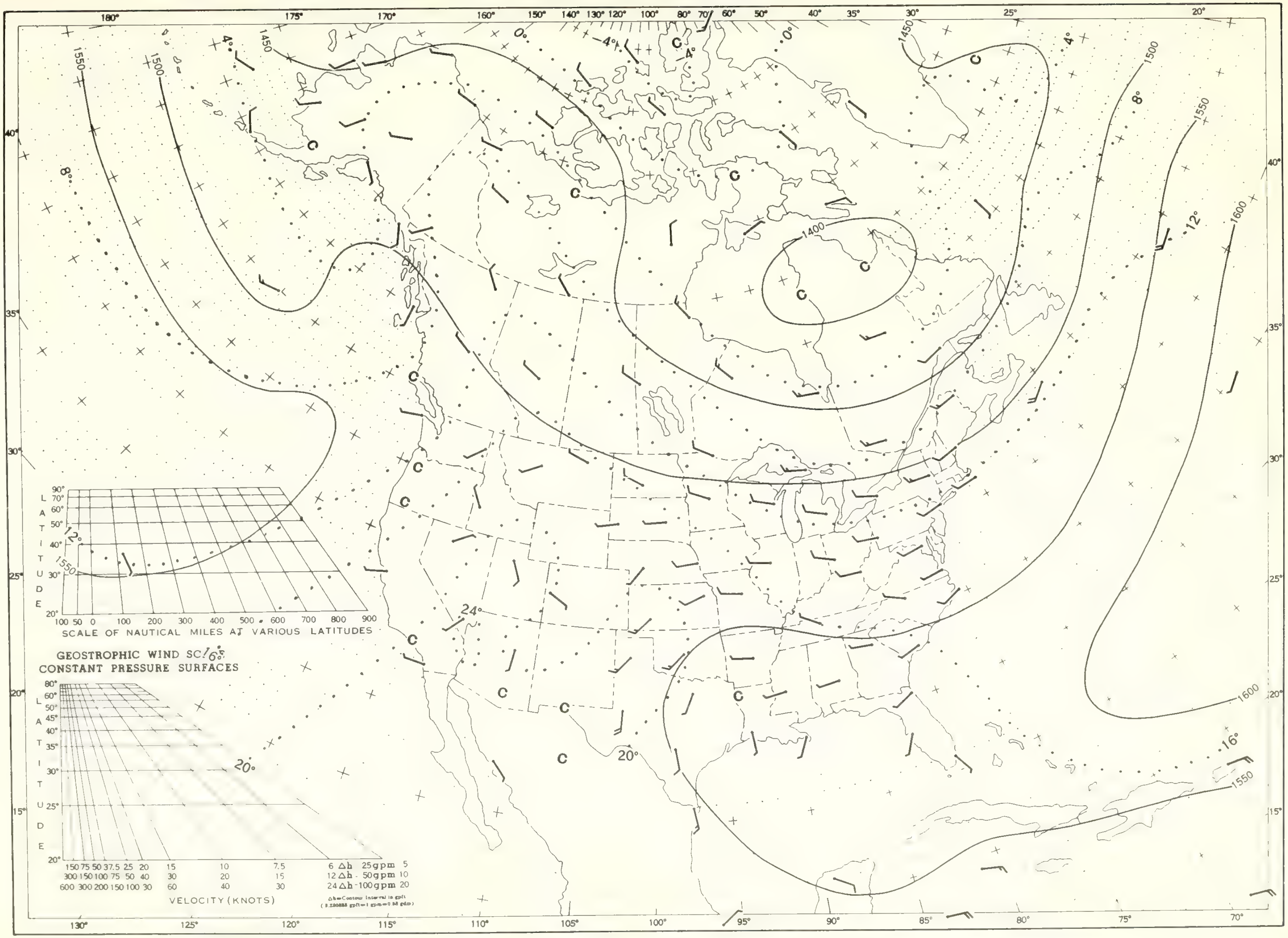
Circle indicates position of center at 7:00 a. m. E. S. T. See Chart VIII for explanation of symbols.

Chart X. Average Sea Level Pressure (mb.) and Resultant Surface Wind, July 1965. Inset: Departure of Average Pressure (mb.) from Normal, July 1965.



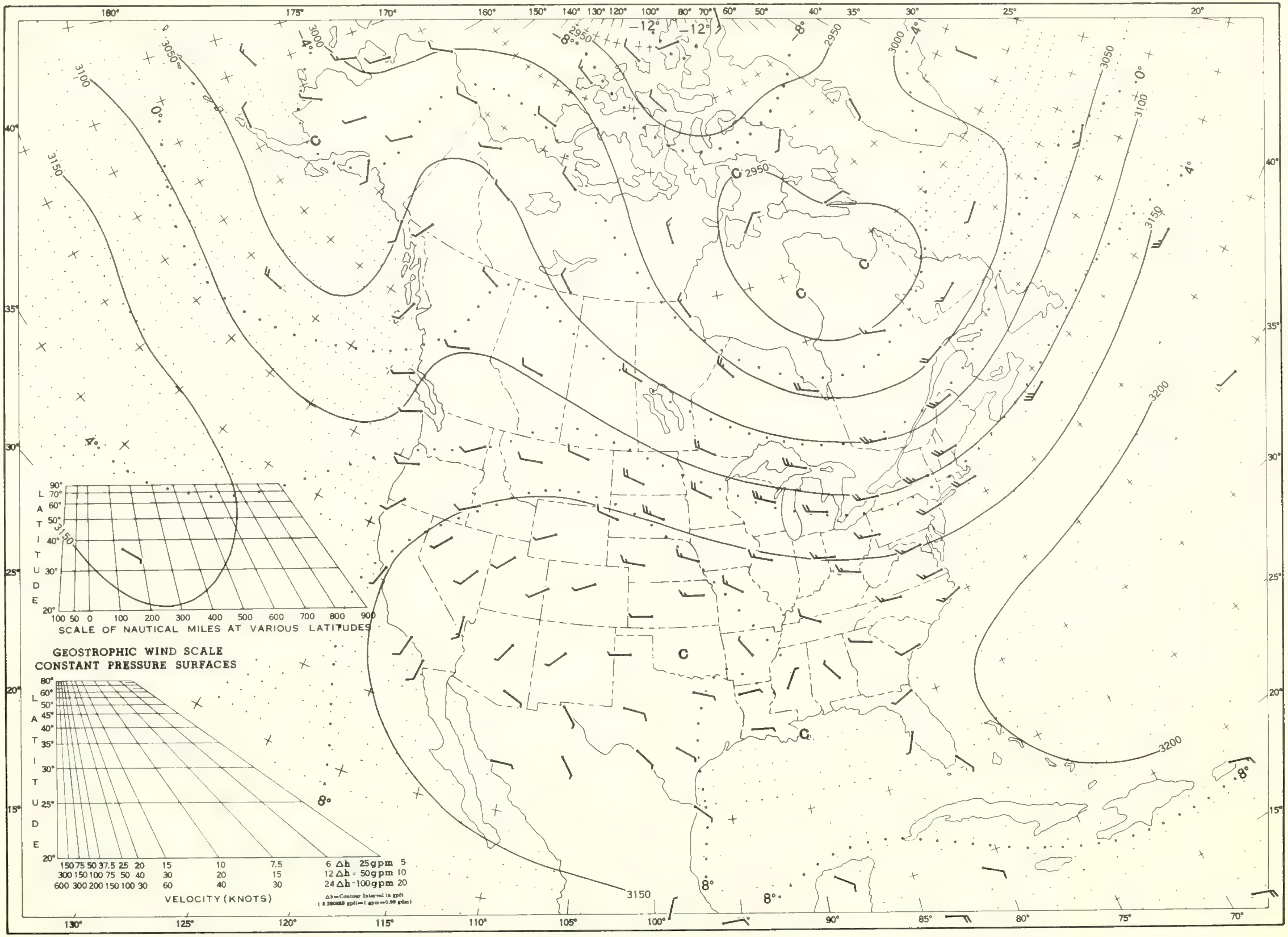
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb. Surface, 1200 GMT, July 1965. Average Height and Temperature, and Resultant Winds.



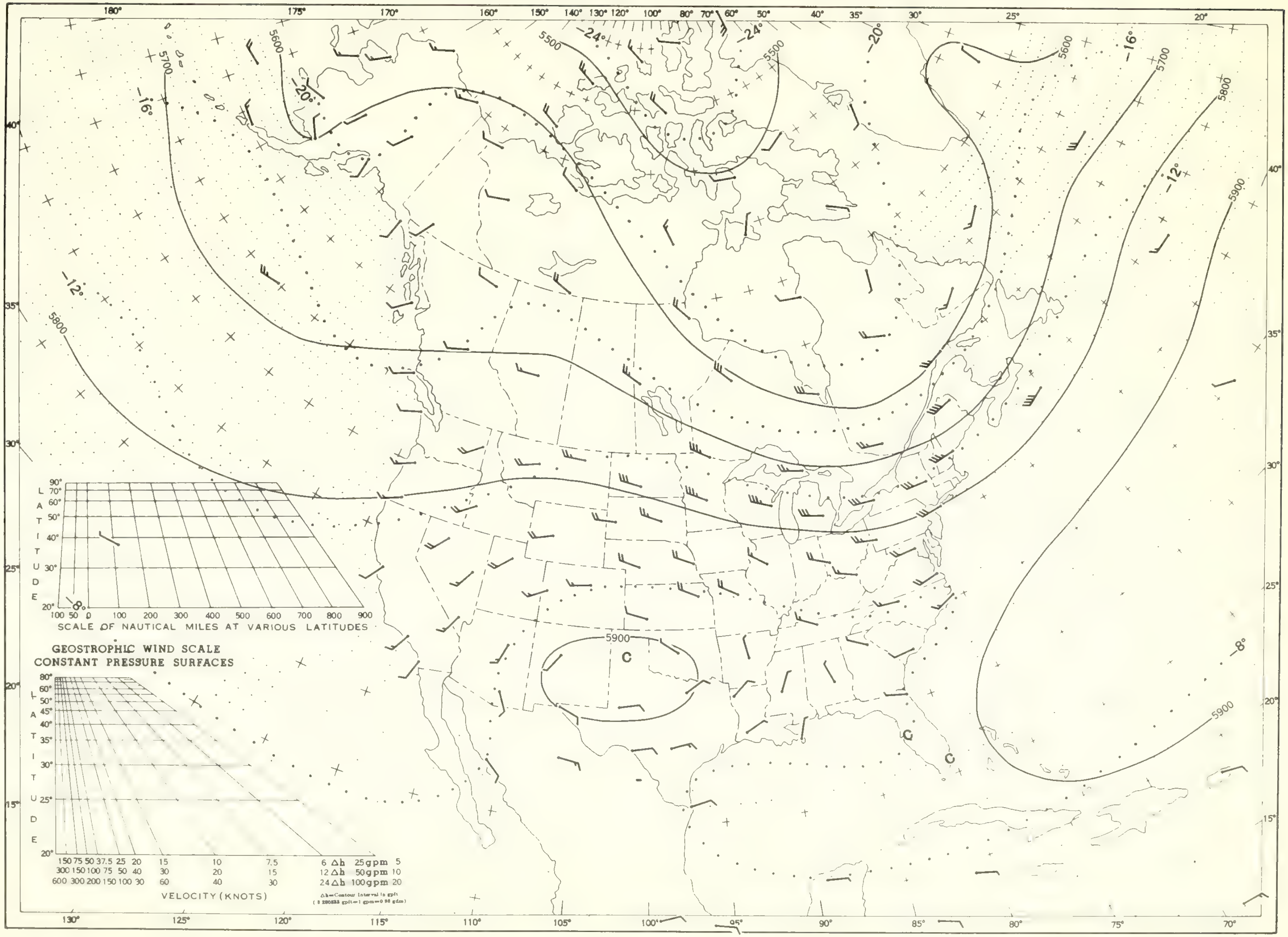
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in knots; flag represents 50 knots, full feather 10 knots, and half feather 5 knots. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, July 1965. Average Height and Temperature, and Resultant Winds.



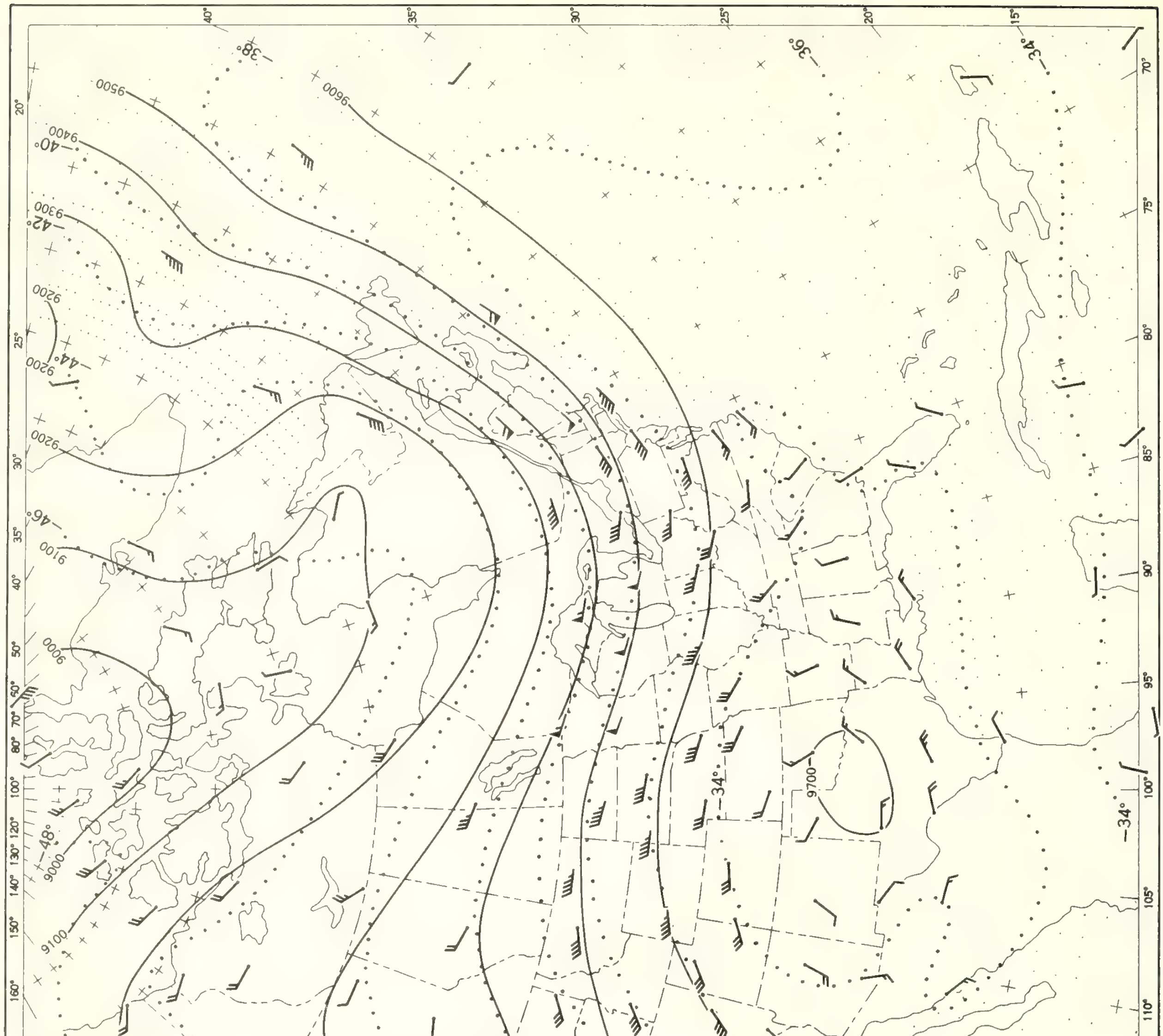
See Chart XI for explanation of map.

Chart XIII. 500-mb. Surface, 1200 GMT, July 1965. Average Height and Temperature, and Resultant Winds.



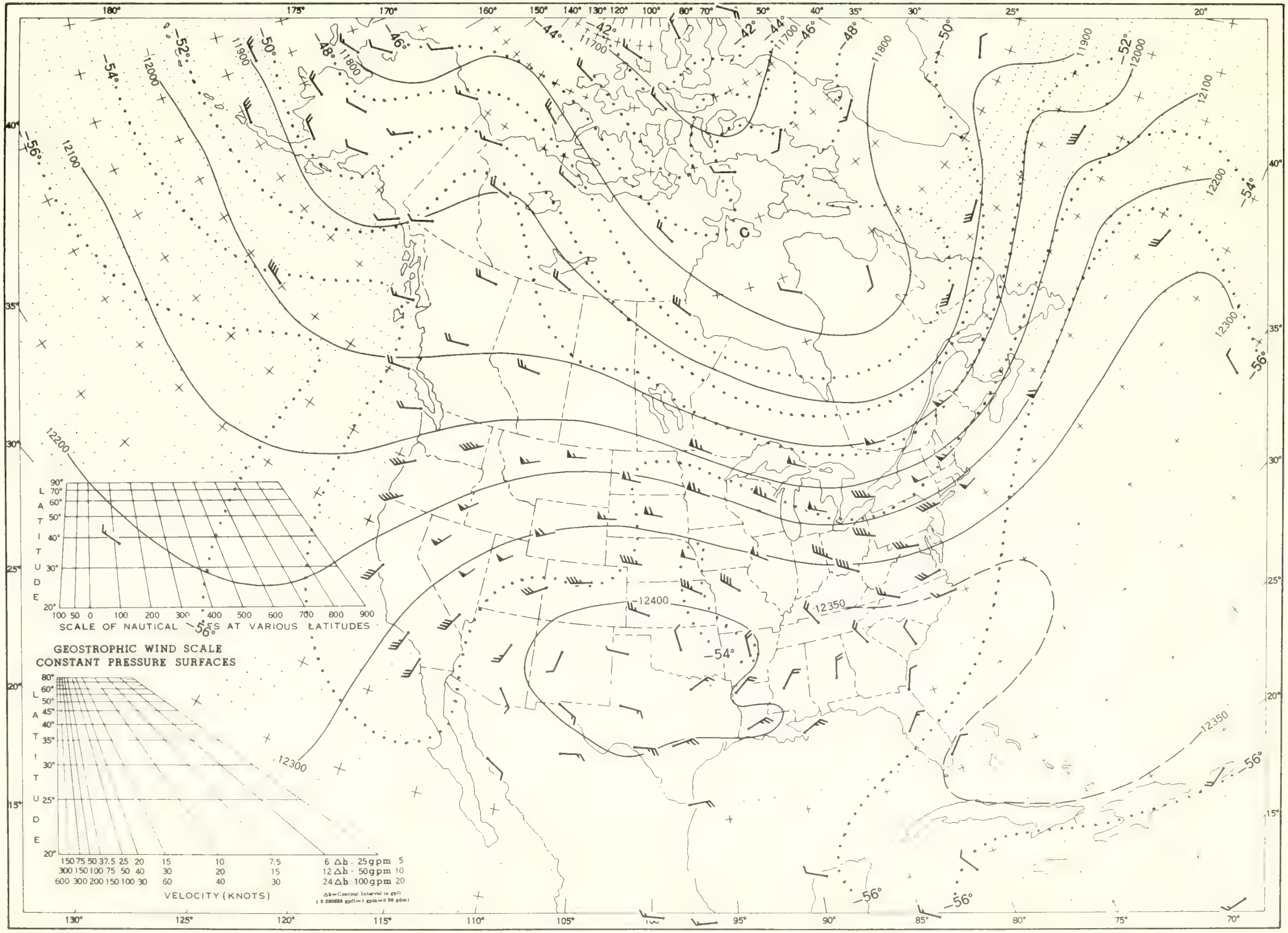
See Chart XI for explanation of map.

Chart XIV. 300-mb. Surface, 1200 GMT, July 1965. Average Height and Temperature, and Resultant Winds.



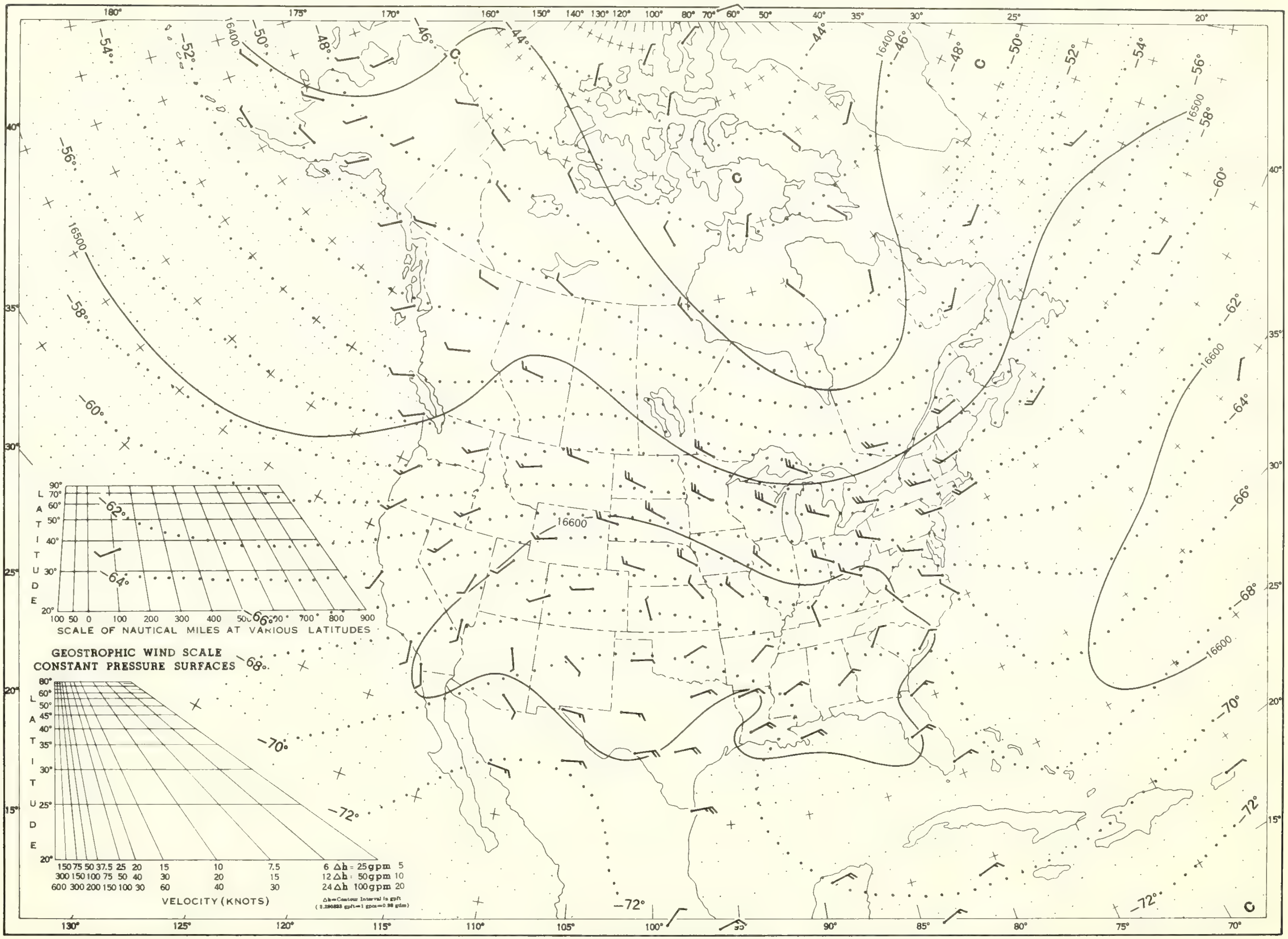
See Chart XI for explanation of map.

Chart XV. 200-mb. Surface, 1200 GMT, July 1965. Average Height and Temperature, and Resultant Winds.



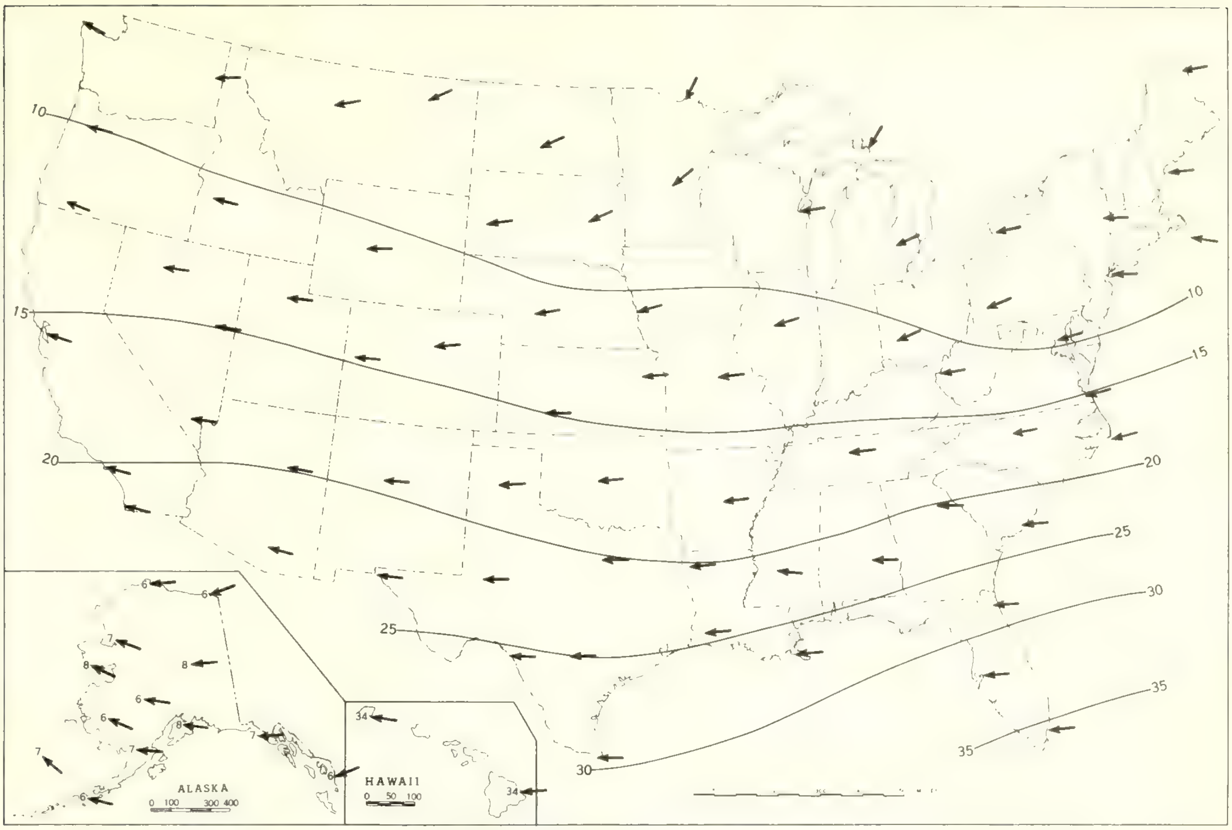
See Chart XI for explanation of map.

Chart XVI. 100-mb. Surface, 1200 GMT, July 1965. Average Height and Temperature, and Resultant Winds.

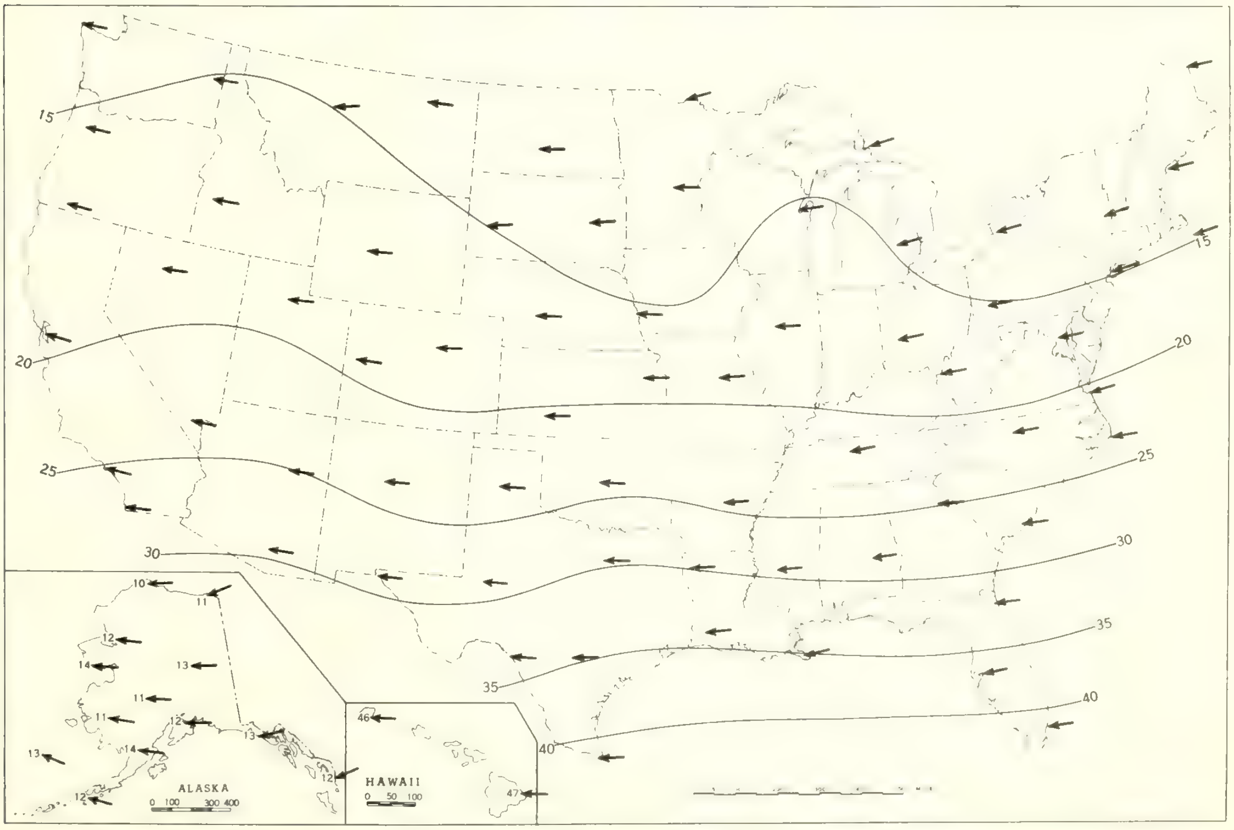

16400
16500
16600
C
-44°
-46°
-48°
-50°
-52°
-54°
-56°
-58°
-60°
-62°
-64°
-66°
-68°
-70°
-72°
SCALE OF NAUTICAL MILES AT VARIOUS LATITUDES
100 50 0 100 200 300 400 500 600 700 800 900
LATITUDE
GEOSTROPHIC WIND SCALE
CONSTANT PRESSURE SURFACES
150 75 50 37.5 25 20 15 10 7.5 6 Δh = 25gpm 5
300 150 100 75 50 40 30 20 15 12 Δh : 50gpm 10
600 300 200 150 100 30 60 40 30 24 Δh 100gpm 20
VELOCITY (KNOTS)
Δh=Contour Interval in gpft
(3.280833 gpft=1 gpm=0.98 gdm)

See Chart XI for explanation of map.

Chart XVII. A. 50-mb. Surface, 1200 GMT, July 1965. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, July 1965. Resultant Winds.



Wind speed (isotachs) in knots. Arrows show resultant wind direction. All wind data are based on rawin observations.

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AUGUST 1965
Volume 16 No. 8

ASHEVILLE: 1965

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NOTE: Delayed data and corrections will be carried in the June and December issues of this publication.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 16 No. 8

AUGUST 1965

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. Third consecutive cool month most areas.
2. Unseasonably heavy rainfall Far West.
3. Drought persisted in Northeast despite beneficial rains.
4. Record cold spell in Northeast closing days.

TEMPERATURE.--The month was cooler than normal in virtually all interior areas, but near to slightly warmer than normal along the coasts and western borders. Cloudiness and frequent showers helped keep maximum temperatures below normal in the Far West and a strong flow of Canadian air over areas east of the Rockies kept temperatures below normal in that area most of the month. The warmest weather occurred around the middle of the month east of the Continental Divide and during the first week in much of the Far West. During the midmonth heat wave, temperatures rose to record levels for August at a number of places in the northern Great Plains. Redfield, S. Dak., reported 116° on the 13th which equaled the highest temperature ever recorded in the State during August.

The temperature highlight of the month occurred during the closing days with the passage of an unusually cold Canadian air mass. Lowest temperatures ever recorded in August were reported by many stations in the Ohio Valley and in the Atlantic Coastal States from the Carolinas to Maine. In New England, frost and freezing were widespread. Lows of 32° were recorded even at some coastal stations. On the 30th Mt. Washington, N. H., recorded 20°, tying the August record which had stood since 1876. On the 31st most stations in New England recorded a new low for the month. This freeze was about a month early in southern New England. New August lows were recorded for Vermont (25°), Maine (26°), New Hampshire, except Mt. Washington (26°), and Connecticut (28°), and the lows for Massachusetts (28°) and Rhode Island (33°) were equaled. Even at Nantucket, Mass., where extremes are tempered by the ocean, 39° on the 31st broke the old record low for August by 10°. Some other stations that recorded new record lows for August included Raleigh, N. C. (46°); Lexington, Ky. (42°); St. Louis, Mo. (47°); and Toledo, Ohio (37°). A number of stations in the northern Rockies and Pacific Northwest also had record lows for August.

The summer (June-August) of 1965, like that of 1964 was cooler than normal. Summer temperatures averaged above normal only in a few scattered sections. To illustrate the persistency of cool weather this summer, the temperature at Birmingham, Ala., on the 16th averaged 2° above normal ending a string of 71 days below normal.

PRECIPITATION.--The frequency and amounts of rainfall in most areas west of the Continental Divide were much greater than usual. Totals were generally in the range of 1 to 3 inches which were two to as much as five times the normal amounts for August. This was the wettest August on record at a number of stations including Red Bluff, Blue Canyon, San Francisco, and Stockton, Calif., and Boise, Idaho, and since 1896 at Kalispell, Mont. However, in New Mexico, Arizona, and extreme southern California the month was unusually dry as the frequency of August thunderstorms were only about half the usual number. Phoenix, Ariz., had only 0.18 inch of rain, the least for August since 1944.

Rainfall east of the Rocky Mountains was of the thunderstorm type and irregularly distributed. Amounts were greater than normal over interior sections of the Northeast and from the Great Lakes southwestward through west Texas. Totals in the central Great Plains and east of the Great Plains generally ranged from 2 to 4 inches, except 4 to over 8 inches in scattered relatively small areas. Rainfall was generally adequate in the Corn Belt, but there were a few dry spots. The western two-thirds of Iowa was becoming very dry before the rains of the latter half of the month. Sections in central and southwestern Kentucky were extremely dry, and Hopkinsville in the southwest reported the driest August since 1945 and the third driest in 69 years.

Rainfall was above normal in the Northeast drought area, except along the coast where it generally was less than half normal. However, the drought situation was only slightly improved owing to the large accumulated deficits of precipitation during the past 4 years. The crop situation was improved but the shortage of water for domestic and industrial uses remained.

Northern Illinois and nearby sections of Iowa and Wisconsin was an area with more than twice the normal rainfall for August. Actual totals in Illinois ranged up to 10.81 inches at Dixon, and 8.61 inches at Peoria was the most for August in 103 years. At Dubuque, Iowa, 8.33 inches was the most there since 1928.

The first snowfall of the season in New England covered many northern mountaintops, during the cold spell at the end of the month. Traces fell at some lower elevations in the north and at some of the highest elevations in the south. Mt. Washington, N. H., reported 2.5 inches, a record snowfall for August.

DESTRUCTIVE STORMS.--Storminess in the form of severe local storms and tornadoes was fairly light for the Country as a whole. However, sections of the northern Great Plains and upper Mississippi Valley reported above normal frequency of these storms. In northern Indiana tornadoes occurred on 3 days, and thundersqualls on the 26th and 27th caused much damage including the derailment of a train near Crown Point, and injured a number of persons. One of the worst of numerous flash floods which were reported across the Country, occurred in Scott County, Iowa, where hundreds of families were driven from their homes and crop damage was severe.

CONDENSED CLIMATOLOGICAL SUMMARY

AUGUST 1965

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	2 Stations	99	18+	Double Springs	51	30	Robertsdale 1E	13.32	Guntersville	0.73
Alaska	Snettisham	85	7	Snowshoe Lake	17	30	Yakutat WBAP	14.43	Dot Lake	.12
Arizona	3 Stations	115	10+	Fort Valley	28	24	Blue	5.60	Cow Springs Trading Post	.00
Arkansas	Booneville	104	27+	Evening Shade 1NE	43	29	Rogers	7.42	Saint Francis	.23
California	Death Valley	119	10+	Bodie	23	22	Twin Lakes	6.36	60 Stations	.00
Colorado	2 Stations	105	12	Fraser	20	30+	Karval	7.68	Wiggins 7SW	.10
Connecticut	do	94	16+	Coventry	28	31	Middletown 4W	5.01	Hartford WBAP	1.09
Delaware	Dover	95	19	Newark University Farm	45	31+	Selbyville	10.39	Wilmington Ncastle WBAP	2.04
Florida	4 Stations	98	30+	Alexander Springs	59	29	Saint Leo	16.08	Fort Pierce	1.37
Georgia	Fort Stewart	100	26	2 Stations	49	31+	Jesup 8S	11.44	Juliette	.53
Hawaii	2 Stations	92	30+	Mauna Loa Slope Obs.	30	19	Lanihau 68C, Hawaii	18.15	Kihei 311, Maui	.05
Idaho	Kooskia	107	1	2 Stations	16	31+	Cabinet Gorge	4.42	Idaho Falls 2ESE	.34
Illinois	Newton	104	5	Roberts 3N	37	29	Dixon	10.81	Brookport Dam 52	.63
Indiana	Salamonia 7W	99	16	Bluffton	33	29	Lowell	9.67	Evans Landing Dam 43	.92
Iowa	2 Stations	103	13	Saratoga 2E	37	28	Wapello	12.09	Sioux City 4N	1.04
Kansas	Beloit 1ESE	105	12	Atwood	48	2	Madison	7.28	Elkhart	1.04
Kentucky	Hopkinsville	101	17	Cynthiana 2	36	29	Vanceburg	6.46	Bowling Green	.21
Louisiana	Logansport	104	20	Converse	54	2	Grand Chenier	15.44	Saint Joseph Exp Sta	.59
Maine	Sanford 2NNW	99	7	Eustis 2	26	31	2 Stations	6.14	Rockland	.93
Maryland	Washington WB City, D.C.	100	18	Sines Deep Creek 2	33	29	Salisbury FAA AP	10.66	Crisfield Somers Cove	1.77
Massachusetts	Fitchburg 2S	98	17+	Barre Falls Dam	28	31	Turners Falls	6.07	Nantucket WBAP	.68
Michigan	2 Stations	99	15	Stambaugh 1S	28	29	Benton Harbor AP	10.50	Cross Village	1.08
Minnesota	Beardsley	108	13	Cook 18W	25	28	Milaca	7.00	Tyler	.99
Mississippi	Tupelo 2WSW	101	19+	Corinth 4SW	52	30+	Tylertown 2N	11.17	Moorhead	1.20
Missouri	Malden	103	18	Berryman 6NW	40	29	Camdenton	12.17	Parma	.22
Montana	2 Stations	108	12	Jackson	15	30	Swan Lake	6.53	Biddle	.00
Nebraska	Merriman	109	13	Hay Springs 12S	33	31	Haigler	5.60	Scottsbluff WBAP	.52
Nevada	Sunrise Manor Las Vegas	113	7	Mountain City RS	16	31	Fernley	4.16	2 Stations	.18
New Hampshire	Franklin	100	7	2 Stations	26	31	Dixville Notch	6.40	Lakeport 2	1.20
New Jersey	2 Stations	96	18+	do	34	31	Midland Park	7.60	Hammonton 2NNE	1.22
New Mexico	Lordsburg	107	4	do	30	27+	Cloudcroft Ranger Station	6.88	Shiprock	.20
New York	Penn Yan 2SW	100	15	Elizabethtown	26	31	Slide Mountain	9.58	Bath	1.00
North Carolina	2 Stations	99	20+	Transou	37	30	Wilmington 7N	13.50	Nashville	.74
North Dakota	Lisbon	110	13	Hannah 2N	25	28	Woodsworth	7.42	Ashley	.77
Ohio	Toledo Blade	103	16	Tom Jenkins Dam	30	30+	Toledo WB Express AP	8.47	Pleasant Hill	1.01
Oklahoma	Kingfisher	107	27	Grove 1E	51	5	Chickasha	8.64	Elk City	.67
Oregon	The Dalles	108	1	3 Stations	21	31+	Meacham WBAP	4.89	Illahe 2N	.16
Pennsylvania	Newell	100	18	Coudersport 4NW	27	30	Pleasant Mount 1W	9.54	Barnes	1.05
Puerto Rico	Guayama, PR	96	30+	2 Stations	60	28+	Rio Grande El Verde, PR	23.44	Cotton Valley, VI	1.27
Rhode Island	Providence WBAP	90	16	Kingston	33	31	Block Island WBAP	4.09	Providence WBAP	1.90
South Carolina	Spartanburg	99	17	3 Stations	47	30	Columbia WBAP	9.39	Ware Shoals	.60
South Dakota	Redfield	116	13	2 Stations	30	31	Yankton 3N	6.10	Mission 14SSE	.25
Tennessee	Savannah	100	16	Mountain City #2	39	30	Cleveland 3NNE	6.61	Paris	.17
Texas	3 Stations	107	31+	2 Stations	51	12+	Henrietta	7.07	6 Stations	.00
Utah	2 Stations	103	12+	Woodruff	20	31	Eureka	4.86	Navajo Mountain	.14
Vermont	Bennington 2NNW	96	7	West Burke	26	31	Enosburg Falls	8.44	Woodstock 3E	2.03
Virginia	6 Stations	100	19+	2 Stations	34	30	Partlow 3WNW	8.75	Staunton D and B Inst	.56
Washington	Little Goose Dam	110	2	3 Stations	29	30+	Rainier Paradise RS	6.59	Odessa	.01
West Virginia	Williamson	101	18	Canaan Valley	30	30+	Summersville	6.04	Horner	.65
Wisconsin	Pine River 3NE	100	14	2 Stations	28	29	Fontana	10.21	Willow Reservoir	1.53
Wyoming	Weston 1E	106	12	Bondurant 3NW	14	31	Leiter 9N	3.96	Ft Laramie 11NNW	.10

+ And also on an earlier date or dates

NOTE: Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

CLIMATOLOGICAL DATA

ENGLISH UNITS

AUGUST 1965

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90° F. or above	Min. 32° F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	994.6	1016.8	88	69	78.0	- 3.1	94	16	60	2	8	0	70	80	3.55	- 1.30	0.96	9	9	0.0	0	1.0	18	33	E	19	3	17	11	6.3	52
HUNTSVILLE	600	993.9	1016.4	89	69	79.1	- 1.1	97	16	59	29	9	0	67	70	3.38	0.09	1.35	9	9	0.0	0	1.0	21	36	31	27	7	14	10	6.2	
MOBILE	211	1008.5	1016.4	90	73	81.2	- 0.9	96	15	68	3	18	0	73	82	4.72	- 1.72	1.25	13	14	0.0	0	1.4	17	23	1	28	2	16	13	6.7	
MONTGOMERY	194	1009.5	1016.6	88	71	79.5	- 2.2	94	26	65	3	11	0	73	84	3.98	- 0.12	1.15	12	8	0.0	0	1.1	18	31	E	10	6	15	10	6.3	69
ALASKA												B																				
ANCHORAGE PRK STRIP	85			60	47	53.5	- 2.1	68	1	35	25	0	0			1.94	- 0.63	0.51	12		0.0	0										
ANCHORAGE	143	1011.2	1015.9	64	49	56.3		71	7	37	27	2	0	45	67	1.58		0.52	14	0	0.0	0	3.2	19	29	18	10+	6	4	21	7.7	39
ANNETTE	110	1013.2	1017.2	68	51	59.3	0.9	79	7+	43	27	10	0	51	79	3.91	- 3.60	2.70	10	0	0.0	0	1.1	22	21	17	31	4	6	21	7.3	
BARROW	22	1010.5	1011.1	43	33	38.1	0.2	65	20	27	31+	0	15	35	88	0.89	- 0.01	0.28	12	0	0.2	T	0.9	18	29	27	24	1	7	23	8.6	
BARTER ISLAND	39	1010.2	1011.9	42	33	37.3	- 2.7	57	5	24	31+	0	15	36	95	1.44	0.39	0.40	12	0	1.4	1	1.3	5	26	27	21	1	6	24	8.3	
BETHEL	125	1008.5	1014.2	55	45	50.2	- 2.1	64	7	38	29	0	0	46	88	3.42	- 0.78	0.69	17	0	0.0	0	7.4	20	32	20	12	2	1	28	9.1	
COLD BAY	94	1011.9	1015.8	54	46	50.3	- 1.0	59	31+	40	30+	0	0	46	88	1.57	- 2.68	0.38	16	0	0.0	0	8.4	17	47	15	5+	0	3	28	9.3	
FAIRBANKS	436	997.3	1014.4	62	43	52.7	- 1.6	75	1	30	30	7	2	42	68	1.48	- 0.72	0.46	15	0	0.0	0	2.3	24	18	25	24	1	8	22	8.2	
JUNEAU	12	1015.9	1016.6	66	45	55.1	1.0	80	7	36	25	10	0	49	81	4.17	- 0.85	1.43	11	0	0.0	0	1.2	8	33	13	30	4	13	14	7.1	54
KING SALMON	43	1013.2	1015.4	59	44	51.4	- 3.2	71	6	32	30+	1	2	45	82	2.51	- 0.92	0.90	11	0	0.0	0	5.6	19	25	25	23+	2	4	25	8.6	
KOTZEBUE	10	1009.5	1010.0	51	43	47.3	- 3.3	61	4	34	29	0	0	43	85	3.75	1.59	0.97	21	0	T	T	4.8	21	31	30	2	1	2	28	9.3	
MC GRATH	334	1001.7	1014.3	59	45	52.0	- 2.1	73	1	31	30	1	1	44	77	3.41	- 0.38	0.57	15	0	0.0	0	4.4	20	21	19	14	1	3	27	9.0	
NOME	13	1009.1	1010.0	50	41	45.6	- 3.4	56	2	32	28	0	1	42	87	4.69	0.89	1.23	21	0	0.1	T	5.8	20	36	15	19	1	3	27	9.0	20
ST. PAUL ISLAND	22	1010.5	1011.5	50	43	46.4	- 1.2	53	16+	38	16	0	0	45	96	3.97	0.68	0.86	18	0	0.0	0	8.2	19	40	20	22	1	1	29	9.6	
SHEMYA	122	1004.4	1008.2	51	47	48.8	- 0.9	53	8+	44	21	0	0	47	94	3.28	1.16	0.94	19	0	0.0	0	5.1	23	48	23	18	1	1	29	9.5	
YAKUTAT	28	1015.2	1016.3	56	42	49.3	- 4.5	63	4	34	27+	0	0	48	93	14.43	3.51	5.56	16	0	0.0	0	1.2	18	24	12	10	4	4	23	8.1	
ARIZONA																																
FLAGSTAFF	6993	791.4	1015.9	79	48	63.7	- 0.2	86	6	36	24	0	0	42	51	1.01	- 1.83	0.34	7	13	0.0	0	3.2	20	23	17	22	15	11	5	3.9	
PHOENIX	1117	970.9	1008.5	104	74	89.0	1.5	110	9+	61	24	31	0	56	36	0.18	- 0.94	0.16	3	3	0.0	0	1.4	25	45Y	S	13	22	7	2	2.1	94
TUCSON	2584	924.1	1009.5	97	71	84.0	0.9	104	9	66	18+	30	0	57	44	1.12	- 1.76	0.31	7	10	0.0	0	1.5	20	47	W	30	21	7	3	2.9	88
WINSLOW	4895	852.7	1012.8	92	60	76.0	- 1.8	99	7+	52	31	22	0	46	41	0.70	- 0.73	0.35	8	6	0.0	0	3.6	21	29	24	8	18	10	3	3.6	
YUMA	194	1001.4	1008.3	105	80	92.5	0.0	111	1	70	25	31	0	64	43	0.02	- 0.48	0.02	1	1	0.0	0	5.6	19	26	SE	14+	24	6	1	2.0	88
ARKANSAS																																
FORT SMITH	449	998.6	1015.0	95	66	80.9	- 1.4	103	26	56	9+	30	0	65	65	3.81	0.89	1.62	6	7	0.0	0	1.4	9	40	SW	16	16	9	6	4.2	74
LITTLE ROCK	257	1006.1	1015.5	95	69	81.7	0.4	101	18	60	29	28	0	68	68	2.03	- 0.79	1.43	7	10	0.0	0	1.8	21	35	NW	31	14	15	2	3.9	79
TEXARKANA	372	1002.7	1015.6	93	70	81.4	- 1.2	100	19	61	11	25	0			4.05	0.98	2.30	9	9	0.0	0	2.1	17				14	14	3	3.9	
CALIFORNIA																																
BAKERSFIELD	494	994.2	1011.4	96	69	82.3	0.6	102	7+	60	24	27	0	54	40	T	0.00	T	0	1	0.0	0	4.3	31	21	33	11	23	8	0	1.5	
BISHOP	4108			94	55	74.2	- 0.1	102	5	45	25	26	0			0.61	0.49	0.38	7		0.0	0						18	9	4	3.0	
BLUE CANYON	5280			75	56	65.6	- 1.1	83	6	49	22+	0	0			2.17	2.11	1.98	5		0.0	0			17	17	19	21	3	7	3.1	
BURBANK	724	986.1	1011.5	90	64	77.3	3.2	106	9	59	25+	17	0	60	64	0.04	- 0.01	0.04	1	1	0.0	0	5.1	15	14	16	18+	22	8	1	2.7	
EUREKA U	43			63	54	58.9	2.2	70	25	49	29+	0	0			0.36	0.26	0.30	2		0.0	0			25	N	28	4	10	17	7.1	53
FRESNO	328	1000.0	1011.4	95	62	78.8	- 0.1	103	7	55	21	24	0	56	49	0.02	0.01	0.02	1	2	0.0	0	4.9	32	21	NW	11	25	4	2	1.7	94
LONG BEACH	34	1011.2	1012.4	83	64	73.5	1.2	97	13	58	1	6	0	59	68	0.17	0.14	0.17	1	2	0.0	0	2.9	24	17	28	13+	15	16	0	3.6	
LOS ANGELES	97	1008.5	1012.1	78	65	71.5	2.4	89	10	59	1	0	0	62	77	0.12	0.10	0.12	1	1	0.0	0	5.7	25	23Y	W	22+	8	17	6	4.8	
LOS ANGELES U	270			86	66	75.6	2.5	98	8	59	1	8	0			0.01	- 0.03	0.01	1		0.0	0			17	W	26	21	9	1	2.9	71
MT SHASTA R	3544			81	49	65.0	- 1.7	93	6	40	13	3	0			1.97	1.79	0.55	9		0.0	0										
OAKLAND	6	1013.9	1014.0	72	60	65.9	1.7	87	13	57	7	0	0	57	79	0.06	0.03	0.06	1	1	0.0	0	8.7	28	22	28	20+	16	10	5	4.1	
RED BLUFF	341	999.0	1011.3	93	66	79.4	- 1.6	105	5	60	23+	20	0	54	46	1.56	1.50	0.84	5	3	0.0	0	1.6	17	20	SW	10+	21	6	4	2.8	81
SACRAMENTO	17	1010.8	1011.8	92	59	75.7	1.6	100	5+	56	7+	22	0	56	59	0.65	0.63	0.65	1	1	0.0	0	5.3	21	20	SW	11	22	7	2	2.1	91
SANDBERG R	4517			84	64	73.8	0.5	93	9+	53	22+	6	0			0.27	0.18	0.16	4		0.0	0			33	34	19	19	10	2	2.5	
SAN DIEGO	13	1011.2	1012.3	78	66	72.0	0.2	89	13+	63	7+	0	0	62	75	T	- 0.08	T	0	0	0.0	0	3.8	26	17	NW	13+	16	10	5	4.0	72
SAN FRANCISCO	8	1013.9	1014.5	71	55	63.3	0.5	85	13	52	7+	0	0	54	77	0.29	0.27	0.29	1	1	0.0	0	11.1	30	32	W	21+	19	7	5	3.4	
SAN FRANCISCO U	52			67	56	61.2	1.8	81	13	52	7	0	0			0.49	0.45	0.49	1		0.0	0			29	W	20					69
SANTA CATALINA	1568			82	65	73.7	3.3	96	9+	55	31+	5	0			0.03	- 0.03	0.02	2	1	0.0	0						21	9	1	2.5	
SANTA MARIA	236			76	54	64.7	2.3	89	11	47	26	0	0			T	- 0.03	T	0		0.0	0						19	12	0	3.4	
STOCKTON	22	1011.5	1012.6	93	63	77.7	1.5	102	1	57	31	21	0	56	53	0.35	0.35	0.35	1	2	0.0	0	7.1	30	23	26	20	23	7	1	1.9	
COLORADO																																
ALAMOSA	7536			78	43	60.7	- 2.3	86	13	34	30	0	0			0.95	- 0.03	0.36	12		0.0	0						15	10	6	4.2	
COLORADO SPRINGS	6145	814.4	1014.8	78	54	65.8	- 3.4	89	12	45	1	0	0	50	61	3.83	1.67	1.27	12	13	0.0	0	1.9	4	36	36	4	15	10	6	4.2	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
COLORADO																																
DENVER	5283	838.8	1013.1	84	56	70.2	- 1.3	97	12	46	31	8	0	48	52	1.06	- 0.22	0.49	7	5	0.0	0	1.9	19	30	NW	30	15	9	7	4.3	71
GRAND JUNCTION	4855	853.0	1011.7	91	63	76.6	1.1	101	9	54	31	20	0	44	38	0.67	- 0.40	0.26	8	8	0.0	0	2.3	11	43	N	30	15	10	6	4.3	73
PUEBLO	4684	857.4	1013.4	88	57	72.2	- 2.4	95	12+	52	12+	12	0	52	56	2.69	0.84	1.34	10	12	0.0	0	1.3	7	40	NW	3	17	10	4	3.6	79
CONNECTICUT																																
BRIDGEPORT	7	1015.2	1015.9	82	66	73.5	1.2	87	27+	49	30	0	0	64	74	1.81	- 2.64	1.19	6	2	0.0	0	4.7	23	42	28	28	9	12	10	5.7	
HARTFORD	169	1008.5	1014.7	84	60	71.7	0.5	94	16+	36	31	8	0	60	72	1.09	- 2.92	0.34	8	5	0.0	0	3.5	20	26	NW	30+	4	6	21	7.5	53
NEW HAVEN	6			79	63	71.3	0.7	86	16	45	31	0	0			2.31	- 1.93	1.35	6		0.0	0			24	NW	28	7	12	12	5.9	65
DELAWARE																																
WILMINGTON	78	1012.5	1015.5	83	64	73.3	- 1.0	91	7	46	29	3	0	63	74	2.04	- 3.55	0.56	13	6	0.0	0	3.2	23	23	22	9	9	14	8	5.6	
DIST.OF COLUMBIA																																
WASH NATL AP	14	1013.2	1015.6	87	68	77.2	0.7	96	18	52	29	14	0	65	70	4.44	- 0.46	1.34	10	9	0.0	0	3.0	20	38	NW	18	9	12	10	5.3	62
FLORIDA																																
APALACHICOLA U	13			87	76	81.3	- 0.2	92	15	72	12+	4	0			10.96	3.22	5.45	14	11	0.0	0			30	N	28	10	11	10	5.7	58
DAYTONA BEACH	31	1016.6	1018.1	88	72	79.9	- 0.8	95	28+	68	10+	6	0	72	82	2.97	- 3.40	1.19	11	19	0.0	0	2.4	15	30	32	28	3	17	11	6.5	
FORT MYERS	15	1016.9	1017.3	91	75	82.7	0.0	93	23+	72	30	26	0	74	81	6.57	- 0.81	1.44	21	28	0.0	0	3.3	9	29	33	27	0	23	8	6.3	
JACKSONVILLE	24	1016.3	1017.3	91	74	82.6	0.3	96	25	71	16+	25	0	72	77	9.58	2.73	3.40	18	20	0.0	0	3.1	21	45	NE	15	2	20	9	6.3	60
KEY WEST	4	1015.6	1016.2	90	81	85.1	1.5	92	14	75	11	18	0	75	71	2.26	- 2.07	1.09	16	13	0.0	0	8.6	11	34	SE	11	2	19	10	6.3	75
LAKELAND U	214			91	73	81.7	- 0.2	93	28+	69	11+	23	0			8.98	1.90	2.92	20		0.0	0						3	21	7	6.1	69
MIAMI	7	1016.6	1017.1	88	75	81.7	- 0.6	90	26+	72	29+	3	0	73	77	4.97	- 2.00	1.45	14	12	0.0	0	5.7	11	18	11	13+	1	21	9	6.8	
ORLANDO	108	1013.5	1017.9	91	74	82.2	- 0.6	94	27	72	29+	24	0	72	79	5.49	- 1.45	1.63	14	17	0.0	0	2.9	15	25	12	28+	4	13	14	6.4	
PENSACOLA	112	1012.9	1016.8	87	73	80.1	- 1.4	94	15	69	11+	7	0	74	85	6.26	- 0.71	2.09	15		0.0	0	1.6	18	30	S	21					63
TALLAHASSEE	58	1014.9	1017.2	91	72	81.6	0.5	97	25	68	23	20	0	71	75	8.16	1.23	2.29	14	21	0.0	0	1.2	17	25	36	28	3	14	14	6.3	
TAMPA	19	1017.3	1017.5	90	73	81.5	- 0.5	93	22	69	8	19	0	72	77	5.59	- 2.65	2.35	14	22	0.0	0	1.3	13	22	12	9	0	21	10	6.4	55
WEST PALM BEACH	15	1016.9	1017.5	90	75	82.2	- 0.8	92	29+	71	3	22	0	72	72	2.41	- 4.33	1.07	11	13	0.0	0	4.9	12	23	29	19	6	18	7	5.6	
GEORGIA																																
ATHENS	802	988.5	1016.8	90	68	78.9	- 0.1	97	17	57	30	15	0	69	76	1.44	- 2.19	0.75	8	10	0.0	0	2.0	25	22	21	8	6	12	13	5.8	
ATLANTA	1010	981.0	1017.1	87	68	77.3	- 0.9	92	17+	61	31+	7	0	67	75	1.53	- 2.07	0.51	7	11	0.0	0	2.8	23	30	W	26	6	18	7	5.6	62
AUGUSTA	143	1011.2	1016.3	91	68	79.3	- 0.9	96	26+	55	31	18	0	69	78	2.55	- 1.34	1.25	6	10	0.0	0	1.6	19	26	33	10	7	14	10	5.7	
COLUMBUS	385			91	69	80.4	- 0.3	97	26	62	3	22	0	70	79	1.88	- 2.76	0.85	8		0.0	0	0.8	22	22	32	10+	7	12	12	6.0	
MACON	354	1004.7	1017.5	91	69	79.6	- 1.7	97	27	62	31	19	0	70	80	3.19	- 0.99	1.31	11	9	0.0	0	1.7	22	29	NE	15	8	14	9	5.7	72
ROME	637			89	66	77.4	- 1.0	96	16	57	30	14	0			2.66	- 1.10	1.09	12		0.0	0										
SAVANNAH	46	1015.2	1016.9	90	71	80.6	- 0.4	95	27+	63	31	19	0	71	79	4.56	- 2.06	1.21	15	20	0.0	0	2.3	21	32	E	18	2	17	12	6.4	63
HAWAII																																
HILO	31	1014.2	1015.5	84	68	75.8	0.0	86	28+	65	25+	0	0	66	74	4.79	- 6.66	1.27	26	0	0.0	0	0.7	29	30	11	25	3	18	10	6.3	51
HONOLULU	7	1014.6	1015.2	87	73	79.7	0.3	89	29+	67	15	0	0	66	65	0.87	- 0.02	0.54	12	0	0.0	0	10.1	6	31	NE	21	10	20	1	4.4	87
KAHULUI	48	1012.5		87	69	78.0	- 1.0	90	1	65	15+	1	0			0.41	0.06	0.30	5	0	0.0	0	12.1	6	28	NE	31+	13	17	1	4.3	77
LIHUE	103	1011.2	1016.3	84	73	78.4	0.0	85	20	70	31+	0	0	68	74	2.84	0.38	1.01	23	0	0.0	0	10.2	6	22	NE	22+	5	25	1	5.2	68
IDAHO																																
BOISE	2838	915.3	1013.6	85	57	71.1	- 1.0	103	7	37	30	10	0	47	47	0.88	0.72	0.43	8	6	0.0	0	0.9	21	29	SW	2	14	8	9	4.5	78
IDAHO FALLS 42NW R	4790			82	45	63.7	- 2.7	98	8	27	31	5	1			0.64	0.15	0.29	6						34	SW	28					
IDAHO FALLS 46W R	4932			80	46	63.2	- 3.4	95	8	29	31	5	2			0.54	0.06	0.19	6		0.0	0	3.8	23	46	SW	11					
LEWISTON	1413			86	59	72.2	0.5	104	1	42	30	12	0			1.41	0.98	0.40	7		0.0	0						15	6	10	4.7	
POCATELLO	4454	864.5	1014.6	83	49	65.8	- 4.3	98	8	33	31+	7	0	44	51	0.78	0.23	0.32	6	10	0.0	0	4.7	22	40	SW	12	12	11	8	4.6	80
ILLINOIS																																
CAIRO U	314			89	69	78.5	- 1.4	99	18	53	29	12	0			4.43	1.33	2.81	7		0.0	0			20	S	31	13	10	8	4.7	82
CHICAGO O HARE	658	990.5	1014.6	78	58	68.0	- 3.3	91	15+	41	29	2	0	61	78	6.40	3.19	1.63	12	9	0.0	0	1.4	23	37	32	26	7	13	11	6.2	
CHICAGO MIDWAY	607	992.2		79	62	70.3	- 3.9	92	15	43	29	3	0	60	72	6.79	3.63	1.46	12	9	0.0	0	2.3	23	43	NW	26	9	11	11	6.2	64
MOLINE	582	992.9	1014.0	81	62	71.1	- 2.5	94	15	47	29	4	0	63	78	9.31	5.78	3.67	14	9	0.0	0	2.6	23	37	S	7	9	9	13	5.8	61
PEORIA	652	991.2	1014.9	81	61	71.2	- 3.1	94	15	44	29	4	0	61	73	8.61	5.73	2.62	15	8	0.0	0	1.9	21	33	NW	3	9	8	14	5.6	59
ROCKFORD	724	987.5	1014.1	79	61	69.7	- 2.8	92	5	43	29	3	0	61	76	9.27	5.13	2.20	14	10	0.0	0	2.0	23	48	26	26	9	10	12	5.6	
SPRINGFIELD	588	993.2	1014.9	83	62	72.4	- 2.8	95	5	45	29	6	0	63	74	5.90	3.16	2.00	13	13	0.0	0	2.9	20	32	SW	27	11	10	10	5.4	66

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days Max. 90°F. or above	No. of days Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	No. of days .01 inch or more	No. of days With thunderstorms	Snow, Sleet Total	Snow, Sleet Maximum depth on ground	Resultant speed	Resultant direction	Fastest mile Speed	Fastest mile Direction	Fastest mile Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
INDIANA																																
EVANSVILLE	381	1001.7	1015.6	86	63	74.6	- 2.7	96	18	47	29	11	0	64	73	3.83	0.76	1.98	6	7	0.0	0	1.5	27	30	SW	26	11	14	6	4.8	74
FORT WAYNE	791	985.4	1015.1	80	60	69.9	- 2.6	95	16+	38	29	6	0	59	71	2.95	- 0.09	1.08	15	6	0.0	0	3.5	25	55	N	27	6	12	13	6.4	58
INDIANAPOLIS	793	986.8	1015.5	82	61	71.1	- 2.6	93	16+	41	29	5	0	62	74	3.25	0.22	0.71	10	6	0.0	0	2.3	24	38	NW	26	7	13	11	5.6	71
SOUTH BEND	773	987.1	1014.7	78	59	68.1	- 3.9	93	16+	40	29	5	0	59	75	5.43	1.88	0.94	12	8	0.0	0	3.1	24	40	32	27	6	11	14	6.5	
IOWA																																
BURLINGTON	694			82	61	71.6	- 3.0	95	15	47	29	6	0	64	78	7.34	3.73		11	10	0.0		1.9	25	45	29	25	10	8	13	5.6	
DES MOINES	938	980.0	1014.3	84	62	72.9	- 1.2	99	13	51	28	10	0	61	72	1.93	- 1.74	0.99	9	6	0.0	0	1.3	20	26	NE	26	10	11	10	5.2	63
DUBUQUE	1065			77	59	68.4	- 2.1	90	5	44	29	1	0			8.33	4.60	2.74	13		0.0	0						8	8	15	6.3	
SIOUX CITY	1095	974.6	1013.7	83	61	72.0	- 3.1	98	13	48	31+	6	0	61	71	1.85	- 0.81	0.98	10	9	0.0	0	1.6	15	26	NW	27	8	16	7	5.2	65
WATERLOO	868	982.7	1013.9	79	56	67.8	- 3.9	95	13	41	28	4	0	60	78	7.08	3.66	2.89	9	8	0.0	0	1.4	20	35	33	17	11	7	13	5.6	
KANSAS																																
CONCORDIA	1470	961.4	1013.2	87	64	75.7	- 3.3	100	12	54	28	17	0	60	63	5.24	2.09	3.01	8	9	0.0	0	3.9	18	31	NW	17	11	11	9	4.7	71
DODGE CITY	2582	924.8	1013.4	89	64	76.2	- 3.0	98	26	53	31	17	0	59	62	1.62	- 0.74	0.70	10	14	0.0	0	4.9	17	57	NW	9	11	12	8	5.1	69
GOODLAND	3645	889.6	1013.8	86	57	71.5	- 3.2	100	12	49	31	15	0	54	61	2.94	0.66	1.40	10	7	0.0	0	3.5	16	26	20	5	17	8	6	4.1	
TOPEKA	876	982.7	1014.0	86	64	74.9	- 3.5	100	26	55	31+	10	0	64	71	3.53	- 0.76	1.68	11	11	0.0	0	2.3	19	38	W	30	12	10	9	5.1	71
WICHITA	1321	966.8	1013.6	90	67	78.2	- 2.6	99	26	57	31	17	0	62	61	4.91	2.04	2.70	10	14	0.0	0	5.0	16	30	S	29	8	15	8	5.1	69
KENTUCKY																																
COVINGTON	869	984.4	1015.7	83	62	72.5	- 1.6	94	18+	43	29	8	0	61	73	3.24	0.64	0.78	8	5	0.0	0	2.9	24	23	26	1	9	10	12	6.0	
LEXINGTON	966	981.4	1016.1	86	63	74.5	- 1.5	96	18+	42	29	10	0	59	63	1.92	- 1.29	1.68	10	7	0.0	0	3.3	20	22	21	31+	9	13	9	5.4	
LOUISVILLE	474	998.0	1015.3	86	65	75.2	- 1.0	96	27	49	29	10	0	62	67	2.12	- 0.85	1.10	6	7	0.0	0	1.7	25	23	W	26	10	13	8	5.4	69
LOUISIANA																																
ALEXANDRIA	92	1012.2	1016.2	92	68	80.1	- 2.0	96	19+	62	2	24	0	70	78	2.46	- 1.02	0.90	11	13	0.0	0	1.6	20	28	33	8	7	12	12	6.2	
BATON ROUGE	64	1013.5	1016.4	89	70	79.6	- 2.8	93	20	66	11	14	0	70	79	7.03	1.77	1.33	19	15	0.0	0	0.4	20	35	6	20	2	15	14	6.8	
LAKE CHARLES	14	1014.9	1016.0	89	71	80.0	- 2.2	95	1	68	11+	15	0	71	82	6.79	1.99	2.05	15	18	0.0	0	1.8	18	30	9	20	4	14	13	6.7	
NEW ORLEANS	3	1015.2	1016.1	86	69	77.7	- 4.2	90	16+	63	24	2	0	71	83	6.34	1.00	1.90	19	18	0.0	0	1.0	21	28	6	31	4	16	11	6.3	
SHREVEPORT	252	1006.1	1015.3	93	71	82.1	- 1.7	101	20	65	3+	27	0	70	73	1.82	- 0.73	1.15	4	5	0.0	0	3.8	19	28	18	5	11	13	7	5.1	73
MAINE																																
CARIBOU	624			71	51	60.9	- 1.7	90	15	34	31	1	0			3.60	- 0.07	0.98	12		0.0	0						3	10	18	7.6	
PORTLAND	61	1011.9	1014.2	78	55	66.5	- 0.3	91	7	33	31	2	0	57	74	1.84	- 0.58	0.67	11	5	0.0	0	3.5	22	29	W	29	5	12	14	6.9	60
MARYLAND																																
BALTIMORE	148	1010.2	1015.6	86	65	75.5	0.5	96	18	50	30+	13	0	64	72	4.72	- 0.47	1.12	9	6	0.0	0	2.8	23	41	NW	19	9	9	13	5.9	54
MASSACHUSETTS																																
BLUE HILL OBS R	629			81	60	70.2	0.8	94	7	39	30	4	0			1.62	- 2.43	0.58	8		0.0	0			44	NW	28					65
BOSTON	15	1013.5	1014.6	79	62	70.5	- 1.2	93	7	47	31	2	0	60	74	1.48	- 2.18	0.72	8	3	0.0	0	5.3	23	35	W	29	9	9	13	5.8	65
NANTUCKET	43	1015.2	1015.4	76	62	68.6	0.5	85	13	39	31	0	0	62	83	0.68	- 3.00	0.39	6	4	0.0	0	5.5	20	29	SW	29	6	14	11	6.0	67
PITTSFIELD	1170			78	55	66.2	0.0	90	16+	32	31	2	1			4.69	0.79	1.34	12		0.0	0										
WORCESTER	986	979.0	1015.5	76	58	67.4	- 0.9	90	7	38	30	1	0	55	67	3.40	- 0.84	1.29	11	4	0.0	0	5.3	25	29	28	28	8	10	13	6.2	
MICHIGAN																																
ALPENA	689			74	50	62.0	- 2.5	95	14	31	30	2	1			3.65	0.62	0.97	15		0.0	0			26	NE	9	6	9	16	6.7	57
DETROIT	619	991.9	1014.4	79	61	70.0	- 2.8	97	15	45	29	4	0	59	72	3.24	0.38	0.97	15	7	0.0	0	3.1	26	33	NW	27	7	9	15	6.8	50
DETROIT M WAYNE CO	633	990.5	1014.5	79	58	68.0	- 3.9	96	15	42	29	4	0	59	74	6.94	4.10	1.57	17	9	0.0	0	3.6	23				8	8	15	6.8	
DETROIT WILLOW RUN	711	987.1	1014.9	77	57	67.2	- 5.4	94	15	40	29	4	0	57	71	4.39	1.55	1.11	16	7	0.0	0	3.6	23	25	27	27	8	8	15	6.5	
FLINT	770	986.8	1014.4	78	57	67.6	- 0.6	97	14	40	29	4	0	58	73	4.55	1.38	2.23	12	6	0.0	0	3.2	24	23	29	27+	4	13	14	6.6	
GRAND RAPIDS	784	985.4	1014.3	78	58	67.9	- 2.5	91	15+	42	29	3	0	58	75	5.36	2.66	1.52	15	6	0.0	0	3.2	25	40	SE	27	5	12	14	6.6	48
HOUGHTON LAKE	1150	972.9	1014.7	74	53	63.0		90	14	40	3	1	0	55	76	5.05	0.23	1.43	11	5	0.0	0	2.0	26	18	26	8	6	9	16	6.6	
LANSING	841	983.1	1014.5	80	57	68.3	- 1.9	98	14	37	3	6	0	59	77	3.68	0.63	1.70	13	4	0.0	0	3.8	25	43	SW	16	5	12	14	6.7	49
MARQUETTE U	677			71	54	62.6	- 3.2	99	14	44	28+	2	0			3.02	- 0.01	0.84	15		0.0	0			28	SW	14	4	13	14	6.8	65
MUSKEGON	627	991.5	1014.1	76	59	67.6	- 2.7	88	6	43	29	0	0	58	75	5.11	2.20	1.75	13	7	0.0	0	1.8	24	32	21	6	8	8	15	6.3	
SAULT STE MARIE	721	987.5	1013.7	69	52	60.6	- 3.4	87	14	38	30	0	0	54	81	3.91	1.02	1.64	11	5	0.0	0	1.9	30	24	22	11	6	7	18	7.0	51

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90°F. or above	Temperature: No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	°F.	°F.	F.	F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MINNESOTA																																
DULUTH	1428	963.4	1014.6	73	49	61.1	-2.7	89	12	36	28	0	0	54	77	3.76	-0.05	1.22	12	6	0.0	0	0.9	21	32	SW	5	4	13	14	6.8	62
INTERNATIONAL FALLS	1179	971.2	1014.0	75	49	61.9	-1.2	92	11	34	28	2	0	53	76	2.89	-0.75	1.26	13	8	0.0	0	0.9	24	40	32	12	6	14	11	6.2	
MINNEAPOLIS	834	984.1	1013.9	79	58	68.6	-1.4	95	13	43	28	4	0	56	66	4.04	0.86	1.59	11	6	0.0	0	0.5	16	29	N	2	10	10	11	5.9	60
ROCHESTER	1297	967.5	1014.6	76	57	66.3	-3.5	88	13	42	28	0	0	58	76	3.40	-0.39	0.83	14	8	0.0	0	2.2	23	32	30	31	11	9	11	5.7	
ST CLOUD	1034	976.6	1013.9	78	56	66.7	-1.9	95	12	39	28	3	0			4.65	0.92	1.88	11		0.0	0						9	10	12	5.8	
MISSISSIPPI																																
JACKSON	310	1004.7	1016.3	91	68	79.5	-2.5	94	7	59	2	26	0	70	80	3.61	0.28	1.31	11	13	0.0	0	1.5	16	23	S	8	6	16	9	5.7	65
MERIDIAN	290	1005.8	1016.8	91	68	79.1	-2.1	94	17+	60	3+	20	0	70	82	1.82	-1.72	0.73	11	15	0.0	0	0.9	21	29	35	8	1	15	15	6.9	
VICKSBURG U	234			89	72	80.5	-1.2	93	19+	68	9+	17	0			2.23	-0.78	1.42	6		0.0	0			25	W	8+	12	13	6	4.7	74
MISSOURI																																
COLUMBIA	778	986.8	1014.5	85	65	75.1	-2.1	95	26	53	29	10	0	63	69	3.62	-0.19	1.08	12	8	0.0	0	3.1	20	29	N	30	13	8	10	5.0	69
KANSAS CITY	742	987.5	1013.8	87	68	77.1	-2.7	96	4+	58	29+	12	0	63	65	6.27	2.50	1.79	15	11	0.0	0	3.0	19	32	S	15	11	7	13	5.5	75
SAINT JOSEPH	811			88	64	75.6	-1.9	95	15+	52	9	12	0	63	73	4.76	0.55		9	12	0.0	0	1.8	19	32	30	17	14	10	7	4.4	
ST LOUIS	535	995.3	1015.3	86	65	75.8	-1.0	97	5	47	29	11	0	62	66	3.59	0.57	1.02	12	10	0.0	0	2.7	23	38	NW	27	14	5	12	5.3	70
SPRINGFIELD	1268	970.9	1015.5	88	62	75.2	-2.8	96	15+	50	10	14	0	63	72	5.13	1.81	1.71	9	10	0.0	0	3.6	17	46	W	16	12	11	8	4.6	65
MONTANA																																
BILLINGS	3567	892.0	1013.8	83	56	69.5	-2.4	101	12	42	30	9	0	46	50	3.50	2.60	2.47	7	5	0.0	0	3.0	30	35	NW	25	11	14	6	4.7	74
GLASGOW	2284			82	57	69.4	1.6	100	12	44	29	7	0			3.01	1.52	2.45	8		0.0	0						11	10	10	5.2	
GREAT FALLS	3662	889.3	1013.7	82	54	68.0	1.2	100	9	37	30	7	0	46	50	1.58	0.32	0.43	7	8	0.0	0	4.8	24	38	W	12	11	9	11	4.8	83
HAVRE	2582			81	54	67.4	0.4	96	10	39	31	7	0			2.77	1.67	1.85	12		0.0	0			37	W	13	13	9	9	4.7	80
HELENA	3828	882.2	1015.3	80	52	65.8	-0.4	95	9	40	31+	7	0	47	55	1.92	1.03	0.71	11	9	0.0	0	3.1	28	35	W	28	15	8	8	4.6	70
KALISPELL	2965	911.6	1015.2	77	50	63.3	0.2	93	9+	34	31	5	0	51	70	3.47	2.38	0.99	13	4	0.0	0	1.8	20	35	29	28	8	10	13	5.8	
MILES CITY	2629	922.1	1013.4	85	58	71.2	-1.4	103	12	41	29	10	0	46	46	0.22	-1.02		6	4	0.0		2.3	30								
MISSOULA	3190	905.5	1016.2	79	50	64.1	-0.7	93	9+	33	30	6	0	48	64	2.24	1.52	1.06	11	7	0.0	0	0.7	25	29	28	28+	11	8	12	5.4	68
NEBRASKA																																
GRAND ISLAND	1841	948.9	1013.8	88	60	73.6	-1.7	103	12	47	31	16	0	57	63	3.35	1.00	2.36	9	6	0.0	0	2.4	20	43	24	29	15	9	7	4.2	
LINCOLN U	1150			85	64	74.8	-2.9	99	12	52	28	12	0			2.17	-1.21	0.90	9		0.0	0			35	S	29	11	10	10	5.1	61
NORFOLK	1544			84	60	72.0	-3.2	98	13+	46	31	9	0			2.78	0.17	2.24	6		0.0	0						13	8	10	4.8	
NORTH PLATTE	2775	917.0	1012.9	84	57	70.5	-4.0	100	12	44	31	6	0	57	67	1.82	-0.31	1.25	7	6	0.0	0	1.6	14	37	NW	6	15	6	10	4.7	72
OMAHA	978	979.0	1013.9	86	62	74.1	-2.1	99	12	50	28	11	0	63	71	2.06	-1.92	0.97	12	6	0.0	0	2.2	17	29	SW	17	14	7	10	5.2	74
SCOTTSBLUFF	3957	880.5	1013.7	85	55	69.6	-3.0	98	13+	45	31	4	0	52	59	0.52	-0.49	0.38	4	8	0.0	0	3.1	11	26	13	22+	18	4	9	4.1	
VALENTINE	2587			86	56	71.1	-1.8	108	13	37	31	9	0			0.92	-1.37	0.74	5		0.0	0			33	SW	28	14	10	7	4.6	80
NEVADA																																
ELKO	5050	846.6	1014.8	85	48	66.1	-0.8	96	7	29	31	7	1	43	52	1.31	1.01	0.73	10	10	0.0	0	0.8	21	31	12	9	13	10	8	4.9	
ELY	6253	811.4	1013.3	81	46	63.6	-2.5	90	8+	34	31	2	0	40	50	1.52	1.03	0.48	10	11	0.0	0	4.1	20	30	NW	19	13	11	7	4.8	76
LAS VEGAS	2162	934.6	1008.8	102	74	87.9	0.7	109	7	64	27	31	0	41	23	0.38	-0.10	0.18	4	6	0.0	0	5.8	22	42	SW	10	21	8	2	2.5	89
RENO	4404	866.6	1014.2	86	46	65.8	0.3	97	6	38	27+	7	0	46	55	1.65	1.48	0.97	7	6	0.0	0	1.7	26	28	SW	9	18	8	5	3.7	94
WINNEMUCCA	4299	868.3	1014.0	85	48	66.5	-1.1	97	7	33	31	5	0	40	43	0.72	0.57	0.31	6	8	0.0	0	1.2	29	43	SW	11	17	5	9	4.0	72
NEW HAMPSHIRE																																
CONCORD	342	1002.0	1014.7	80	54	66.6	-0.8	96	7	29	31	4	2	56	74	3.12	0.16	1.19	14	9	0.0	0	2.5	22	26	W	28+	7	11	13	6.3	52
MT WASHINGTON OBS	6262			52	41	46.2	-1.5	68	16	20	30	0	4			8.19	1.54	2.16	17	6	2.5	1			105Y	W	30	2	6	23	8.6	24
NEW JERSEY																																
ATLANTIC CITY	64	1013.5	1016.1	83	62	72.1	-1.6	94	19	40	31	4	0	63	75	2.40	-2.50	0.79	8	2	0.0	0	4.9	22	28	30	28	7	15	9	5.6	68
ATLANTIC CITY U	11			80	67	73.3	-0.4	88	13	53	31+	0	0			5.50	0.36	2.01	8						30	W	28					
NEWARK	11	1014.2	1015.3	84	66	74.5	-0.9	91	27+	50	30+	5	0	61	66	2.87	-1.56	0.87	11	6	0.0	0	4.2	22	32	22	8	7	13	11	6.3	
TRENTON U	56			83	64	73.5	-0.4	90	17+	50	31+	3	0			5.54	0.77	2.08	13		0.0	0			33	NW	18	4	15	12	6.1	59
NEW MEXICO																																
ALBUQUERQUE	5310	840.2	1012.4	89	62	75.4	-0.8	96	28+	54	15	15	0	48	43	0.61	-0.72	0.45	4	6	0.0	0	1.7	16	37	S	2	15	12	4	3.9	80
CLAYTON	4969			84	58	70.9	-2.4	92	26	53	7	4	0			3.64	1.55	2.00	10		0.0	0						15	10	6	4.2	
RATON	6379			82	51	66.1	-2.1	90	12	46	26+	1	0			1.09	-1.54	0.46	15		0.0	0						8	14	9	5.3	
ROSWELL	3617			91	63	76.7	0.1	100	27	58	13	20	0			0.83	-0.79	0.23	7	8	0.0	0			30	26	19	12	15	4	4.3	75
SILVER CITY	5373			88	60	73.9	-1.2	96	7	57	20+	11	0			2.58	0.18	0.74	12		0.0	0						18	12	1	3.6	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW YORK																																
ALBANY	275	1004.1	1014.6	81	58	69.4	- 0.6	93	16+	37	31	4	0	59	71	4.32	1.25	1.43	15	5	0.0	0	4.6	21	30	NW	29+	6	7	18	7.2	48
BINGHAMTON	1590	957.3	1015.2	76	57	66.6	0.1	92	15	37	30	4	0	57	73	4.25	0.68	1.52	14	6	0.0	0	4.2	24	34	W	17	5	7	19	7.0	56
BUFFALO	705	989.2	1014.3	77	59	67.8	- 0.6	90	7	38	30	1	0	59	75	4.12	1.07	1.08	14	8	0.0	0	5.3	24	47	SW	17	2	12	17	7.6	54
NEW YORK U	132	1012.5		82	65	73.2	- 1.9	91	27	50	30+	1	0	61	72	2.73	- 1.71	0.87	10	4	0.0	0	2.9	21	28	NW	29	11	11	9	5.0	65
J.F. KENNEDY	15	1014.6	1015.4	80	64	72.3	- 2.2	89	27	46	31	0	0	63	74	2.11	- 2.86	0.89	10	4	0.0	0	4.9	21	46	30	28	7	16	8	5.8	
NEW YORK LA GUARDIA	11	1013.5	1015.3	83	68	75.7	0.3	91	27	53	29	3	0	62	67	2.02	- 3.06	1.03	11	5	0.0	0	3.8	22	29	W	28	7	15	9	5.7	
ROCHESTER	547	994.9	1014.8	79	58	68.4	- 1.3	96	6	36	30	4	0	57	69	2.94	0.22	1.42	11	5	T	0	5.0	24	31	W	29	5	9	17	6.8	61
SYRACUSE	410	999.3	1013.8	80	58	69.1	- 1.1	97	15	40	31+	5	0	58	71	1.95	- 1.30	0.45	12	3	0.0	0	3.4	26	32	S	31+	8	7	16	6.5	47
NORTH CAROLINA																																
ASHEVILLE	2140	942.8	1017.9	82	60	71.1	- 0.4	89	15	48	30	0	0	64	84	4.03	- 0.91	0.93	14	11	0.0	0	0.2	31	30	33	19	6	11	14	6.3	63
CAPE HATTERAS R	7	1016.3	1016.5	85	72	78.5	0.9	91	27	61	30	2	0	71	79	2.80	- 3.62	1.30	8	10	0.0	0	4.2	22	31	WSW	29	6	9	16	6.6	76
CHARLOTTE	735	989.2	1016.2	88	68	78.0	- 0.7	96	18	53	30	12	0	68	75	4.87	0.65	1.52	9	10	0.0	0	1.9	22	28	S	7	9	12	10	5.4	73
GREENSBORO	897	985.4	1016.5	87	67	77.0	0.8	95	18+	48	30	11	0	67	76	3.91	- 0.70	2.81	10	9	0.0	0	2.4	22	25	NW	18	11	6	14	5.8	69
RALEIGH	434	1000.7	1016.1	88	67	77.2	0.3	94	27	46	30	11	0	67	76	3.00	- 2.20	1.25	10	12	0.0	0	2.8	20	24	18	17	9	12	10	5.5	63
WILMINGTON	28	1015.2	1016.7	89	71	80.2	0.8	96	27	59	30	14	0	71	78	10.58	3.72	3.93	13	13	0.0	0	2.3	21	36	E	17	3	18	10	6.3	68
NORTH DAKOTA																																
BISMARCK	1647	954.6	1013.6	80	53	66.8	- 2.5	96	12	37	30	5	0	53	64	3.39	1.66	2.68	8	4	0.0	0	0.3	8	33	SE	28	7	17	7	5.7	73
FARGO	896	981.7	1014.0	79	55	66.5	- 3.0	100	13	36	28	3	0	55	68	2.55	- 0.40	1.22	9	7	0.0	0	0.8	15	32	Sw	5	7	15	9	5.8	61
WILLISTON	1899			82	54	67.7	- 0.5	100	12+	41	31	8	0			1.23	- 0.25	0.49	5		0.0	0			36	Nw	13	10	9	12	5.7	72
OHIO																																
AKRON	1208	971.9	1015.7	80	58	69.2	- 2.3	93	17+	42	29	6	0	58	72	4.16	1.05	1.52	15	9	0.0	0	3.2	24	25	25	1	7	10	14	6.6	
CINCINNATI OBS	761			85	64	74.4	- 1.3	96	17+	44	29	11	0			2.94	- 0.34	0.95	10		0.0	0			20	SW	9					60
CLEVELAND	777	986.1	1015.0	79	59	68.7	- 1.2	92	15+	41	29	2	0	59	74	3.58	0.30	1.16	14	7	0.0	0	4.0	23	38	W	1	5	10	16	6.7	54
COLUMBUS	812	986.1	1015.8	82	60	71.0	- 2.2	94	17+	39	29	6	0	59	69	4.62	1.76	1.12	12	9	0.0	0	2.3	23	43	NW	18	6	11	14	6.5	56
DAYTON	1002	980.0	1015.5	85	62	73.1	- 0.6	98	16+	40	3	8	0	58	63	1.35	- 1.53	0.27	10	5	0.0	0	4.0	24	33	W	27+	3	15	13	6.6	72
MANSFIELD	1295			78	57	67.2	- 3.0	92	16	40	29	3	0			3.30	0.07	1.02	15	9	0.0	0						9	6	16	6.5	
TOLEDO	676	990.2	1015.1	78	57	67.2	- 3.7	93	15	37	29	3	0	60	81	8.47	5.14	2.07	15	9	0.0	0	3.6	24	47	W	27	6	10	15	6.5	55
YOUNGSTOWN	1178	973.6	1015.7	78	56	67.3	- 2.7	91	15	41	29	3	0	58	76	4.10	0.60	1.01	14	8	0.0	0	3.0	23	20	30	28+	7	8	16	6.7	
OKLAHOMA																																
OKLAHOMA CITY	1280	968.8	1013.9	92	69	80.6	- 2.2	101	27	63	2	23	0	65	63	3.37	0.85	1.38	9	10	0.0	0	7.0	15	40	Nw	6	18	9	4	3.7	81
TULSA	650	990.5	1014.4	95	69	81.7	0.1	104	27	61	31+	27	0	64	62	3.72	0.68	1.85	6	7	0.0	0	5.7	17	30	Nw	15	17	10	4	4.0	83
OREGON																																
ASTORIA	8	1016.3	1017.0	70	54	61.7	0.7	82	31	43	29	0	0	55	82	1.95	0.46	0.85	9	0	0.0	0	3.3	24	20	29	29+	5	9	17	7.2	
BURNS U	4151	874.0	1015.2	79	48	63.8	- 3.4	93	8+	33	30	4	0	43	53	1.10	0.81	0.88	6		0.0	0	1.8	32				13	12	6	4.4	
EUGENE	359	1002.7	1015.9	81	54	67.4	1.5	93	6	44	28	5	0	54	70	0.90	0.50	0.50	6	2	0.0	0	2.6	30	24	36	29	12	5	14	5.4	
MEACHAM	4050			72	50	61.1	- 0.6	92	1	35	29	2	0			4.89	4.36	1.11	12		0.0	0						13	7	11	4.8	
MEDFORD	1298	967.8	1014.8	87	55	70.5	- 0.2	97	31	42	29	16	0	51	58	1.52	1.34	0.60	8	3	0.0	0	2.8	30	26	14	11	15	6	10	4.1	
PENDLETON	1482	961.7	1014.4	85	58	71.5	- 0.4	103	1	44	30	12	0	45	44	1.21	0.93	0.58	6	3	0.0	0	3.0	26	29	27	3	17	6	8	3.8	
PORTLAND	21	1014.6	1015.7	80	57	68.6	2.0	91	17+	46	29	5	0	55	67	0.73	0.08	0.42	7	2	0.0	0	3.8	31	20	NE	30	12	6	13	5.4	71
SALEM	196	1008.8	1016.0	81	53	66.7	0.6	92	6	38	29	4	0	52	65	0.99	0.54	0.47	7	3	0.0	0	2.1	30	23	35	30	12	5	14	5.4	
SEXTON SUMMIT R	3836	884.5	1014.3	73	51	62.3	- 0.9	86	31	38	28	0	0			1.33	1.08	0.69	6		0.0	0	5.7	34	25	33	28+	16	8	7	3.9	
PACIFIC AREA																																
CANTON ISLAND	8			88	77	82.9	- 0.6	90	31+	72	21	9	0			5.43	2.93	1.91	14		0.0	0						3	9	19	7.7	
ENIWETOK	13	1008.8	1009.5	88	78	83.2	0.2	90	27+	70	7	4	0	76	79	4.62	- 2.19	1.27	20	3	0.0	0	9.4	9								
TAGUAC GUAM R	361			86	71	78.8	- 0.5	89	31+	68	15+	0	0			3.87	- 8.97	0.83	20		0.0	0			20	SE	11					53
JOHNSTON	7	1012.2	1012.9	85	76	80.4	- 1.1	86	28+	73	9	0	0	71	74	1.46	- 0.80	0.45	14	0	0.0	0	14.4	10	32	E	29	4	18	9	6.2	79
KOROR R	94	1006.1	1009.9	87	75	80.9	- 0.1	90	10	72	30	1	0	75	86	16.76	1.00	3.77	18	4	0.0	0	2.4	25	21	SW	29	0	0	31	10.0	60
KWAJALEIN	8	1008.8	1009.6	87	77	81.9	0.0	90	14	73	15+	1	0	75	81	8.05	- 1.54	1.34	21	2	0.0	0	6.4	8	29	11	7	1	6	24	8.6	
MAJURO	10	1009.1	1009.4	87	77	82.1	1.9	90	13	73	18	1	0	74	78	6.92	- 4.76	2.29	22	1	0.0	0	4.6	8	27	NE	19	2	7	22	8.1	65
MARCUS ISLAND	20			89	78	83.6		93	15	74	29+	15	0			5.38		2.01	18		0.0	0						6	10	15	7.0	72
PONAPE R	123	1003.7	1009.2	88	72	80.0	0.6	90	30+	70	4	2	0	75	89	10.06	- 6.26	1.79	24	7	0.0	0	2.1	11	17	NE	7	0	7	24	8.8	41
TRUK MOEN ISLAND	5	1008.8	1009.0	86	75	80.7	0.3	88	26+	73	14	0	0	75	83	9.13	- 3.68	2.01	16	0	0.0	0	1.9	36	25	N	1	0	10	21	8.5	66
WAKE	11	1011.9	1012.1	86	77	81.5	- 0.9	88	31+	73	16	0	0	73	77	4.02	- 3.06	1.41	21	1	0.0	0	9.2	7	37	5	16	3	14	14	7.1	
YAP R	55	1007.1	1008.8	86	75	80.7	- 0.6	88	25+	74	29+	0	0	76	87	12.39	- 2.31	2.86	21	2	0.0	0	1.4	24	16	SW	29+	0	0	31	9.9	37

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station ∅	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PENNSYLVANIA																																
ALLENTOWN	376	1001.7	1015.5	82	60	71.1	- 0.9	94	16	45	31+	4	0	61	73	5.92	1.45	1.51	13	6	0.0	0	3.5	24	35	29	28	5	17	9	6.0	
ERIE	732	988.5	1015.0	77	60	68.2	- 1.6	92	17	44	30	3	0	58	73	2.68	- 0.30	0.85	12	8	0.0	0	4.5	23	30	33	28	5	11	15	6.5	
HARRISBURG	338	1002.7	1015.4	85	64	74.6	0.5	97	18+	51	31+	9	0	61	66	3.99	0.34	1.72	9	7	0.0	0	1.7	24	29	W	28	7	12	12	6.2	63
PHILADELPHIA	5	1014.6	1015.7	83	63	73.1	- 0.5	91	17+	45	31	3	0	61	69	4.05	- 0.58	2.05	14	5	0.0	0	3.4	24	25	W	28	7	12	12	6.1	65
PITTSBURGH	1137	972.2	1015.7	81	57	69.1	- 1.7	94	17+	40	29	4	0	57	70	3.26	- 0.05	2.20	10	8	0.0	0	4.0	26	28	29	25	4	10	17	7.0	53
READING U	266			83	64	73.8	- 1.0	96	16	49	31+	6	0			3.29	- 0.76	1.52	12		0.0	0			35	NW	28	6	15	10	5.9	57
SCRANTON	930	982.1	1015.7	79	60	69.5	- 0.5	91	7	44	31+	3	0	60	75	5.23	1.65	2.09	12	9	0.0	0	3.0	22	31	NW	28	7	11	13	6.4	66
WILLIAMSPORT	527	996.6	1015.5	78	58	68.1	- 3.5	90	16	38	30	1	0			5.03	1.41	2.23	14	9	0.0	0	1.7	25	22	16	31	6	10	15	6.6	
RHODE ISLAND																																
BLOCK ISLAND	110			76	63	69.6	0.0	82	20	51	29	0	0			4.09	0.23	3.20	5		0.0	0						5	16	10	5.8	
PROVIDENCE	51	1012.9	1015.1	81	62	71.6	1.1	90	16	40	31	1	0	59	68	1.90	- 2.06	0.83	8	4	0.0	0	5.2	22	24	30	30	9	13	9	5.8	62
SOUTH CAROLINA																																
CHARLESTON	41	1015.2	1016.8	88	71	79.6	- 0.1	94	27	65	30	10	0	69	74	5.90	- 0.71	1.75	16	17	0.0	0	2.5	21	37Y	SE	4	2	14	15	7.0	53
CHARLESTON U	9			88	75	81.6	0.6	95	26	70	30+	11	0			4.70	- 1.37	2.15	12		0.0	0			33	E	18+					
COLUMBIA	217	1008.1	1016.1	91	70	80.5	0.0	98	27	57	31	21	0	69	74	9.39	3.65	5.03	10	14	0.0	0	2.4	23	35	9	18	9	16	6	5.0	75
GNVLE-SPARTANBURG	957	982.4	1016.4	89	68	78.1	- 0.6	95	27+	54	30	14	0	66	72	3.57	- 0.94	1.38	9	7	0.0	0	1.2	24	31	S	18	8	13	10	5.7	69
SOUTH DAKOTA																																
ABERDEEN	1296	967.2	1013.1	84	55	69.5	- 2.0	112	13	35	28	6	0	53	59	1.26	- 0.90	0.53	8	4	0.0	0	1.5	4	30	35	27+	5	15	11	6.0	
HURON	1282	967.2	1012.8	86	56	71.0	- 1.8	110	13	40	28	11	0	55	63	1.72	- 0.35	0.54	7	6	0.0	0	1.2	12	40	NW	24	7	16	8	5.7	67
RAPID CITY	3165	904.8	1013.8	84	58	70.7	- 1.3	105	12	43	31	8	0	49	52	1.46	0.24	0.54	9	9	0.0	0	2.0	34	42	SW	28	13	11	7	4.6	66
SIOUX FALLS	1418	963.1	1013.7	82	57	69.4	- 2.4	101	13	40	28	4	0	58	70	1.29	- 2.30	0.42	8	5	0.0	0	1.7	16	25	26	31+	9	14	8	5.3	
TENNESSEE																																
BRISTOL	1507	964.1	1017.3	85	63	73.9	- 0.9	95	17+	49	30+	3	0	65	80	2.65	- 1.15	0.75	11	9	0.0	0	0.9	28	21	24	7	6	13	12	6.0	
CHATTANOOGA	670	992.6	1016.7	88	66	76.9	- 2.9	96	17	55	30	9	0	69	81	3.55	- 0.21	0.96	10	11	0.0	0	1.2	20	23	SW	7	5	11	15	6.5	62
KNOXVILLE	980	982.4	1017.0	88	67	77.5	0.1	96	16	56	30	12	0	67	76	2.18	- 1.28	0.77	10	10	0.0	0	2.8	25	20	SW	7+	5	16	10	6.0	42
MEMPHIS	263	1006.1	1015.9	90	70	80.2	- 0.3	96	4	57	29	19	0	66	65	3.98	1.01	3.01	7	5	0.0	0	1.7	20	26	NW	31	14	12	5	4.5	78
NASHVILLE	590	994.6	1015.7	90	68	79.0	- 0.2	97	17+	54	30+	18	0	64	66	2.53	- 0.33	1.05	8	8	0.0	0	2.6	23	29	N	27	9	18	4	5.0	76
OAK RIDGE	905			86	65	75.8	- 0.3	95	17+	51	30	5	0			2.76	- 1.86	0.98	11		0.0	0			45Y		19	9	11	11	5.6	
TEXAS																																
ABILENE	1762	953.6	1013.3	97	73	84.7	1.7	102	26	63	2	28	0	60	47	1.59	0.12	0.71	6	8	0.0	0	6.2	17	43	SE	15	14	8	9	5.0	77
AMARILLO	3604	892.3	1012.3	90	64	76.9	- 2.6	96	27+	59	15+	18	0	59	59	1.71	- 0.87	1.20	5	6	0.0	0	8.3	19	38	N	31	16	13	2	4.0	81
AUSTIN	597	993.2	1014.6	96	73	84.3	- 0.4	99	9+	68	12	31	0	68	63	1.32	- 0.62	0.94	4	8	0.0	0	5.5	17	30	NE	8	10	18	3	4.4	77
BROWNSVILLE	16	1013.5	1014.1	90	74	81.8	- 2.3	94	27	70	13	19	0	73	79	3.12	0.35	1.68	10	5	0.0	0	8.8	14	31	E	28	8	14	9	5.5	68
CORPUS CHRISTI	41	1012.9	1014.5	92	74	83.1	- 1.1	97	31+	69	13	22	0	73	78	2.64	- 0.13	1.66	5	7	0.0	0	8.0	15	26	SE	29+	6	14	11	6.2	62
DALLAS	481	997.3	1014.2	96	75	85.1	0.1	101	19	68	3	30	0	66	57	1.70	- 0.23	0.84	7	7	0.0	0	6.6	16	29	NW	8	14	13	4	4.0	76
DEL RIO	1026	977.7	1012.9	96	73	84.5	- 1.3	100	27+	67	3	30	0	64	54	1.64	0.12	1.61	2	2	0.0	0	9.2	13	20	14	19+	16	10	5	4.3	
EL PASO	3918	882.2	1010.5	93	69	81.1	0.7	102	7	64	13+	25	0	53	42	0.49	- 0.70	0.27	6	6	0.0	0	2.5	14	42	NE	22	17	11	3	3.6	87
FORT WORTH	537	994.6	1014.5	96	72	84.1	- 1.3	103	19	62	2	30	0	64	55	2.26	0.58	1.01	6	10	0.0	0	5.6	16	25	33	8	18	11	2	3.4	
GALVESTON U	7			87	79	82.8	- 0.5	93	1	73	5+	2	0			4.88	0.49	1.61	7		0.0	0			27	E	9					53
HOUSTON U	41			92	76	84.3	0.2	98	20+	70	12+	25	0			1.86	- 1.69	1.04	10		0.0	0										
HOUSTON	50	1013.5	1015.5	93	74	83.5	0.3	98	20+	69	12	29	0	72	75	2.29	- 1.98	0.53	12	12	0.0	0	3.7	16	30	9	14	4	20	7	6.1	61
LUBBOCK	3243	904.8	1013.4	91	65	78.0	- 0.8	98	27+	61	2	22	0	60	58	0.62	- 1.06	0.46	5	7	0.0	0	7.9	17	32	28	30	16	9	6	4.2	
MIDLAND	2851	916.0	1012.1	92	68	79.6	- 2.6	97	31+	62	13	22	0	58	53	3.23	1.75	2.41	10	9	0.0	0	6.6	15	35	22	15	15	9	7	4.6	
PORT ARTHUR	16	1014.9	1015.7	92	73	82.4	0.1	97	27+	69	11	23	0	73	81	1.91	- 3.58	1.11	13	15	0.0	0	2.6	18	38	NW	9+	1	15	15	6.9	65
SAN ANGELO	1903	947.9	1012.8	95	71	82.7	- 2.4	100	19+	60	13	27	0	63	57	2.71	1.44	1.01	9	9	0.0	0	5.3	17	25	31	31	13	11	7	4.6	
SAN ANTONIO	788	987.1	1014.7	96	72	84.0	0.2	98	26+	64	13	30	0	68	64	1.65	- 0.71	1.14	6	6	0.0	0	6.1	16	34	NE	11	13	14	4	4.8	82
VICTORIA	104	1010.8	1014.9	95	75	84.7	1.3	99	20+	69	12	30	0	71	70	0.34	- 2.79	0.12	6	10	0.0	0	5.8	15	32Y	SW	6	4	20	7	6.1	
WACO	500	996.6	1014.3	98	74	86.0	0.5	102	20	66	3+	30	0	64	51	0.64	- 1.04	0.30	7	6	0.0	0	7.6	17	30	33	8	18	10	3	3.7	
WICHITA FALLS	994	977.3	1013.1	99	68	83.4	- 2.3	106	19	60	3+	29	0	62	55	2.29	0.50	0.68	10	11	0.0	0	6.5	17	44	1	23	12	14	5	4.4	
UTAH																																
MILFORD	5028			89	51	69.9	- 2.3	96	9+	39	27	16	0			0.79	0.06	0.28	12		0.0	0						14	12	5	3.7	
SALT LAKE CITY	4220	872.3	1013.5	86	56	70.9	- 3.6	97	9+	37	31	8	0	48	49	2.08	1.21	1.10	7	6	0.0	0	1.9	14	37	SW	3	12	14	5	4.3	85
WENDOVER	4237			83	62	72.5	- 4.7	96	8	51	31	5	0			1.01	0.65	0.36	10		0.0	0						12	12	7	4.3	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
VERMONT																																
BURLINGTON	332	1001.0	1013.4	76	56	66.0	- 0.7	91	15+	35	31	3	0	57	73	6.27	2.90	1.39	16	8	0.0	0	3.4	20	29	NW	18	5	9	17	6.9	56
VIRGINIA																																
LYNCHBURG	916			85	63	73.9	- 0.9	95	16	45	30	9	0			2.87	- 1.54	1.36	11	9	0.0	0			26	W	17	7	14	10	5.8	66
NORFOLK	26	1014.9	1015.9	86	68	77.1	- 0.4	95	19	52	30	10	0	68	75	3.08	- 2.89	1.14	10	7	0.0	0	3.5	18	28	NE	18	8	17	6	5.1	64
RICHMOND	162	1010.2	1016.0	87	65	75.9	- 0.1	94	19+	47	30	11	0	64	72	0.81	- 4.73	0.37	9	4	0.0	0	2.5	19	24	NW	26	8	13	10	5.4	68
ROANOKE	1149	974.9	1016.1	86	63	74.2	- 1.2	95	18+	43	30	10	0	62	70	1.16	- 3.47	0.26	10	10	0.0	0	2.2	26	35	26	26	9	13	9	5.5	
WASHINGTON																																
OLYMPIA	195	1009.1	1016.5	78	53	65.2	1.8	97	1	35	29	3	0	55	73	2.05	1.16	0.90	8	0	0.0	0	2.0	22	21	26	28+	8	7	16	6.5	
SEATTLE TACOMA	400	1000.3	1016.5	75	57	65.7	1.6	90	1	49	29	1	0	55	73	2.18	1.23	0.89	8	0	0.0	0	1.4	27	26	22	12	7	8	16	6.5	55
SPOKANE	2356	931.6	1014.0	81	55	67.9	- 0.1	98	1	35	29	8	0	47	52	1.73	1.32	0.65	6	0	0.0	0	3.2	19	25	SW	12	11	8	12	5.2	67
STAMPEDE PASS R	3958			64	48	56.0	0.4	87	1	36	29	0	0			3.93	1.89	0.84	18		0.0	0						6	7	18	6.9	
TATOOSH ISLAND R	101	1013.5	1016.6	60	52	55.7	- 0.3	64	6	48	30+	0	0	54	93	2.38	0.40	0.97	14	1	0.0	0	5.4	18	29	NE	30	6	5	20	7.5	30
WALLA WALLA U	949			85	62	73.4	- 0.4	103	1	46	30	11	0			2.52	2.22	1.36	7		0.0	0			21	W	12	17	5	9	3.9	78
YAKIMA	1052	975.6	1013.6	84	53	68.4	- 0.2	102	1	40	30+	10	0	49	54	0.21	0.01	0.10	4	0	0.0	0	3.7	28	25	19	12	16	7	8	4.3	
WEST INDIES																																
SAN JUAN P.R.	15	1013.2	1015.7	87	76	81.5	0.6	89	31+	73	22+	0	0	74	80	8.66	1.53	2.69	23	6	0.0	0	6.7	9	25	E	28+	3	19	9	6.7	64
SWAN ISLAND	28			87	78	82.5	- 0.6	89	25	73	25+	0	0			1.58	- 2.08	0.49	13		0.0	0						3	14	14	7.0	
WEST VIRGINIA																																
BECKLEY	2504	930.6	1016.9	79	57	68.0		90	17+	36	29	2	0	59	76	2.26	- 0.94	1.04	10	13	0.0	0	3.5	24	40	32	19	3	12	16	6.9	
CHARLESTON	939	982.4	1015.9	84	61	72.5	- 1.3	95	16	41	29	7	0	60	69	4.38	0.43	1.50	12	11	0.0	0	2.6	22	35	23	18	3	14	14	6.7	
ELKINS	1970	946.8	1017.2	81	54	67.3	- 1.5	92	17	34	29	3	0	57	76	1.74	- 2.49	0.76	13	9	0.0	0	2.9	26	39	26	27	4	12	15	6.7	
HUNTINGTON	827	986.1	1015.8	84	62	73.2	- 0.8	94	17+	43	29	8	0	63	76	4.24	1.42	1.06	10	10	0.0	0	2.4	21	35	24	17	5	13	13	6.3	
PARKERSBURG U	615			83	61	72.3	- 2.1	95	16	42	29	8	0			2.85	- 0.93	0.78	15		0.0	0			25	W	7+					57
WISCONSIN																																
GREEN BAY	682	988.8	1014.2	78	56	67.0	- 1.9	96	14	38	29	2	0	59	77	3.38	0.63	0.68	16	6	0.0	0	1.3	26	40	SW	6	7	9	15	6.4	56
LA CROSSE	651	990.2	1014.5	78	57	67.5	- 4.1	94	14	40	29	4	0	59	80	2.85	- 0.78	1.02	11	7	0.0	0	1.0	19	21	31	31	10	9	12	5.9	
MADISON	858	983.1	1014.1	78	55	66.7	- 2.8	93	13+	35	29	4	0	58	78	6.77	3.40	2.90	15	9	0.0	0	1.6	25	33	NW	18	9	7	15	6.1	63
MILWAUKEE	672	989.5	1014.6	75	59	66.8	- 1.0	91	14	44	29	1	0	59	78	6.15	3.09	1.42	14	9	0.0	0	1.4	23	29	SW	27+	10	8	13	5.6	66
WYOMING																																
CASPER	5338	839.5	1013.6	83	50	66.3	- 3.8	96	12	33	31	6	0	38	41	0.21	- 0.51	0.08	4	6	0.0	0	2.6	26	38	22	21	16	12	3	3.8	
CHEYENNE	6126	815.8	1015.2	79	51	64.7	- 3.0	90	13+	41	31	3	0	42	50	1.54	0.10	0.90	6	5	0.0	0	3.9	30	34	SW	29	15	8	8	4.1	73
LANDER	5563	831.0	1013.5	82	52	67.1	- 1.7	93	12+	39	31	4	0	41	42	0.18	- 0.29	0.16	3	6	0.0	0	2.9	27	39	SW	23	11	16	4	4.2	78
SHERIDAN	3964	880.1	1014.7	83	51	67.1	- 2.4	100	12	38	31	7	0	45	48	0.68	- 0.22	0.40	4	7	0.0	0	1.7	34	40	SW	22	12	10	9	4.9	65

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

A Maximum hourly average.
B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure	Pressure	Temperature	Temperature	Temperature	Temperature	Temperature	Temperature	Temperature	Temperature	Temperature	Temperature	Average dew point	Average relative humidity	Precipitation	Precipitation	Precipitation	Precipitation	Precipitation	Precipitation	Precipitation	Wind	Wind	Wind	Wind	Wind	No. of days (sunrise to sunset)	No. of days (sunrise to sunset)	No. of days (sunrise to sunset)	Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days	No. of days						No. of days	No. of days	Snow, Sleet	Snow, Sleet			Fastest mile (1.6 kilometers)	Fastest mile (1.6 kilometers)	Fastest mile (1.6 kilometers)					
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower			Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	°C.	°C.	C.	°C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
ALABAMA																																
BIRMINGHAM	189	994.6	1016.8	31.1	20.6	25.6	-1.7	34.4	16	15.6	2	8	0	21.1	80	90	- 33	24	9	9	0	0	0.4	18	14.8	E	19	3	17	11	6.3	52
HUNTSVILLE	183	993.9	1016.4	31.7	20.6	26.2	-0.6	36.1	16	15.0	29	9	0	19.4	70	86	2	34	9	9	0	0	0.4	21	16.1	31	27	7	14	10	6.2	
MOBILE	64	1008.5	1016.4	32.2	22.8	27.3	-0.5	35.6	15	20.0	3	18	0	22.8	82	120	- 44	32	13	14	0	0	0.6	17	10.3	1	28	2	16	13	6.7	
MONTGOMERY	59	1009.5	1016.6	31.1	21.7	26.4	-1.2	34.4	26	18.3	3	11	0	22.8	84	101	- 3	29	12	8	0	0	0.5	18	13.9	E	10	6	15	10	6.3	69
ALASKA												B																				
ANCHORAGE PRK STRIP	26			15.6	8.3	11.9	-1.2	20.0	1	1.7	25	0	0			49	- 16	13	12		0	0										
ANCHORAGE	44	1011.2	1015.9	17.8	9.4	13.5		21.7	7	2.8	27	2	0	7.2	67	40		13	14	0	0	0	1.4	19	13.0	18	10+	6	4	21	7.7	39
ANNETTE	34	1013.2	1017.2	20.0	10.6	15.2	0.5	26.1	7+	6.1	27	10	0	10.6	79	99	- 91	69	10	0	0	0	0.5	22	9.4	17	31	4	6	21	7.3	
BARROW	7	1010.5	1011.1	6.1	0.6	3.4	0.1	18.3	20	- 2.8	31+	0	15	1.7	88	23		7	12	0	5	T	0.4	18	13.0	27	24	1	7	23	8.6	
BARTER ISLAND	12	1010.2	1011.9	5.6	0.6	2.9	-1.5	13.9	5	- 4.4	31+	0	15	2.2	95	37	10	10	12	0	36	T	0.6	5	11.6	27	21	1	6	24	8.3	
BETHEL	38	1008.5	1014.2	12.8	7.2	10.1	-1.2	17.8	7	3.3	29	0	0	7.8	88	87	- 20	18	17	0	0	0	3.3	20	14.3	20	12	2	1	28	9.1	
COLD BAY	29	1011.9	1015.8	12.2	7.8	10.2	-0.6	15.0	31+	4.4	30+	0	0	7.8	88	40	- 68	10	16	0	0	0	3.8	17	21.0	15	5+	0	3	28	9.3	
FAIRBANKS	133	997.3	1014.4	16.7	6.1	11.5	-0.9	23.9	1	- 1.1	30	7	2	5.6	68	38	- 18	12	15	0	0	0	1.0	24	8.0	25	24	1	8	22	8.2	
JUNEAU	4	1015.9	1016.6	18.9	7.2	12.8	0.6	26.7	7	2.2	25	10	0	9.4	81	106	- 22	36	11	0	0	0	0.5	8	14.8	13	30	4	13	14	7.1	54
KING SALMON	13	1013.2	1015.4	15.0	6.7	10.8	-1.8	21.7	6	0.0	30+	1	2	7.2	82	64	- 23	23	11	0	0	0	2.5	19	11.2	25	23+	2	4	25	8.6	
KOTZEBUE	3	1009.5	1010.0	10.6	6.1	8.5	-1.8	16.1	4	1.1	29	0	0	6.1	85	95	40	25	21	0	T	T	2.1	21	13.9	30	2	1	2	28	9.3	
MC GRATH	102	1001.7	1014.3	15.0	7.2	11.1	-1.2	22.8	1	- 0.6	30	1	1	6.7	77	87	- 10	14	15	0	0	0	2.0	20	9.4	19	14	1	3	27	9.0	
NOME	4	1009.1	1010.0	10.0	5.0	7.6	-1.9	13.3	2	0.0	28	0	1	5.6	87	119	23	31	21	0	T	T	2.6	20	16.1	15	19	1	3	27	9.0	20
ST. PAUL ISLAND	7	1010.5	1011.5	10.0	6.1	8.0	-0.7	11.7	16+	3.3	16	0	0	7.2	96	101	17	22	18	0	0	0	3.7	19	17.9	20	22	1	1	29	9.6	
SHEMYA	37	1004.4	1008.2	10.6	8.3	9.3	-0.5	11.7	8+	6.7	21	0	0	8.3	94	83	29	24	19	0	0	0	2.3	23	21.5	23	18	1	1	29	9.5	
YAKUTAT	9	1015.2	1016.3	13.3	5.6	9.6	-2.5	17.2	4	1.1	27+	0	0	8.9	93	367	89	141	16	0	0	0	0.5	18	10.7	12	10	4	4	23	8.1	
ARIZONA																																
FLAGSTAFF	2131	791.4	1015.9	26.1	8.9	17.6	-0.1	30.0	6	2.2	24	0	0	5.6	51	26	- 46	9	7	13	0	0	1.4	20	10.3	17	22	15	11	5	3.9	
PHOENIX	340	970.9	1008.5	40.0	23.3	31.7	0.8	43.3	9+	16.1	24	31	0	13.3	36	5	- 24	4	3	3	0	0	0.6	25	20.1Y	S	13	22	7	2	2.1	94
TUCSON	788	924.1	1009.5	36.1	21.7	28.9	0.5	40.0	9	18.9	18+	30	0	13.9	44	28	- 45	8	7	10	0	0	0.7	20	21.0	W	30	21	7	3	2.9	88
WINSLOW	1492	852.7	1012.8	33.3	15.6	24.4	-1.0	37.2	7+	11.1	31	22	0	7.8	41	18	- 19	9	8	6	0	0	1.6	21	13.0	24	8	18	10	3	3.6	
YUMA	59	1001.4	1008.3	40.6	26.7	33.6	0.0	43.9	1	21.1	25	31	0	17.8	43	1	- 12	1	1	1	0	0	2.5	19	11.6	SE	14+	24	6	1	2.0	88
ARKANSAS																																
FORT SMITH	137	998.6	1015.0	35.0	18.9	27.2	-0.8	39.4	26	13.3	9+	30	0	18.3	65	97	23	41	6	7	0	0	0.6	9	17.9	SW	16	16	9	6	4.2	74
LITTLE ROCK	78	1006.1	1015.5	35.0	20.6	27.6	0.2	38.3	18	15.6	29	28	0	20.0	68	52	- 20	36	7	10	0	0	0.8	21	15.6	NW	31	14	15	2	3.9	79
TEXARKANA	113	1002.7	1015.6	33.9	21.1	27.4	-0.7	37.8	19	16.1	11	25	0			103	25	58	9	9	0	0	0.9	17				14	14	3	3.9	
CALIFORNIA																																
BAKERSFIELD	151	994.2	1011.4	35.6	20.6	27.9	0.3	38.9	7+	15.6	24	27	0	12.2	40	T	0	T	0	1	0	0	1.9	31	9.4	33	11	23	8	0	1.5	
BISHOP	1252			34.4	12.8	23.4	-0.1	38.9	5	7.2	25	26	0			15	12	10	7		0	0						18	9	4	3.0	
BLUE CANYON	1609			23.9	13.3	18.7	-0.6	28.3	6	9.4	22+	0	0			55	54	50	5		0	0			7.6	17	19	21	3	7	3.1	
BURBANK	221	986.1	1011.5	32.2	17.8	25.2	1.8	41.1	9	15.0	25+	17	0	15.6	64	1		1	1	1	0	0	2.3	15	6.3	16	18+	22	8	1	2.7	
EUREKA U	13			17.2	12.2	14.9	1.2	21.1	25	9.4	29+	0	0			9	7	8	2		0	0			11.2	N	28	4	10	17	7.1	53
FRESNO	100	1000.0	1011.4	35.0	16.7	26.0	-0.1	39.4	7	12.8	21	24	0	13.3	49	1	0	1	1	2	0	0	2.2	32	9.4	NW	11	25	4	2	1.7	94
LONG BEACH	10	1011.2	1012.4	28.3	17.8	23.1	0.7	36.1	13	14.4	1	6	0	15.0	68	4	4	4	1	2	0	0	1.3	24	7.6	28	13+	15	16	0	3.6	
LOS ANGELES	30	1008.5	1012.1	25.6	18.3	21.9	1.3	31.7	10	15.0	1	0	0	16.7	77	3	3	3	1	1	0	0	2.5	25	10.3Y	W	22+	8	17	6	4.8	
LOS ANGELES U	82			30.0	18.9	24.2	1.4	36.7	8	15.0	1	8	0			T	- 1	T	1		0	0			7.6	W	26	21	9	1	2.9	71
MT SHASTA R	1080			27.2	9.4	18.3	-0.9	33.9	6	4.4	13	3	0			50	45	14	9		0	0										
OAKLAND	2	1013.9	1014.0	22.2	15.6	18.8	0.9	30.6	13	13.9	7	0	0	13.9	79	2	1	2	1	1	0	0	3.9	28	9.8	28	20+	16	10	5	4.1	
RED BLUFF	104	999.0	1011.3	33.9	18.9	26.3	-0.9	40.6	5	15.6	23+	20	0	12.2	46	40	38	21	5	3	0	0	0.7	17	8.9	SW	10+	21	6	4	2.8	81
SACRAMENTO	5	1010.8	1011.8	33.3	15.0	24.3	0.9	37.8	5+	13.3	7+	22	0	13.3	59	17	16	17	1	1	0	0	2.4	21	8.9	SW	11	22	7	2	2.1	91
SANDBERG R	1377			28.9	17.8	23.2	0.3	33.9	9+	11.7	22+	6	0			7	5	4	4		0	0			14.8	34	19	19	10	2	2.5	
SAN DIEGO	4	1011.2	1012.3	25.6	18.9	22.2	0.1	31.7	13+	17.2	7+	0	0	16.7	75	T	- 2	T	0	0	0	0	1.7	26	7.6	NW	13+	16	10	5	4.0	72
SAN FRANCISCO	2	1013.9	1014.5	21.7	12.8	17.4	0.3	29.4	13	11.1	7+	0	0	12.2	77	7	7	7	1	1	0	0	5.0	30	14.3	W	21+	19	7	5	3.4	
SAN FRANCISCO U	16			19.4	13.3	16.2	1.0	27.2	13	11.1	7	0	0			12	11	12	1		0	0			13.0	W	20					69
SANTA CATALINA	478			27.8	18.3	23.2	1.8	35.6	9+	12.8	31+	5	0			1	- 1	1	2	1	0	0						21	9	1	2.5	
SANTA MARIA	72			24.4	12.2	18.2	1.3	31.7	11	8.3	26	0	0			T	- 1	T	0		0	0						19	12	0	3.4	
STOCKTON	7	1011.5	1012.6	33.9	17.2	25.4	0.8	38.9	1	13.9	31	21	0	13.3	53	9	9	9	1	2	0	0	3.2	30	10.3	26	20	23	7	1	1.9	
COLORADO																																
ALAMOSA	2297			25.6	6.1	15.9	-1.3	30.0	13	1.1	30	0	0			24	- 1	9	12		0	0						15	10	6	4.2	
COLORADO SPRINGS	1873	814.4	1014.8	25.6	12.2	18.8	-1.9	31.7	12	7.2	1	0	0	10.0	61	97	42	32	12	13	0	0	0.8	4	16.1	36	4	15	10	6	4.2	
DENVER	1610	838.8	1013.1	28.9	13.3	21.2	-0.7	36.1	12	7.8	31	8	0	8.9	52	27	- 6	12	7	5	0	0	0.8	19	13.4	NW	30	15	9	7	4.3	71
GRAND JUNCTION	1480	853.0	1011.7	32.8	17.2	24.8	0.6	38.3	9	12.2	31	20	0	6.7	38	17	- 10	7	8	8	0	0	1.0	11	19.2	N	30	15	10	6	4.3	73
PUEBLO	1428	857.4	1013.4	31.1	13.9	22.3	-1.3	35.0	12+	11.1	12+	12	0	11.1	56	68	21	34	10	12	0	0	0.6	7	17.9	NW	3	17	10	4	3.6	79

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	°C.	°C.	°C.	°C.	C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
CONNECTICUT																																
BRIDGEPORT	2	1015.2	1015.9	27.8	18.9	23.1	0.7	30.6	27+	9.4	30	0	0	17.8	74	46	- 67	30	6	2	0	0	2.1	23	18.8	28	28	9	12	10	5.7	
HARTFORD	52	1008.5	1014.7	28.9	15.6	22.1	0.3	34.4	16+	2.2	31	8	0	15.6	72	28	- 74	9	8	5	0	0	1.6	20	11.6	NW	30+	4	6	21	7.5	53
NEW HAVEN	2			26.1	17.2	21.8	0.4	30.0	16	7.2	31	0	0			59	- 49	34	6		0	0			10.7	NW	28	7	12	12	5.9	65
DELAWARE																																
WILMINGTON	24	1012.5	1015.5	28.3	17.8	22.9	-0.6	32.8	7	7.8	29	3	0	17.2	74	52	- 90	14	13	6	0	0	1.4	23	10.3	22	9	9	14	8	5.6	
DIST.OF COLUMBIA																																
WASH NATL AP	4	1013.2	1015.6	30.6	20.0	25.1	0.4	35.6	18	11.1	29	14	0	18.3	70	113	- 12	34	10	9	0	0	1.3	20	17.0	NW	18	9	12	10	5.3	62
FLORIDA																																
APALACHICOLA U	4			30.6	24.4	27.4	-0.1	33.3	15	22.2	12+	4	0			278	82	138	14	11	0	0			13.4	N	28	10	11	10	5.7	58
DAYTONA BEACH	9	1016.6	1018.1	31.1	22.2	26.6	-0.4	35.0	28+	20.0	10+	6	0	22.2	82	75	- 86	30	11	19	0	0	1.1	15	13.4	32	28	3	17	11	6.5	
FORT MYERS	5	1016.9	1017.3	32.8	23.9	28.2	0.0	33.9	23+	22.2	30	26	0	23.3	81	167	- 21	37	21	28	0	0	1.5	9	13.0	33	27	0	23	8	6.3	
JACKSONVILLE	7	1016.3	1017.3	32.8	23.3	28.1	0.2	35.6	25	21.7	16+	25	0	22.2	77	243	69	86	18	20	0	0	1.4	21	20.1	NE	15	2	20	9	6.3	60
KEY WEST	1	1015.6	1016.2	32.2	27.2	29.5	0.8	33.3	14	23.9	11	18	0	23.9	71	57	- 53	28	16	13	0	0	3.8	11	15.2	SE	11	2	19	10	6.3	75
LAKELAND U	65			32.8	22.8	27.6	-0.1	33.9	28+	20.6	11+	23	0			228	48	74	20		0	0						3	21	7	6.1	69
MIAMI	2	1016.6	1017.1	31.1	23.9	27.6	-0.3	32.2	26+	22.2	29+	3	0	22.8	77	126	- 51	37	14	12	0	0	2.5	11	8.0	11	13+	1	21	9	6.8	
ORLANDO	33	1013.5	1017.9	32.8	23.3	27.9	-0.3	34.4	27	22.2	29+	24	0	22.2	79	139	- 37	41	14	17	0	0	1.3	15	11.2	12	28+	4	13	14	6.4	
PENSACOLA	34	1012.9	1016.8	30.6	22.8	26.7	-0.8	34.4	15	20.6	11+	7	0	23.3	85	159	- 18	53	15		0	0	0.7	18	13.4	S	21					63
TALLAHASSEE	18	1014.9	1017.2	32.8	22.2	27.6	0.3	36.1	25	20.0	23	20	0	21.7	75	207	31	58	14	21	0	0	0.5	17	11.2	36	28	3	14	14	6.3	
TAMPA	6	1017.3	1017.5	32.2	22.8	27.5	-0.3	33.9	22	20.6	8	19	0	22.2	77	142	- 67	60	14	22	0	0	0.6	13	9.8	12	9	0	21	10	6.4	55
WEST PALM BEACH	5	1016.9	1017.5	32.2	23.9	27.9	-0.4	33.3	29+	21.7	3	22	0	22.2	72	61	-110	27	11	13	0	0	2.2	12	10.3	29	19	6	18	7	5.6	
GEORGIA																																
ATHENS	244	988.5	1016.8	32.2	20.0	26.1	-0.1	36.1	17	13.9	30	15	0	20.6	76	37	- 56	19	8	10	0	0	0.9	25	9.8	21	8	6	12	13	5.8	
ATLANTA	308	981.0	1017.1	30.6	20.0	25.2	-0.5	33.3	17+	16.1	31+	7	0	19.4	75	39	- 53	13	7	11	0	0	1.3	23	13.4	W	26	6	18	7	5.6	62
AUGUSTA	44	1011.2	1016.3	32.8	20.0	26.3	-0.5	35.6	26+	12.8	31	18	0	20.6	78	65	- 34	32	6	10	0	0	0.7	19	11.6	33	10	7	14	10	5.7	
COLUMBUS	117			32.8	20.6	26.9	-0.2	36.1	26	16.7	3	22	0	21.1	79	48	- 70	22	8		0	0	0.4	22	9.8	32	10+	7	12	12	6.0	
MACON	108	1004.7	1017.5	32.8	20.6	26.4	-0.9	36.1	27	16.7	31	19	0	21.1	80	81	- 25	33	11	9	0	0	0.8	22	13.0	NE	15	8	14	9	5.7	72
ROME	194			31.7	18.9	25.2	-0.6	35.6	16	13.9	30	14	0			68	- 28	28	12		0	0										
SAVANNAH	14	1015.2	1016.9	32.2	21.7	27.0	-0.2	35.0	27+	17.2	31	19	0	21.7	79	116	- 52	31	15	20	0	0	1.0	21	14.3	E	18	2	17	12	6.4	63
HAWAII																																
HILO	9	1014.2	1015.5	28.9	20.0	24.3	0.0	30.0	28+	18.3	25+	0	0	18.9	74	122	-169	32	26	0	0	0	0.3	29	13.4	11	25	3	18	10	6.3	51
HONOLULU	2	1014.6	1015.2	30.6	22.8	26.5	0.2	31.7	29+	19.4	15	0	0	18.9	65	22	- 1	14	12	0	0	0	4.5	6	13.9	NE	21	10	20	1	4.4	87
KAHULUI	15	1012.5		30.6	20.6	25.6	-0.6	32.2	1	18.3	15+	1	0			10	2	8	5	0	0	0	5.4	6	12.5	NE	31+	13	17	1	4.3	77
LIHUE	31	1011.2	1016.3	28.9	22.8	25.8	0.0	29.4	20	21.1	31+	0	0	20.0	74	72	10	26	23	0	0	0	4.6	6	9.8	NE	22+	5	25	1	5.2	68
IDAHO																																
BOISE	865	915.3	1013.6	29.4	13.9	21.7	-0.6	39.4	7	2.8	30	10	0	8.3	47	22	18	11	8	6	0	0	0.4	21	13.0	SW	2	14	8	9	4.5	78
IDAHO FALLS 42NW R	1460			27.8	7.2	17.6	-1.5	36.7	8	- 2.8	31	5	1			16	4	7	6						15.2	SW	28					
IDAHO FALLS 46W R	1503			26.7	7.8	17.3	-1.9	35.0	8	- 1.7	31	5	2			14	2	5	6		0	0	1.7	23	20.6	SW	11					
LEWISTON	431			30.0	15.0	22.3	0.3	40.0	1	5.6	30	12	0			36	25	10	7		0	0						15	6	10	4.7	
POCATELLO	1358	864.5	1014.6	28.3	9.4	18.8	-2.4	36.7	8	0.6	31+	7	0	6.7	51	20	6	8	6	10	0	0	2.1	22	17.9	SW	12	12	11	8	4.6	80
ILLINOIS																																
CAIRO U	96			31.7	20.6	25.8	-0.8	37.2	18	11.7	29	12	0			113	34	71	7		0	0			8.9	S	31	13	10	8	4.7	82
CHICAGO O HARE	201	990.5	1014.6	25.6	14.4	20.0	-1.8	32.8	15+	5.0	29	2	0	16.1	78	163	81	41	12	9	0	0	0.6	23	16.5	32	26	7	13	11	6.2	
CHICAGO MIDWAY	185	992.2		26.1	16.7	21.3	-2.2	33.3	15	6.1	29	3	0	15.6	72	172	92	37	12	9	0	0	1.0	23	19.2	NW	26	9	11	11	6.2	64
MOLINE	177	992.9	1014.0	27.2	16.7	21.7	-1.4	34.4	15	8.3	29	4	0	17.2	78	236	147	93	14	9	0	0	1.2	23	16.5	S	7	9	9	13	5.8	61
PEORIA	199	991.2	1014.9	27.2	16.1	21.8	-1.7	34.4	15	6.7	29	4	0	16.1	73	219	146	67	15	8	0	0	0.8	21	14.8	NW	3	9	8	14	5.6	59
ROCKFORD	221	987.5	1014.1	26.1	16.1	20.9	-1.6	33.3	5	6.1	29	3	0	16.1	76	235	130	56	14	10	0	0	0.9	23	21.5	26	26	9	10	12	5.6	
SPRINGFIELD	179	993.2	1014.9	28.3	16.7	22.4	-1.6	35.0	5	7.2	29	6	0	17.2	74	150	80	51	13	13	0	0	1.3	20	14.3	SW	27	11	10	10	5.4	66
INDIANA																																
EVANSVILLE	116	1001.7	1015.6	30.0	17.2	23.7	-1.5	35.6	18	8.3	29	11	0	17.8	73	97	19	50	6	7	0	0	0.7	27	13.4	SW	26	11	14	6	4.8	74
FORT WAYNE	241	985.4	1015.1	26.7	15.6	21.1	-1.4	35.0	16+	3.3	29	6	0	15.0	71	75	- 2	27	15	6	0	0	1.6	25	24.6	N	27	6	12	13	6.4	58
INDIANAPOLIS	242	986.8	1015.5	27.8	16.1	21.7	-1.4	33.9	16+	5.0	29	5	0	16.7	74	83	6	18	10	6	0	0	1.0	24	17.0	NW	26	7	13	11	5.6	71
SOUTH BEND	236	987.1	1014.7	25.6	15.0	20.1	-2.2	33.9	16+	4.4	29	5	0	15.0	75	138	48	24	12	8	0	0	1.4	24	17.9	32	27	6	11	14	6.5	
IOWA																																
BURLINGTON	212			27.8	16.1	22.0	-1.7	35.0	15	8.3	29	6	0	17.8	78	186	95		11	10	0		0.8	25	20.1	29	25	10	8	13	5.6	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	°C.	°C.	C.	°C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
IOWA																																
DES MOINES	286	980.0	1014.3	28.9	16.7	22.7	-0.7	37.2	13	10.6	28	10	0	16.1	72	49	- 44	25	9	6	0	0	0.6	20	11.6	NE	26	10	11	10	5.2	63
DUBUQUE	325			25.0	15.0	20.2	-1.2	32.2	5	6.7	29	1	0			212	117	70	13		0	0						8	8	15	6.3	
SIOUX CITY	334	974.6	1013.7	28.3	16.1	22.2	-1.7	36.7	13	8.9	31+	6	0	16.1	71	47	- 21	25	10	9	0	0	0.7	15	11.6	NW	27	8	16	7	5.2	65
WATERLOO	265	982.7	1013.9	26.1	13.3	19.9	-2.2	35.0	13	5.0	28	4	0	15.6	78	180	93	73	9	8	0	0	0.6	20	15.6	33	17	11	7	13	5.6	
KANSAS																																
CONCORDIA	448	961.4	1013.2	30.6	17.8	24.3	-1.8	37.8	12	12.2	28	17	0	15.6	63	133	53	76	8	9	0	0	1.7	18	13.9	NW	17	11	11	9	4.7	71
DODGE CITY	787	924.8	1013.4	31.7	17.8	24.6	-1.7	36.7	26	11.7	31	17	0	15.0	62	41	- 19	18	10	14	0	0	2.2	17	25.5	NW	9	11	12	8	5.1	69
GOODLAND	1111	889.6	1013.8	30.0	13.9	21.9	-1.8	37.8	12	9.4	31	15	0	12.2	61	75	17	36	10	7	0	0	1.6	16	11.6	20	5	17	8	6	4.1	
TOPEKA	267	982.7	1014.0	30.0	17.8	23.8	-1.9	37.8	26	12.8	31+	10	0	17.8	71	90	- 19	43	11	11	0	0	1.0	19	17.0	W	30	12	10	9	5.1	71
WICHITA	403	966.8	1013.6	32.2	19.4	25.7	-1.4	37.2	26	13.9	31	17	0	16.7	61	125	52	69	10	14	0	0	2.2	16	13.4	S	29	8	15	8	5.1	69
KENTUCKY																																
COVINGTON	265	984.4	1015.7	28.3	16.7	22.5	-0.9	34.4	18+	6.1	29	8	0	16.1	73	82	16	20	8	5	0	0	1.3	24	10.3	26	1	9	10	12	6.0	
LEXINGTON	294	981.4	1016.1	30.0	17.2	23.6	-0.8	35.6	18+	5.6	29	10	0	15.0	63	49	- 33	43	10	7	0	0	1.5	20	9.8	21	31+	9	13	9	5.4	
LOUISVILLE	144	998.0	1015.3	30.0	18.3	24.0	-0.6	35.6	27	9.4	29	10	0	16.7	67	54	- 22	28	6	7	0	0	0.8	25	10.3	W	26	10	13	8	5.4	69
LOUISIANA																																
ALEXANDRIA	28	1012.2	1016.2	33.3	20.0	26.7	-1.1	35.6	19+	16.7	2	24	0	21.1	78	62	- 26	23	11	13	0	0	0.7	20	12.5	33	8	7	12	12	6.2	
BATON ROUGE	20	1013.5	1016.4	31.7	21.1	26.4	-1.6	33.9	20	18.9	11	14	0	21.1	79	179	45	34	19	15	0	0	0.2	20	15.6	6	20	2	15	14	6.8	
LAKE CHARLES	4	1014.9	1016.0	31.7	21.7	26.7	-1.2	35.0	1	20.0	11+	15	0	21.7	82	172	51	52	15	18	0	0	0.8	18	13.4	9	20	4	14	13	6.7	
NEW ORLEANS	1	1015.2	1016.1	30.0	20.6	25.4	-2.3	32.2	16+	17.2	24	2	0	21.7	83	161	25	48	19	18	0	0	0.4	21	12.5	6	31	4	16	11	6.3	
SHREVEPORT	77	1006.1	1015.3	33.9	21.7	27.8	-0.9	38.3	20	18.3	3+	27	0	21.1	73	46	- 19	29	4	5	0	0	1.7	19	12.5	18	5	11	13	7	5.1	73
MAINE																																
CARIBOU	190			21.7	10.6	16.1	-0.9	32.2	15	1.1	31	1	0			91	- 2	25	12		0	0						3	10	18	7.6	
PORTLAND	19	1011.9	1014.2	25.6	12.8	19.2	-0.2	32.8	7	0.6	31	2	0	13.9	74	47	- 15	17	11	5	0	0	1.6	22	13.0	W	29	5	12	14	6.9	60
MARYLAND																																
BALTIMORE	45	1010.2	1015.6	30.0	18.3	24.2	0.3	35.6	18	10.0	30+	13	0	17.8	72	120	- 12	28	9	6	0	0	1.3	23	18.3	NW	19	9	9	13	5.9	54
MASSACHUSETTS																																
BLUE HILL OBS R	192			27.2	15.6	21.2	0.4	34.4	7	3.9	30	4	0			41	- 62	15	8		0	0			19.7	NW	28					65
BOSTON	5	1013.5	1014.6	26.1	16.7	21.4	-0.7	33.9	7	8.3	31	2	0	15.6	74	38	- 55	18	8	3	0	0	2.4	23	15.6	W	29	9	9	13	5.8	65
NANTUCKET	13	1015.2	1015.4	24.4	16.7	20.3	0.3	29.4	13	3.9	31	0	0	16.7	83	17	- 76	10	6	4	0	0	2.5	20	13.0	SW	29	6	14	11	6.0	67
PITTSFIELD	357			25.6	12.8	19.0	0.0	32.2	16+	0.0	31	2	1			119	20	34	12		0	0										
WORCESTER	301	979.0	1015.5	24.4	14.4	19.7	-0.5	32.2	7	3.3	30	1	0	12.8	67	86	- 21	33	11	4	0	0	2.4	25	13.0	28	28	8	10	13	6.2	
MICHIGAN																																
ALPENA	210			23.3	10.0	16.7	-1.4	35.0	14	- 0.6	30	2	1			93	16	25	15		0	0			11.6	NE	9	6	9	16	6.7	57
DETROIT	189	991.9	1014.4	26.1	16.1	21.1	-1.6	36.1	15	7.2	29	4	0	15.0	72	82	10	25	15	7	0	0	1.4	26	14.8	NW	27	7	9	15	6.8	50
DETROIT M WAYNE CO	193	990.5	1014.5	26.1	14.4	20.0	-2.2	35.6	15	5.6	29	4	0	15.0	74	176	104	40	17	9	0	0	1.6	23				8	8	15	6.8	
DETROIT WILLOW RUN	217	987.1	1014.9	25.0	13.9	19.6	-3.0	34.4	15	4.4	29	4	0	13.9	71	112	39	28	16	7	0	0	1.6	23	11.2	27	27	8	8	15	6.5	
FLINT	235	986.8	1014.4	25.6	13.9	19.8	-0.3	36.1	14	4.4	29	4	0	14.4	73	116	35	57	12	6	0	0	1.4	24	10.3	29	27+	4	13	14	6.6	
GRAND RAPIDS	239	985.4	1014.3	25.6	14.4	19.9	-1.4	32.8	15+	5.6	29	3	0	14.4	75	136	68	39	15	6	0	0	1.4	25	17.9	SE	27	5	12	14	6.6	48
HOUGHTON LAKE	351	972.9	1014.7	23.3	11.7	17.2		32.2	14	4.4	3	1	0	12.8	76	128	6	36	11	5	0	0	0.9	26	8.0	26	8	6	9	16	6.6	
LANSING	256	983.1	1014.5	26.7	13.9	20.2	-1.1	36.7	14	2.8	3	6	0	15.0	77	93	16	43	13	4	0	0	1.7	25	19.2	SW	16	5	12	14	6.7	49
MARQUETTE U	206			21.7	12.2	17.0	-1.8	37.2	14	6.7	28+	2	0			77		21	15		0	0			12.5	SW	14	4	13	14	6.8	65
MUSKEGON	191	991.5	1014.1	24.4	15.0	19.8	-1.5	31.1	6	6.1	29	0	0	14.4	75	130	56	44	13	7	0	0	0.8	24	14.3	21	6	8	8	15	6.3	
SAULT STE MARIE	220	987.5	1013.7	20.6	11.1	15.9	-1.9	30.6	14	3.3	30	0	0	12.2	81	99	26	42	11	5	0	0	0.8	30	10.7	22	11	6	7	18	7.0	51
MINNESOTA																																
DULUTH	435	963.4	1014.6	22.8	9.4	16.2	-1.5	31.7	12	2.2	28	0	0	12.2	77	96	- 1	31	12	6	0	0	0.4	21	14.3	SW	5	4	13	14	6.8	62
INTERNATIONAL FALLS	359	971.2	1014.0	23.9	9.4	16.6	-0.7	33.3	11	1.1	28	2	0	11.7	76	73	- 19	32	13	8	0	0	0.4	24	17.9	32	12	6	14	11	6.2	
MINNEAPOLIS	254	984.1	1013.9	26.1	14.4	20.3	-0.8	35.0	13	6.1	28	4	0	13.3	66	103	22	40	11	6	0	0	0.2	16	13.0	N	2	10	10	11	5.9	60
ROCHESTER	395	967.5	1014.6	24.4	13.9	19.1	-1.9	31.1	13	5.6	28	0	0	14.4	76	86	- 10	21	14	8	0	0	1.0	23	14.3	30	31	11	9	11	5.7	
ST CLOUD	315	976.6	1013.9	25.6	13.3	19.3	-1.1	35.0	12	3.9	28	3	0			118	23	48	11		0	0						9	10	12	5.8	
MISSISSIPPI																																
JACKSON	94	1004.7	1016.3	32.8	20.0	26.4	-1.4	34.4	7	15.0	2	26	0	21.1	80	92	7	33	11	13	0	0	0.7	16	10.3	S	8	6	16	9	5.7	65
MERIDIAN	88	1005.8	1016.8	32.8	20.0	26.2	-1.2	34.4	17+	15.6	3+	20	0	21.1	82	46	- 44	19	11	15	0	0	0.4	21	13.0	35	8	1	15	15	6.9	
VICKSBURG U	71			31.7	22.2	26.9	-0.7	33.9	19+	20.0	9+	17	0			57	- 20	36	6		0	0			11.2	W	8+	12	13	6	4.7	74

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days		Average dew point		Total	Departure from normal	Greatest in 24 hours	No. of days		Snow, Sleet		Resultant speed	Resultant direction	Fastest mile (1.6 kilometers)			Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
												Max. 32.2 °C or above	Min. 0 °C or lower						.25 mm. or more	With thunderstorms	Total	Maximum depth on ground			Speed	Direction	Date					
	M.	Mb.	Mb.	°C.	°C.	°C.	°C.	C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
MISSOURI																																
COLUMBIA	237	986.8	1014.5	29.4	18.3	23.9	-1.2	35.0	26	11.7	29	10	0	17.2	69	92	- 5	27	12	8	0	0	1.4	20	13.0	N	30	13	8	10	5.0	69
KANSAS CITY	226	987.5	1013.8	30.6	20.0	25.1	-1.5	35.6	4+	14.4	29+	12	0	17.2	65	159	64	45	15	11	0	0	1.3	19	14.3	S	15	11	7	13	5.5	75
SAINT JOSEPH	247			31.1	17.8	24.2	-1.1	35.0	15+	11.1	9	12	0	17.2	73	121	14		9	12	0	0	0.8	19	14.3	30	17	14	10	7	4.4	
ST LOUIS	163	995.3	1015.3	30.0	18.3	24.3	-0.6	36.1	5	8.3	29	11	0	16.7	66	91	14	26	12	10	0	0	1.2	23	17.0	NW	27	14	5	12	5.3	70
SPRINGFIELD	386	970.9	1015.5	31.1	16.7	24.0	-1.6	35.6	15+	10.0	10	14	0	17.2	72	130	46	43	9	10	0	0	1.6	17	20.6	W	16	12	11	8	4.6	65
MONTANA																																
BILLINGS	1087	892.0	1013.8	28.3	13.3	20.8	-1.3	38.3	12	5.6	30	9	0	7.8	50	89	66	63	7	5	0	0	1.3	30	15.6	NW	25	11	14	6	4.7	74
GLASGOW	696			27.8	13.9	20.8	0.9	37.8	12	6.7	29	7	0			76	39	62	8		0	0						11	10	10	5.2	
GREAT FALLS	1116	889.3	1013.7	27.8	12.2	20.0	0.7	37.8	9	2.8	30	7	0	7.8	50	40	8	11	7	8	0	0	2.1	24	17.0	W	12	11	9	11	4.8	83
HAVRE	787			27.2	12.2	19.7	0.2	35.6	10	3.9	31	7	0			70	42	47	12		0	0			16.5	W	13	13	9	9	4.7	80
HELENA	1167	882.2	1015.3	26.7	11.1	18.8	-0.2	35.0	9	4.4	31+	7	0	8.3	55	49	26	18	11	9	0	0	1.4	28	15.6	W	28	15	8	8	4.6	70
KALISPELL	904	911.6	1015.2	25.0	10.0	17.4	0.1	33.9	9+	1.1	31	5	0	10.6	70	88	60	25	13	4	0	0	0.8	20	15.6	29	28	8	10	13	5.8	
MILES CITY	801	922.1	1013.4	29.4	14.4	21.8	-0.8	39.4	12	5.0	29	10	0	7.8	46	6	- 26		6	4	0		1.0	30								
MISSOULA	972	905.5	1016.2	26.1	10.0	17.8	-0.4	33.9	9+	0.6	30	6	0	8.9	64	57	39	27	11	7	0	0	0.3	25	13.0	28	28+	11	8	12	5.4	68
NEBRASKA																																
GRAND ISLAND	561	948.9	1013.8	31.1	15.6	23.1	-0.9	39.4	12	8.3	31	16	0	13.9	63	85	25	60	9	6	0	0	1.1	20	19.2	24	29	15	9	7	4.2	
LINCOLN U	351			29.4	17.8	23.8	-1.6	37.2	12	11.1	28	12	0			55	- 31	23	9		0	0			15.6	S	29	11	10	10	5.1	61
NORFOLK	471			28.9	15.6	22.2	-1.8	36.7	13+	7.8	31	9	0			71	4	57	6		0	0						13	8	10	4.8	
NORTH PLATTE	846	917.0	1012.9	28.9	13.9	21.4	-2.2	37.8	12	6.7	31	6	0	13.9	67	46	- 8	32	7	6	0	0	0.7	14	16.5	NW	6	15	6	10	4.7	72
OMAHA	298	979.0	1013.9	30.0	16.7	23.4	-1.2	37.2	12	10.0	28	11	0	17.2	71	52	- 49	25	12	6	0	0	1.0	17	13.0	SW	17	14	7	10	5.2	74
SCOTTSBLUFF	1206	880.5	1013.7	29.4	12.8	20.9	-1.7	36.7	13+	7.2	31	4	0	11.1	59	13	- 12	10	4	8	0	0	1.4	11	11.6	13	22+	18	4	9	4.1	
VALENTINE	789			30.0	13.3	21.7	-1.0	42.2	13	2.8	31	9	0			23	- 35	19	5		0	0			14.8	SW	28	14	10	7	4.6	80
NEVADA																																
ELKO	1539	846.6	1014.8	29.4	8.9	18.9	-0.4	35.6	7	- 1.7	31	7	1	6.1	52	33	26	19	10	10	0	0	0.4	21	13.9	12	9	13	10	8	4.9	
ELY	1906	811.4	1013.3	27.2	7.8	17.6	-1.4	32.2	8+	1.1	31	2	0	4.4	50	39	26	12	10	11	0	0	1.8	20	13.4	NW	19	13	11	7	4.8	76
LAS VEGAS	659	934.6	1008.8	38.9	23.3	31.1	0.4	42.8	7	17.8	27	31	0	5.0	23	10	- 3	5	4	6	0	0	2.6	22	18.8	SW	10	21	8	2	2.5	89
RENO	1342	866.6	1014.2	30.0	7.8	18.8	0.2	36.1	6	3.3	27+	7	0	7.8	55	42	38	25	7	6	0	0	0.8	26	12.5	SW	9	18	8	5	3.7	94
WINNEMUCCA	1310	868.3	1014.0	29.4	8.9	19.2	-0.6	36.1	7	0.6	31	5	0	4.4	43	18	14	8	6	8	0	0	0.5	29	19.2	SW	11	17	5	9	4.0	72
NEW HAMPSHIRE																																
CONCORD	104	1002.0	1014.7	26.7	12.2	19.2	-0.4	35.6	7	- 1.7	31	4	2	13.3	74	79	4	30	14	9	0	0	1.1	22	11.6	W	28+	7	11	13	6.3	52
MT WASHINGTON OBS	1909			11.1	5.0	7.9	-0.8	20.0	16	- 6.7	30	0	4			208	39	55	17	6	64	T			46.9Y	W	30	2	6	23	8.6	24
NEW JERSEY																																
ATLANTIC CITY	20	1013.5	1016.1	28.3	16.7	22.3	-0.9	34.4	19	4.4	31	4	0	17.2	75	61	- 64	20	8	2	0	0	2.2	22	12.5	30	28	7	15	9	5.6	68
ATLANTIC CITY U	3			26.7	19.4	22.9	-0.2	31.1	13	11.7	31+	0	0			140	9	51	8						13.4	W	28					
NEWARK	3	1014.2	1015.3	28.9	18.9	23.6	-0.5	32.8	27+	10.0	30+	5	0	16.1	66	73	- 40	22	11	6	0	0	1.9	22	14.3	22	8	7	13	11	6.3	
TRENTON U	17			28.3	17.8	23.1	-0.2	32.2	17+	10.0	31+	3	0			141	20	53	13		0	0			14.8	NW	18	4	15	12	6.1	59
NEW MEXICO																																
ALBUQUERQUE	1618	840.2	1012.4	31.7	16.7	24.1	-0.4	35.6	28+	12.2	15	15	0	8.9	43	15	- 18	11	4	6	0	0	0.8	16	16.5	S	2	15	12	4	3.9	80
CLAYTON	1515			28.9	14.4	21.6	-1.3	33.3	26	11.7	7	4	0			92	39	51	10		0	0						15	10	6	4.2	
RATON	1944			27.8	10.6	18.9	-1.2	32.2	12	7.8	26+	1	0			28	- 39	12	15		0	0						8	14	9	5.3	
ROSWELL	1102			32.8	17.2	24.8	0.1	37.8	27	14.4	13	20	0			21	- 20	6	7	8	0	0			13.4	26	19	12	15	4	4.3	75
SILVER CITY	1638			31.1	15.6	23.3	-0.7	35.6	7	13.9	20+	11	0			66	5	19	12		0	0						18	12	1	3.6	
NEW YORK																																
ALBANY	84	1004.1	1014.6	27.2	14.4	20.8	-0.3	33.9	16+	2.8	31	4	0	15.0	71	110	32	36	15	5	0	0	2.1	21	13.4	NW	29+	6	7	18	7.2	48
BINGHAMTON	485	957.3	1015.2	24.4	13.9	19.2	0.1	33.3	15	2.8	30	4	0	13.9	73	108	17	39	14	6	0	0	1.9	24	15.2	W	17	5	7	19	7.0	56
BUFFALO	215	989.2	1014.3	25.0	15.0	19.9	-0.3	32.2	7	3.3	30	1	0	15.0	75	105	27	27	14	8	0	0	2.4	24	21.0	SW	17	2	12	17	7.6	54
NEW YORK U	40	1012.5		27.8	18.3	22.9	-1.1	32.8	27	10.0	30+	1	0	16.1	72	69	- 43	22	10	4	0	0	1.3	21	12.5	NW	29	11	11	9	5.0	65
J.F. KENNEDY	5	1014.6	1015.4	26.7	17.8	22.4	-1.2	31.7	27	7.8	31	0	0	17.2	74	54	- 73	23	10	4	0	0	2.2	21	20.6	30	28	7	16	8	5.8	
NEW YORK LA GUARDIA	3	1013.5	1015.3	28.3	20.0	24.3	0.2	32.8	27	11.7	29	3	0	16.7	67	51	- 78	26	11	5	0	0	1.7	22	13.0	W	28	7	15	9	5.7	
ROCHESTER	167	994.9	1014.8	26.1	14.4	20.2	-0.7	35.6	6	2.2	30	4	0	13.9	69	75	6	36	11	5	T	0	2.2	24	13.9	W	29	5	9	17	6.8	61
SYRACUSE	125	999.3	1013.8	26.7	14.4	20.6	-0.6	36.1	15	4.4	31+	5	0	14.4	71	50	- 33	11	12	3	0	0	1.5	26	14.3	S	31+	8	7	16	6.5	47
NORTH CAROLINA																																
ASHEVILLE	652	942.8	1017.9	27.8	15.6	21.7	-0.2	31.7	15	8.9	30	0	0	17.8	84	102	- 23	24	14	11	0	0	0.1	31	13.4	33	19	6	11	14	6.3	63
CAPE HATTERAS R	2	1016.3	1016.5	29.4	22.2	25.8	0.5	32.8	27	16.1	30	2	0	21.7	79	71	- 92	33	8	10	0	0	1.9	22	13.9	WSW	29	6	9	16	6.6	76
CHARLOTTE	224	989.2	1016.2	31.1	20.0	25.6	-0.4	35.6	18	11.7	30	12	0	20.0	75	124	17	39	9	10	0	0	0.8	22	12.5	S	7	9	12	10	5.4	73

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No of days								No of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm	Mm.	Mm			Mm.	Mm.	M.p.s.		M.p.s.							%
NORTH CAROLINA																																
GREENSBORO	273	985.4	1016.5	30.6	19.4	25.0	0.4	35.0	18+	8.9	30	11	0	19.4	76	99	- 16	71	10	9	0	0	1.1	22	11.2	NW	18	11	6	14	5.8	69
RALEIGH	132	1000.7	1016.1	31.1	19.4	25.1	0.2	34.4	27	7.8	30	11	0	19.4	76	76	- 56	32	10	12	0	0	1.3	20	10.7	18	17	9	12	10	5.5	63
WILMINGTON	9	1015.2	1016.7	31.7	21.7	26.8	0.4	35.6	27	15.0	30	14	0	21.7	78	269	94	100	13	13	0	0	1.0	21	16.1	E	17	3	18	10	6.3	68
NORTH DAKOTA																																
BISMARCK	502	954.6	1013.6	26.7	11.7	19.3	-1.4	35.6	12	2.8	30	5	0	11.7	64	86	42	68	8	4	0	0	0.1	8	14.8	SE	28	7	17	7	5.7	73
FARGO	273	981.7	1014.0	26.1	12.8	19.2	-1.7	37.8	13	2.2	28	3	0	12.8	68	65	- 10	31	9	7	0	0	0.4	15	14.3	SW	5	7	15	9	5.8	61
WILLISTON	579			27.8	12.2	19.8	-0.3	37.8	12+	5.0	31	8	0			31	- 6	12	5		0	0			16.1	NW	13	10	9	12	5.7	72
OHIO																																
AKRON	368	971.9	1015.7	26.7	14.4	20.7	-1.3	33.9	17+	5.6	29	6	0	14.4	72	106	27	39	15	9	0	0	1.4	24	11.2	25	1	7	10	14	6.6	
CINCINNATI ORS	232			29.4	17.8	23.6	-0.7	35.6	17+	6.7	29	11	0			75	- 9	24	10		0	0			8.9	SW	9					60
CLEVELAND	237	986.1	1015.0	26.1	15.0	20.4	-0.7	33.3	15+	5.0	29	2	0	15.0	74	91	8	29	14	7	0	0	1.8	23	17.0	W	1	5	10	16	6.7	54
COLUMBUS	247	986.1	1015.8	27.8	15.6	21.7	-1.2	34.4	17+	3.9	29	6	0	15.0	69	117	45	28	12	9	0	0	1.0	23	19.2	NW	18	6	11	14	6.5	56
DAYTON	305	980.0	1015.5	29.4	16.7	22.8	-0.3	36.7	16+	4.4	3	8	0	14.4	63	34	- 39	7	10	5	0	0	1.8	24	14.8	W	27+	3	15	13	6.6	72
MANSFIELD	395			25.6	13.9	19.6	-1.7	33.3	16	4.4	29	3	0			84	2	26	15	9	0	0						9	6	16	6.5	
TOLEDO	206	990.2	1015.1	25.6	13.9	19.6	-2.1	33.9	15	2.8	29	3	0	15.6	81	215	131	53	15	9	0	0	1.6	24	21.0	W	27	6	10	15	6.5	55
YOUNGSTOWN	359	973.6	1015.7	25.6	13.3	19.6	-1.5	32.8	15	5.0	29	3	0	14.4	76	104	15	26	14	8	0	0	1.3	23	8.9	30	28+	7	8	16	6.7	
OKLAHOMA																																
OKLAHOMA CITY	390	968.8	1013.9	33.3	20.6	27.0	-1.2	38.3	27	17.2	2	23	0	18.3	63	86	22	35	9	10	0	0	3.1	15	17.9	NW	6	18	9	4	3.7	81
TULSA	198	990.5	1014.4	35.0	20.6	27.6	0.1	40.0	27	16.1	31+	27	0	17.8	62	94	17	47	6	7	0	0	2.5	17	13.4	NW	15	17	10	4	4.0	83
OREGON																																
ASTORIA	2	1016.3	1017.0	21.1	12.2	16.5	0.4	27.8	31	6.1	29	0	0	12.8	82	50	12	22	9	0	0	0	1.5	24	8.9	29	29+	5	9	17	7.2	
BURNS U	1265	874.0	1015.2	26.1	8.9	17.7	-1.9	33.9	8+	0.6	30	4	0	6.1	53	28	21	22	6		0	0	0.8	32				13	12	6	4.4	
EUGENE	109	1002.7	1015.9	27.2	12.2	19.7	0.8	33.9	6	6.7	28	5	0	12.2	70	23	13	13	6	2	0	0	1.2	30	10.7	36	29	12	5	14	5.4	
MEACHAM	1234			22.2	10.0	16.2	-0.3	33.3	1	1.7	29	2	0			124	111	28	12		0	0						13	7	11	4.8	
MEDFORD	396	967.8	1014.8	30.6	12.8	21.4	-0.1	36.1	31	5.6	29	16	0	10.6	58	39	34	15	8	3	0	0	1.3	30	11.6	14	11	15	6	10	4.1	
PENDLETON	452	961.7	1014.4	29.4	14.4	21.9	-0.2	39.4	1	6.7	30	12	0	7.2	44	31	24	15	6	3	0	0	1.3	26	13.0	27	3	17	6	8	3.8	
PORTLAND	6	1014.6	1015.7	26.7	13.9	20.3	1.1	32.8	17+	7.8	29	5	0	12.8	67	19	2	11	7	2	0	0	1.7	31	8.9	NE	30	12	6	13	5.4	71
SALEM	60	1008.8	1016.0	27.2	11.7	19.3	0.3	33.3	6	3.3	29	4	0	11.1	65	25	14	12	7	3	0	0	0.9	30	10.3	35	30	12	5	14	5.4	
SEXTON SUMMIT R	1169	884.5	1014.3	22.8	10.6	16.8	-0.5	30.0	31	3.3	28	0	0			34	27	18	6		0	0	2.5	34	11.2	33	28+	16	8	7	3.9	
PACIFIC AREA																																
CANTON ISLAND	2			31.1	25.0	28.3	-0.3	32.2	31+	22.2	21	9	0			138	74	49	14		0	0						3	9	19	7.7	
ENIWETOK	4	1008.8	1009.5	31.1	25.6	28.4	0.1	32.2	27+	21.1	7	4	0	24.4	79	117	- 56	32	20	3	0	0	4.2	9								
TAGUAC GUAM R	110			30.0	21.7	26.0	-0.3	31.7	31+	20.0	15+	0	0			98	-228	21	20		0	0			8.9	SE	11					53
JOHNSTON	2	1012.2	1012.9	29.4	24.4	26.9	-0.6	30.0	28+	22.8	9	0	0	21.7	74	37	- 20	11	14	0	0	0	6.4	10	14.3	E	29	4	18	9	6.2	79
KOROR R	29	1006.1	1009.9	30.6	23.9	27.2	-0.1	32.2	10	22.2	30	1	0	23.9	86	426	25	96	18	4	0	0	1.1	25	9.4	SW	29	0	0	31	10.0	60
KWAJALEIN	2	1008.8	1009.6	30.6	25.0	27.7	0.0	32.2	14	22.8	15+	1	0	23.9	81	204	- 39	34	21	2	0	0	2.9	8	13.0	11	7	1	6	24	8.6	
MAJURO	3	1009.1	1009.4	30.6	25.0	27.8	1.1	32.2	13	22.8	18	1	0	23.3	78	176	-121	58	22	1	0	0	2.1	8	12.1	NE	19	2	7	22	8.1	65
MARCUS ISLAND	6			31.7	25.6	28.7		33.9	15	23.3	29+	15	0			137		51	18		0	0						6	10	15	7.0	72
PONAPE R	37	1003.7	1009.2	31.1	22.2	26.7	0.3	32.2	30+	21.1	4	2	0	23.9	89	256	-159	45	24	7	0	0	0.9	11	7.6	NE	7	0	7	24	8.8	41
TRUK MOEN ISLAND	2	1008.8	1009.0	30.0	23.9	27.1	0.2	31.1	26+	22.8	14	0	0	23.9	83	232	- 93	51	16	0	0	0	0.8	36	11.2	N	1	0	10	21	8.5	66
WAKE	3	1011.9	1012.1	30.0	25.0	27.5	-0.5	31.1	31+	22.8	16	0	0	22.8	77	102	- 78	36	21	1	0	0	4.1	7	16.5	5	16	3	14	14	7.1	
YAP R	17	1007.1	1008.8	30.0	23.9	27.1	-0.3	31.1	25+	23.3	29+	0	0	24.4	87	315	- 59	73	21	2	0	0	0.6	24	7.2	SW	29+	0	0	31	9.9	37
PENNSYLVANIA																																
ALLENTOWN	115	1001.7	1015.5	27.8	15.6	21.7	-0.5	34.4	16	7.2	31+	4	0	16.1	73	150	37	38	13	6	0	0	1.6	24	15.6	29	28	5	17	9	6.0	
ERIE	223	988.5	1015.0	25.0	15.6	20.1	-0.9	33.3	17	6.7	30	3	0	14.4	73	68	- 8	22	12	8	0	0	2.0	23	13.4	33	28	5	11	15	6.5	
HARRISBURG	103	1002.7	1015.4	29.4	17.8	23.7	0.3	36.1	18+	10.6	31+	9	0	16.1	66	101	9	44	9	7	0	0	0.8	24	13.0	W	28	7	12	12	6.2	63
PHILADELPHIA	2	1014.6	1015.7	28.3	17.2	22.8	-0.3	32.8	17+	7.2	31	3	0	16.1	69	103	- 15	52	14	5	0	0	1.5	24	11.2	W	28	7	12	12	6.1	65
PITTSBURGH	347	972.2	1015.7	27.2	13.9	20.6	-0.9	34.4	17+	4.4	29	4	0	13.9	70	83	- 1	56	10	8	0	0	1.8	26	12.5	29	25	4	10	17	7.0	53
READING U	81			28.3	17.8	23.2	-0.6	35.6	16	9.4	31+	6	0			84	- 19	39	12		0	0			15.6	NW	28	6	15	10	5.9	57
SCRANTON	283	982.1	1015.7	26.1	15.6	20.8	-0.3	32.8	7	6.7	31+	3	0	15.6	75	133	42	53	12	9	0	0	1.3	22	13.9	NW	28	7	11	13	6.4	66
WILLIAMSPORT	161	996.6	1015.5	25.6	14.4	20.1	-1.9	32.2	16	3.3	30	1	0			128	36	57	14	9	0	0	0.8	25	9.8	16	31	6	10	15	6.6	
RHODE ISLAND																																
BLOCK ISLAND	34			24.4	17.2	20.9	0.0	27.8	20	10.6	29	0	0			104	6	81	5		0	0						5	16	10	5.8	
PROVIDENCE	16	1012.9	1015.1	27.2	16.7	22.0	0.6	32.2	16	4.4	31	1	0	15.0	68	48	- 52	21	8	4	0	0	2.3	22	10.7	30	30	9	13	9	5.8	62

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days		Average dew point		Total	Departure from normal	Greatest in 24 hours	No. of days		Snow, Sleet		Resultant speed	Resultant direction	Fastest mile (1 6 kilometers)			Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
												Max 32.2 °C or above	Min. 0 C or lower						.25 mm. or more	With thunderstorms	Total	Maximum depth on ground			Speed	Direction	Date					
	M.	Mb.	Mb.	C.	C.	C.	C.	°C.		°C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
SOUTH CAROLINA																																
CHARLESTON	12	1015.2	1016.8	31.1	21.7	26.4	-0.1	34.4	27	18.3	30	10	0	20.6	74	150	- 18	44	16	17	0	0	1.1	21	16.5Y	SE	4	2	14	15	7.0	53
CHARLESTON U	3			31.1	23.9	27.6	0.3	35.0	26	21.1	30+	11	0			119	- 35	55	12		0	0			14.8	E	18+					
COLUMBIA	66	1008.1	1016.1	32.8	21.1	26.9	0.0	36.7	27	13.9	31	21	0	20.6	74	239	93	128	10	14	0	0	1.1	23	15.6	9	18	9	16	6	5.0	75
GNVLE SPARTANBURG	292	982.4	1016.4	31.7	20.0	25.6	-0.3	35.0	27+	12.2	30	14	0	18.9	72	91	- 24	35	9	7	0	0	0.5	24	13.9	5	18	8	13	10	5.7	69
SOUTH DAKOTA																																
ABERDEEN	395	967.2	1013.1	28.9	12.8	20.8	-1.1	44.4	13	1.7	28	6	0	11.7	59	32	- 23	13	8	4	0	0	0.7	4	13.4	35	27+	5	15	11	6.0	
HURON	391	967.2	1012.8	30.0	13.3	21.7	-1.0	43.3	13	4.4	28	11	0	12.8	63	44	- 9	14	7	6	0	0	0.5	12	17.9	NW	24	7	16	8	5.7	67
RAPID CITY	965	904.8	1013.8	28.9	14.4	21.5	-0.7	40.6	12	6.1	31	8	0	9.4	52	37	6	14	9	9	0	0	0.9	34	18.8	SW	28	13	11	7	4.6	66
SIOUX FALLS	432	963.1	1013.7	27.8	13.9	20.8	-1.3	38.3	13	4.4	28	4	0	14.4	70	33	- 58	11	8	5	0	0	0.8	16	11.2	26	31+	9	14	8	5.3	
TENNESSEE																																
BRISTOL	459	964.1	1017.3	29.4	17.2	23.3	-0.5	35.0	17+	9.4	30+	3	0	18.3	80	67	- 29	19	11	9	0	0	0.4	28	9.4	24	7	6	13	12	6.0	
CHATTANOOGA	204	992.6	1016.7	31.1	18.9	24.9	-1.6	35.6	17	12.8	30	9	0	20.6	81	90	- 5	24	10	11	0	0	0.5	20	10.3	SW	7	5	11	15	6.5	62
KNOXVILLE	299	982.4	1017.0	31.1	19.4	25.3	0.1	35.6	16	13.3	30	12	0	19.4	76	55	- 33	20	10	10	0	0	1.3	25	8.9	SW	7+	5	16	10	6.0	42
MEMPHIS	80	1006.1	1015.9	32.2	21.1	26.8	-0.2	35.6	4	13.9	29	19	0	18.9	65	101	26	76	7	5	0	0	0.8	20	11.6	NW	31	14	12	5	4.5	78
NASHVILLE	180	994.6	1015.7	32.2	20.0	26.1	-0.1	36.1	17+	12.2	30+	18	0	17.8	66	64	- 8	27	8	8	0	0	1.2	23	13.0	N	27	9	18	4	5.0	76
OAK RIDGE	276			30.0	18.3	24.3	-0.2	35.0	17+	10.6	30	5	0			70	- 47	25	11		0	0			20.1Y		19	9	11	11	5.6	
TEXAS																																
ABILENE	537	953.6	1013.3	36.1	22.8	29.3	0.9	38.9	26	17.2	2	28	0	15.6	47	40	3	18	6	8	0	0	2.8	17	19.2	SE	15	14	8	9	5.0	77
AMARILLO	1098	892.3	1012.3	32.2	17.8	24.9	-1.4	35.6	27+	15.0	15+	18	0	15.0	59	43	- 22	30	5	6	0	0	3.7	19	17.0	N	31	16	13	2	4.0	81
AUSTIN	182	993.2	1014.6	35.6	22.8	29.1	-0.2	37.2	9+	20.0	12	31	0	20.0	63	34	- 16	24	4	8	0	0	2.5	17	13.4	NE	8	10	18	3	4.4	77
BROWNSVILLE	5	1013.5	1014.1	32.2	23.3	27.7	-1.3	34.4	27	21.1	13	19	0	22.8	79	79	9	43	10	5	0	0	3.9	14	13.9	E	28	8	14	9	5.5	68
CORPUS CHRISTI	12	1012.9	1014.5	33.3	23.3	28.4	-0.6	36.1	31+	20.6	13	22	0	22.8	78	67	- 3	42	5	7	0	0	3.6	15	11.6	SE	29+	6	14	11	6.2	62
DALLAS	147	997.3	1014.2	35.6	23.9	29.5	0.1	38.3	19	20.0	3	30	0	18.9	57	43	- 6	21	7	7	0	0	3.0	16	13.0	NW	8	14	13	4	4.0	76
DEL RIO	313	977.7	1012.9	35.6	22.8	29.2	-0.7	37.8	27+	19.4	3	30	0	17.8	54	42	3	41	2	2	0	0	4.1	13	8.9	14	19+	16	10	5	4.3	
EL PASO	1194	882.2	1010.5	33.9	20.6	27.3	0.4	38.9	7	17.8	13+	25	0	11.7	42	12	- 18	7	6	6	0	0	1.1	14	18.8	NE	22	17	11	3	3.6	87
FORT WORTH	164	994.6	1014.5	35.6	22.2	28.9	-0.7	39.4	19	16.7	2	30	0	17.8	55	57	15	26	6	10	0	0	2.5	16	11.2	33	8	18	11	2	3.4	
GALVESTON U	2			30.6	26.1	28.2	-0.3	33.9	1	22.8	5+	2	0			124	12	41	7		0	0			12.1	E	9					53
HOUSTON U	12			33.3	24.4	29.1	0.1	36.7	20+	21.1	12+	25	0			47	- 43	26	10		0	0										
HOUSTON	15	1013.5	1015.5	33.9	23.3	28.6	0.2	36.7	20+	20.6	12	29	0	22.2	75	58	- 50	13	12	12	0	0	1.7	16	13.4	9	14	4	20	7	6.1	61
LUBBOCK	988	904.8	1013.4	32.8	18.3	25.6	-0.4	36.7	27+	16.1	2	22	0	15.6	58	16	- 27	12	5	7	0	0	3.5	17	14.3	28	30	16	9	6	4.2	
MIDLAND	869	916.0	1012.1	33.3	20.0	26.4	-1.4	36.1	31+	16.7	13	22	0	14.4	53	82	44	61	10	9	0	0	3.0	15	15.6	22	15	15	9	7	4.6	
PORT ARTHUR	5	1014.9	1015.7	33.3	22.8	28.0	0.1	36.1	27+	20.6	11	23	0	22.8	81	49	- 91	28	13	15	0	0	1.2	18	17.0	NW	9+	1	15	15	6.9	65
SAN ANGELO	580	947.9	1012.8	35.0	21.7	28.2	-1.3	37.8	19+	15.6	13	27	0	17.2	57	69	37	26	9	9	0	0	2.4	17	11.2	31	31	13	11	7	4.6	
SAN ANTONIO	240	987.1	1014.7	35.6	22.2	28.9	0.1	36.7	26+	17.8	13	30	0	20.0	64	42	- 18	29	6	6	0	0	2.7	16	15.2	NE	11	13	14	4	4.8	82
VICTORIA	32	1010.8	1014.9	35.0	23.9	29.3	0.7	37.2	20+	20.6	12	30	0	21.7	70	9	- 71	3	6	10	0	0	2.6	15	14.3Y	SW	6	4	20	7	6.1	
WACO	152	996.6	1014.3	36.7	23.3	30.0	0.3	38.9	20	18.9	3+	30	0	17.8	51	16	- 26	8	7	6	0	0	3.4	17	13.4	33	8	18	10	3	3.7	
WICHITA FALLS	303	977.3	1013.1	37.2	20.0	28.6	-1.3	41.1	19	15.6	3+	29	0	16.7	55	58	13	17	10	11	0	0	2.9	17	19.7	1	23	12	14	5	4.4	
UTAH																																
MILFORD	1533			31.7	10.6	21.1	-1.3	35.6	9+	3.9	27	16	0			20	2	7	12		0	0						14	12	5	3.7	
SALT LAKE CITY	1286	872.3	1013.5	30.0	13.3	21.6	-2.0	36.1	9+	2.8	31	8	0	8.9	49	53	31	28	7	6	0	0	0.8	14	16.5	SW	3	12	14	5	4.3	85
WENDOVER	1291			28.3	16.7	22.5	-2.6	35.6	8	10.6	31	5	0			26	17	9	10		0	0						12	12	7	4.3	
VERMONT																																
BURLINGTON	101	1001.0	1013.4	24.4	13.3	18.9	-0.4	32.8	15+	1.7	31	3	0	13.9	73	159	74	35	16	8	0	0	1.5	20	13.0	NW	18	5	9	17	6.9	56
VIRGINIA																																
LYNCHBURG	279			29.4	17.2	23.3	-0.5	35.0	16	7.2	30	9	0			73	- 39	35	11	9	0	0			11.6	W	17	7	14	10	5.8	66
NORFOLK	8	1014.9	1015.9	30.0	20.0	25.1	-0.2	35.0	19	11.1	30	10	0	20.0	75	78	- 73	29	10	7	0	0	1.6	18	12.5	NE	18	8	17	6	5.1	64
RICHMOND	49	1010.2	1016.0	30.6	18.3	24.4	-0.1	34.4	19+	8.3	30	11	0	17.8	72	21	-120	9	9	4	0	0	1.1	19	13.7	NW	26	8	13	10	5.4	68
ROANOKE	350	974.9	1016.1	30.0	17.2	23.4	-0.7	35.0	18+	6.1	30	10	0	16.7	70	29	- 88	7	10	10	0	0	1.0	26	15.6	26	26	9	13	9	5.5	
WASHINGTON																																
OLYMPIA	59	1009.1	1016.5	25.6	11.7	18.4	1.0	36.1	1	1.7	29	3	0	12.8	73	52	29	23	8	0	0	0	0.9	22	9.4	20	28+	8	7	16	6.5	
SEATTLE TACOMA	122	1000.3	1016.5	23.9	13.9	18.7	0.9	32.2	1	9.4	29	1	0	12.8	73	55	31	23	8	0	0	0	0.6	27	11.6	22	12	7	8	16	6.5	55
SPOKANE	718	931.6	1014.0	27.2	12.8	19.9	-0.1	36.7	1	1.7	29	8	0	8.3	52	44	34	17	6	0	0	0	1.4	19	11.2	SW	12	11	8	12	5.2	67
STAMPEDE PASS R	1206			17.8	8.9	13.3	0.2	30.6	1	2.2	29	0	0			100	48	21	18		0	0						6	7	18	6.9	
TATOOSH ISLAND R	31	1013.5	1016.6	15.6	11.1	13.2	-0.2	17.8	6	8.9	30+	0	0	12.2	93	60	10	25	14	1	0	0	2.4	18	13.0	NE	30	6	5	20	7.5	30
WALLA WALLA U	289			29.4	16.7	23.0	-0.2	39.4	1	7.8	30	11	0			64	56	35	7		0	0			9.4	W	12	17	5	9	3.9	78
YAKIMA	321	975.6	1013.6	28.9	11.7	20.2	-0.1	38.9	1	4.4	30+	10	0	9.4	54	5	0	3	4	0	0	0	1.7	28	11.2	19	12	16	7	8	4.3	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

		Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)				
												No. of days							No of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
State and Station	Elevation (ground)	Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
WEST INDIES																																
SAN JUAN P.R.	5	1013.2	1015.7	30.6	24.4	27.5	0.3	31.7	31+	22.8	22+	0	0	23.3	80	220	39	68	23	6	0	0	3.0	9	11.2	E	28+	3	19	9	6.7	64
SWAN ISLAND	9			30.6	25.6	28.1	-0.3	31.7	25	22.8	25+	0	0			40	- 53	12	13		0	0						3	14	14	7.0	
WEST VIRGINIA																																
BECKLEY	763	930.6	1016.9	26.1	13.9	20.0		32.2	17+	2.2	29	2	0	15.0	76	57	- 24	26	10	13	0	0	1.6	24	17.9	32	19	3	12	16	6.9	
CHARLESTON	286	982.4	1015.9	28.9	16.1	22.5	-0.7	35.0	16	5.0	29	7	0	15.6	69	111	11	38	12	11	0	0	1.2	22	15.6	23	18	3	14	14	6.7	
ELKINS	600	946.8	1017.2	27.2	12.2	19.6	-0.8	33.3	17	1.1	29	3	0	13.9	76	44	- 63	19	13	9	0	0	1.3	26	17.4	26	27	4	12	15	6.7	
HUNTINGTON	252	986.1	1015.8	28.9	16.7	22.9	-0.4	34.4	17+	6.1	29	8	0	17.2	76	108	36	27	10	10	0	0	1.1	21	15.6	24	17	5	13	13	6.3	
PARKERSBURG U	187			28.3	16.1	22.4	-1.2	35.0	16	5.6	29	8	0			72	- 24	20	15		0	0			11.2	W	7+					57
WISCONSIN																																
GREEN BAY	208	988.8	1014.2	25.6	13.3	19.4	-1.1	35.6	14	3.3	29	2	0	15.0	77	86	16	17	16	6	0	0	0.6	26	17.9	SW	6	7	9	15	6.4	56
LA CROSSE	198	990.2	1014.5	25.6	13.9	19.7	-2.3	34.4	14	4.4	29	4	0	15.0	80	72	- 20	26	11	7	0	0	0.4	19	9.4	31	31	10	9	12	5.9	
MADISON	262	983.1	1014.1	25.6	12.8	19.3	-1.6	33.9	13+	1.7	29	4	0	14.4	78	172	86	74	15	9	0	0	0.7	25	14.8	NW	18	9	7	15	6.1	63
MILWAUKEE	205	989.5	1014.6	23.9	15.0	19.3	-0.6	32.8	14	6.7	29	1	0	15.0	78	156	78	36	14	9	0	0	0.6	23	13.0	SW	27+	10	8	13	5.6	66
WYOMING																																
CASPER	1627	839.5	1013.6	28.3	10.0	19.1	-2.1	35.6	12	0.6	31	6	0	3.3	41	5	- 13	2	4	6	0	0	1.2	26	17.0	22	21	16	12	3	3.8	
CHEYENNE	1867	815.8	1015.2	26.1	10.6	18.2	-1.7	32.2	13+	5.0	31	3	0	5.6	50	39	3	23	6	5	0	0	1.7	30	15.2	SW	29	15	8	8	4.1	73
LANDER	1696	831.0	1013.5	27.8	11.1	19.5	-0.9	33.9	12+	3.9	31	4	0	5.0	42	5	- 7	4	3	6	0	0	1.3	27	17.4	SW	23	11	16	4	4.2	78
SHERIDAN	1208	880.1	1014.7	28.3	10.6	19.5	-1.3	37.8	12	3.3	31	7	0	7.2	48	17	- 6	10	4	7	0	0	0.8	34	17.9	SW	22	12	10	9	4.9	65

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.
A Maximum hourly average.
B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

AUGUST 1965

State and station	Current season		Normals
	This month	Period July through this month	July through this month
ALABAMA			
BIRMINGHAM	0	0	0
HUNTSVILLE	0	0	0
MOBILE	0	0	0
MONTGOMERY	0	0	0
ALASKA			
ANCHORAGE	261	439	
ANNETTE	175	415	450
BARROW	825	1646	1643
BARTER ISLAND	853	1739	1510
BETHEL	453	859	713
COLD BAY	450	947	899
FAIRBANKS	374	526	503
JUNEAU	297	589	639
KING SALMON	410	783	635
KOTZEBUE	540	964	827
MC GRATH	400	690	546
NOME	595	1163	977
ST. PAUL ISLAND	569	1191	1144
SHEMYA	495	1069	1052
YAKUTAT	477	925	685
ARIZONA			
FLAGSTAFF	69	91	114
PHOENIX	0	0	0
TUCSON	0	0	0
WINSLOW	0	0	0
YUMA	0	0	0
ARKANSAS			
FORT SMITH	0	0	0
LITTLE ROCK	0	0	0
TEXARKANA	0	0	0
CALIFORNIA			
BAKERSFIELD	0	0	0
BISHOP	0	0	0
BLUE CANYON	49	79	84
BURBANK	0	0	0
EUREKA U	183	492	527
FRESNO	0	0	0
LONG BEACH	0	0	0
LOS ANGELES	0	12	35
LOS ANGLES U	0	0	0
MT SHASTA R	54	83	59
OAKLAND	19	102	103
RED BLUFF	0	0	0
SACRAMENTO	0	0	0
SANDBERG U	3	4	0
SAN DIEGO	0	3	6
SAN FRANCISCO	64	203	159
SAN FRANCISCO U	123	353	366
SANTA CATALINA	6	44	16
SANTA MARIA	42	153	192
STOCKTON	0	0	0
COLORADO			
ALAMOSA	128	159	164
COLORADO SPRINGS	31	41	34
DENVER	7	13	15
GRAND JUNCTION	0	0	0
PUEBLO	0	3	0
CONNECTICUT			
BRIDGEPORT	12	12	0
HARTFORD	34	36	6
NEW HAVEN	21	21	12
DELAWARE			
WILMINGTON	12	12	0
DIST.OF COLUMBIA			
WASH NATL AP	1	1	0
FLORIDA			
APALACHICOLA U	0	0	0
DAYTONA BEACH	0	0	0
FORT MYERS	0	0	0
JACKSONVILLE	0	0	0
KEY WEST	0	0	0
LAKELAND U	0	0	0
MIAMI	0	0	0
ORLANDO	0	0	0
PENSACOLA	0	0	0
TALLAHASSEE	0	0	0
TAMPA	0	0	0
WEST PALM BEACH	0	0	0
GEORGIA			
ATHENS	0	0	0
ATLANTA	0	0	0
AUGUSTA	0	0	0
COLUMBUS	0	0	0
MACON	0	0	0
ROME	0	0	0
SAVANNAH	0	0	0
IDAHO			
BOISE	30	37	0
IDAHO FALLS 42NW R	98	121	56
IDAHO FALLS 46W R	112	141	50
LEWISTON	19	29	0
POCATELLO	60	76	0
ILLINOIS			
CAIRO U	0	0	0
CHICAGO O HARE	53	65	12
CHICAGO MIDWAY	26	26	0
MOLINE	21	21	9
PEORIA	18	18	6
ROCKFORD	30	31	15
SPRINGFIELD	13	13	0
INDIANA			
EVANSVILLE	5	5	0
FORT WAYNE	31	34	9
INDIANAPOLIS	18	18	0
SOUTH BEND	56	59	6
IOWA			
BURLINGTON	16	16	0
DES MOINES	14	14	9
DUBUQUE	36	38	43
SIOUX CITY	11	11	9
WATERLOO	60	64	31
KANSAS			
CONCORDIA	3	3	0
DODGE CITY	3	3	0
GOODLAND	11	11	6
TOPEKA	0	0	0
WICHITA	1	1	0
KENTUCKY			
COVINGTON	15	17	0
LEXINGTON	9	9	0
LOUISVILLE	2	2	0
LOUISIANA			
ALEXANDRIA	0	0	0
BATON ROUGE	0	0	0
LAKE CHARLES	0	0	0
NEW ORLEANS	0	0	0
SHREVEPORT	0	0	0
MAINE			
CARIBOU	161	276	193
PORTLAND	61	102	65
MARYLAND			
BALTIMORE	5	5	0
MASSACHUSETTS			
BLUE HILL OBS R	43	45	22
BOSTON	37	39	9
NANTUCKET	30	44	34
PITTSFIELD	81	137	84
WORCESTER	61	75	40
MICHIGAN			
ALPENA	142	268	173
DETROIT	24	34	0
DETROIT M WAYNE CO	48	66	0
DETROIT WILLOW RUN	63	96	0
FLINT	66	97	56
GRAND RAPIDS	50	55	35
HOUGHTON LAKE	123	232	
LANSING	67	96	28
MARQUETTE U	131	236	140
MUSKEGON	42	43	40
SAULT STE MARIE	162	342	201
MINNESOTA			
DULUTH	158	285	180
INTERNATIONAL FALLS	142	230	183
MINNEAPOLIS	40	47	53
ROCHESTER	64	74	59
ST CLOUD	57	71	75
MISSISSIPPI			
JACKSON	0	0	0
MERIDIAN	0	0	0
VICKSBURG U	0	0	0
MISSOURI			
COLUMBIA	3	3	0
KANSAS CITY	0	0	0
ST JOSEPH	0	0	6
ST LOUIS	7	7	0
SPRINGFIELD	0	0	0
MONTANA			
BILLINGS	33	36	21
GLASGOW	41	52	78
GREAT FALLS	54	71	81
HAVRE	57	74	81
HELENA	69	83	90
KALISPELL	115	177	149
MILES CITY	28	29	12
MISSOULA	88	132	108
NEBRASKA			
GRAND ISLAND	11	11	6
LINCOLN U	4	4	6
NORFOLK	14	14	9
NORTH PLATTE	11	11	6
OMAHA	5	5	6
SCOTTSBLUFF	12	12	0
VALENTINE	16	16	21
NEVADA			
ELKO	43	54	43
ELY	76	103	71
LAS VEGAS	0	0	0
RENO	31	65	130
WINNEMUCCA	39	49	34
NEW HAMPSHIRE			
CONCORD	78	128	56
MT WASHINGTON OBS	576	1182	1029
NEW JERSEY			
ATLANTIC CITY	24	27	0
ATLANTIC CITY U	8	8	0
NEWARK	11	11	0
TRENTON U	11	11	0
NEW MEXICO			
ALBUQUERQUE	0	0	0
CLAYTON	0	2	6
RATON	12	19	37
ROSWELL	0	0	0
SILVER CITY	0	0	0
NEW YORK			
ALBANY	49	60	19
BINGHAMTON	76	117	87
BUFFALO	46	69	56
NEW YORK U	13	13	0
J.F. KENNEDY	14	14	0
NEW YORK LA GUARDIA	5	5	0
ROCHESTER	53	77	40
SYRACUSE	50	77	34
NORTH CAROLINA			
ASHEVILLE	7	7	0
CAPE HATTERAS R	0	0	0
CHARLOTTE	0	0	0
GREENSBORO	3	3	0
RALEIGH	5	5	0
WILMINGTON	0	0	0
NORTH DAKOTA			
BISMARCK	57	71	62
FARGO	59	78	65
WILLISTON	62	65	74
OHIO			
AKRON	40	48	9
CINCINNATI OBS	8	8	0
CLEVELAND	49	73	34
COLUMBUS	28	32	6
DAYTON	19	19	6
MANSFIELD	59	82	31
TOLEDO	57	84	16
YOUNGSTOWN	66	90	25
OKLAHOMA			
OKLAHOMA CITY	0	0	0
TULSA	0	0	0
OREGON			
ASTORIA	98	242	276
BURNS U	92	142	49
EUGENE	17	48	68
MEACHAM	178	293	208
MEDFORD	7	11	0
PENDLETON	19	34	0
PORTLAND	16	38	53
SALEM	26	72	68
SEXTON SUMMIT R	134	233	162
PENNSYLVANIA			
ALLENTOWN	23	23	0
ERIE	44	70	25
HARRISBURG	7	7	0
PHILADELPHIA	18	18	0
PITTSBURGH	40	49	9
PITTSBURGH U	15	16	0
READING U	12	12	0
SCRANTON	35	42	19
WILLIAMSPORT	41	58	9
RHODE ISLAND			
BLOCK ISLAND	20	21	16
PROVIDENCE	29	32	16
SOUTH CAROLINA			
CHARLESTON	0	0	0
CHARLESTON U	0	0	0
COLUMBIA	0	0	0
GNVLE-SPARTANBURG	0	0	0
SOUTH DAKOTA			
ABERDEEN	38	43	50
HURON	29	29	21
RAPID CITY	27	30	34
SIOUX FALLS	37	39	44
TENNESSEE			
BRISTOL	3	3	0
CHATTANOOGA	0	0	0
KNOXVILLE	0	0	0
MEMPHIS	[illegible]	0	0
NASHVILLE	0	0	0
OAK RIDGE	0	0	0
TEXAS			
ABILENE	0	0	0
AMARILLO	0	0	0
AUSTIN	0	0	0
BROWNSVILLE	0	0	0
CORPUS CHRISTI	0	0	0
DALLAS	0	0	0
DEL RIO	0	0	0
EL PASO	0	0	0
FORT WORTH	0	0	0
GALVESTON U	0	0	0
HOUSTON U	0	0	0
HOUSTON	0	0	0
LUBBOCK	0	0	0
MIDLAND	0	0	0
PORT ARTHUR	0	0	0
SAN ANGELO	0	0	0
SAN ANTONIO	0	0	0
VICTORIA	0	0	0
WACO	0	0	0
WICHITA FALLS	0	0	0
UTAH			
MILFORD	3	3	0
SALT LAKE CITY	20	20	0
WENDOVER	7	7	0
VERMONT			
BURLINGTON	80	123	93
VIRGINIA			
LYNCHBURG	9	9	0
NORFOLK	6	6	0
RICHMOND	6	6	0
ROANOKE	9	9	0
WASHINGTON			
OLYMPIA	52	104	139
SEATTLE TACOMA	44	68	118
SPOKANE	62	93	34
STAMPEDE PASS R	290	521	564
TATOOSH ISLAND R	281	590	574
WALLA WALLA U	13	18	0
YAKIMA	38	67	12
WEST VIRGINIA			
BECKLEY	40	47	
CHARLESTON	15	15	0
ELKINS	50	62	34
HUNTINGTON	10	10	0
PARKERSBURG U	12	12	0
WISCONSIN			
GREEN BAY	51	77	78
LA CROSSE	61	69	31
MADISON	69	96	65
MILWAUKEE	51	76	90
WYOMING			
CASPER	49	53	22
CHEYENNE	47	58	50
LANDER	39	40	25
SHERIDAN	44	51	56

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

AUGUST 1965

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				ø ALL OTHER			
								†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS
Alabama										0	2	4	0	1	0	0	0												
Alaska *																													
Arizona										0	10	4	3	0	2	0	0												
Arkansas						0	0	4	5					3	2	0	0												
California														2	2	3	0									0	2	5	6
Colorado	1	1	0	0	0	0	0	4	5	0	0	°4	5													D 3	?	F°6	C
Connecticut	1	1	0	0	4					0	0	5	0	0	0	5	0												
Delaware														0	0	4	0									0	0	2	0
Florida	1	1	0	0						0	0	5	?	4	19	U	0												
Georgia	2	2	0	0	4					0	0	3	0	2	1	3	0												
Hawaii *																													
Idaho									5	1	1	4	3	2		4													
Illinois	1	1	0	25	6	0	0	4	6	1	50	6	5	0	0	5	0												
Indiana	4	3	0	0	6	0	0	4	4	0	5	5	5	1	0	4	0												
Iowa	8	3	1	21	6	0	0	5	6	0	0	5	5	0	0	4	4									0	0	5	5
Kansas	2	2	0	0	5	0	0	4	5	0	2	5	4	0	0	4	0												
Kentucky								?	5			?	4			4													
Louisiana														0	2	4	0									0	0	4	0
Maine						0	0	0	2	0	0	4	0	0	0	4	0												
Maryland	1	1	0	0	4	0	0	0	4	0	0	5	0	0	0	4	0									2	0	4	0
Massachusetts	2	2	0	0	4	0	0	0	4	1	3	5	0	0	5	5	0									0	0	R 4	0
Michigan						0	0	5	C	0	4	6	C	2	2	6	0												
Minnesota	3	3	0	0	4	0	0	5	6	0	0	4	5	1	0	4	0									0	0	2	4
Mississippi	1	1	0	0	[illegible]					0	0	3	0	0	1	4	0												
Missouri	1	1	0	0	4	0	0	0	5	0	3	5	5	1	0	3	0												
Montana	2	1	0	0	0	0	0	4	5	0	0	0	4													0	0	5	0
Nebraska						0	0	5	6	0	0	4	4	0	2	3	0									1	0	0	4
Nevada						0	0	0	2					0	0	2	3									5	2	5	4
New Hampshire	1	1	0	0	2	0	0	3	4	0	0	4	0																
New Jersey *																													
New Mexico	1	1	0	0	1	0	0	?	?	0	0	4	0													0	0	°4	C
New York	2	2	0	0	4				5			4		2	1	5												H 4	4
North Carolina						0	0	4	6	0	0	5	4	1	3	5	0									0	0	4	4
North Dakota	2	2	0	0	4	0	0	4	5	0	0	°4	C	0	0	4	0									0	0	4	4
Ohio	2	1	0	5	6																								
Oklahoma	5	3	0	0	3	0	0	5	5	0	3	5	0	0	5	5	0									0	0	4	0
Oregon														0	0	4	3									0	0	R 5	4
Pacific Area *																													
Pennsylvania	1	1	0	0	4	0	0	3	3	0	0	5	0	2	1	6	0												
Puerto Rico																										1	0	4	0
Rhode Island *																													
South Carolina	4	4	0	46	5					0	0	4	0	1	4	5	0									0	1	4	0
South Dakota						0	0	4	6																				
Tennessee						0	0	4	5	0	0	°4	C	1	0	°5	C												
Texas	9	8	0	0	3	0	0	0	5	0	3	4	0	1	2	5	0									1	0	0	0
Utah						0	0	3	5	0	0	3	3	0	1	4	3									0	0	4	4
Vermont										0	1	4	0	1	0	4	0												
U. S. Virgin Is.*																													
Virginia	2	2	0	5	5	0	0	3	5	0	0	5	4	2	5	5	0												
Washington *																													
West Virginia	2	2	0	0	3									0	0	4	3												
Wisconsin						0	0	3	4	0	2	6	6	0	0	5	0												
Wyoming *																													

°	Includes crop damage
C	Crop damage
U	Unknown
R	Rain
H	Heavy rain
D	Drowning
F	Flooding

* No occurrence of storms or unusual weather phenomena.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
ø For breakdown of "All Others", and for detailed listing of other storms, see the U. S. Weather Bureau monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:

1	Less than $50
2	$50 to $500
3	$500 to $5,000
4	$5,000 to $50,000
5	$50,000 to $500,000
6	$500,000 to $5,000,000
7	$5,000,000 to $50,000,000
8	$50,000,000 to $500,000,000
9	$500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

AUGUST 1965

The most damaging floods in the continental United States during August were the flash floods in the upper Arkansas Basin. This was the third consecutive month that damaging floods had been reported in the Colorado portion of the Arkansas Basin. The flood damage, though moderate to locally severe, was light in comparison to the June flood damage.

Flooding elsewhere in continental United States was mostly minor.

ATLANTIC SLOPE DRAINAGE

Heavy rainfall of 2.65 inches, in approximately 1 hour the evening of August 27, caused some flash flooding of small streams in eastern Prince William County, Virginia. This area had received above normal rainfall most of the summer, so runoff was heavy. Damages from the overflows were minor.

The lower Neuse and Cape Fear Rivers in eastern North Carolina were out of their banks in the beginning of August. This flooding was due to general showers and thunderstorms towards the end of July. The precipitation averaged around 2 inches over the Cape Fear Basin and nearly 6 inches locally over the Neuse. The Cape Fear crested during the latter part of July, 9 feet to nearly 15 feet above flood stage. The Neuse River crested at Smithfield, N. C., over 6 feet above flood stage on July 30. It crested at Goldsboro, N. C., on the 3d, nearly 8 feet above flood stage. The crest reached Kinston on the 6th with a stage of over 4.5 feet above flood stage. Rainfall of around 1.5 inches the afternoon and evening of the 1st produced a rise of 5 to 7 feet on the upper half of the Neuse River. Crests a little below bankfull resulted in the upper reaches with light flooding in the middle section. It added less than a foot to the flooding already taking place in the lower reaches. Minor flooding resulted on the Tar River at Greenville, N. C., between the 4th and 6th. Additional rain of about 1 inch the evening of the 4th prolonged the flooding in progress on the lower Neuse.

General rains of up to 3 inches over the upper reaches of the Santee River Systems in South Carolina on July 31 and August 1 caused significant rises on the Broad at Blair, S. C., and the Congaree at Columbia, S. C. The Broad River approached within 1.6 feet of bankfull stage at Blair on the 2d. The crest of the Congaree at Columbia, S. C., was near 10 feet. Although the flood stage at Columbia is 19 feet, swampland flooding below Columbia begins at 8 feet.

Light overflow occurred along the Lumber River at Lumberton, N. C., on August 1-9. Water inundated the yards of homes in low areas. The North Fork of the Edisto at Orangeburg, S. C., was in light flood from July 30 to August 5. Minor overflow occurred along the Edisto at Givhans, S. C., from July 30 to August 1. This flooding was due to heavy rainfall on July 29-30.

EAST GULF OF MEXICO DRAINAGE

Heavy intermittent thundershowers from July 30 through August 12 produced minor to moderate flooding on the Hillsborough River in Florida. Some damage resulted to homes. Near bankfull stages resulted on the Withlacoochee River.

MISSISSIPPI SYSTEM

Missouri Basin.--Heavy thundershowers on the 22d produced flooding in the headwaters of the Yellowstone River in the Laurel, Mont., area. The rainfall was estimated at 4 to over 6 inches. Irrigation ditches overflowed flooding the City of Laurel to depths of 4 feet. Agricultural land in the area was flooded for several miles. Damage in the city totaled over $170,000 with tens of thousands in additional damage to agricultural areas. Locally heavy rain caused flooding along some tributaries in the Big Horn Basin in Wyoming.

Heavy rains, the afternoon and evening of the 16th, caused flash flooding on several small streams in west-central Missouri, blocking a few roads temporarily. Bankfull stages were reported along Fishing River near Mosby, Mo. Over 8 inches of rain was reported unofficially at Lawson, Mo. Locally heavy rain in west-central Missouri on the 24th caused light flooding along the Lamine River at Clifton City, Mo., on the 25th. Localized heavy rain on the night of the 30th caused minor flooding along the Little Platte River in west-central Missouri.

Heavy rains during the middle of August caused flash flooding on some tributaries of the Truckee and Carson Rivers in western Nevada. Lake Tahoe reached its seasonal peak on August 19, rising to within 0.16 inch of maximum level. Flash flooding on Calena Creek closed Mt. Rose Highway (Route 27) late on the 14th and all day on the 15th. Highway 395, about 20 miles south of Reno was closed for a short time on the 14th.

White Basin.--Minor flooding occurred on the Cache River at Patterson, Ark., from the 2d-4th. This overflow was due to 1.5 inches of rainfall over the upper and middle Cache Basin. No significant damage was reported.

Arkansas Basin.--Flash flooding occurred on small tributaries in the upper Arkansas Basin near Canon City and Florence, Colo., the evening of the 21st. Brewster, Colo., a small farm community near Florence reported 2 inches of rain in 30 minutes. At Portland, Colo., the Arkansas River overflowed the evening or night of the 21st. A sharp rise occurred along the Arkansas River just above Pueblo, Colo., late in the evening of the 21st, causing lowland flooding.

The Colorado Irrigation Division Engineer reported the crest at Pueblo the highest it had been for 20 years. Rain in the Canon City and Florence, Colo., areas the evening of the 22d, caused additional local flooding at Florence and in some other nearby communities. The magnitude of the flooding on the Purgatoire River and tributaries was below that of June and July 1965. Flood damage was moderate to locally severe, though light in comparison to June flood damage. At Florence, approximately 60 to 70 homes were damaged from local overflow of small tributary streams. Damage from August flooding will total over $1 million.

Minor flooding occurred on the Cimarron River at Waynoka, Okla., on the 26th. This rise was due to heavy rains along the headwaters on August 20-22.

GREAT BASIN

Heavy thunderstorm activity on the 17th, 20th, and 21st, caused flash flooding on a few streams in Utah. Over 2 inches of rain occurred in 30 to 45 minutes in the Glenwood-Annabella, Utah, area on the 17th. The storm was centered over an area 2 miles wide and 5 miles long, principally over Dry Canyon drainage between Bull Claim Hills and Mill Canyon, Sage Flat. Heavy runoff resulted from semidesert stony loam on steep hillsides. Runoff and sediment damaged farms, roads, bridges, and some buildings and fences. A 3- to 4-foot wall of mud and water moved through the north end of Cedar City, Utah, on the 17th, overturning several cars and ripping out portions of the wall surrounding the cemetary. Vigorous shower activity in the Great Salt Lake Valley on the 20th and 21st caused heavy damages to roads, streets, and homes. The storms were widespread with largest amounts occurring in the foothill areas near Mill Creek Canyon, east of Salt Lake City. This same area was hit hard by the storm of July 30-31.

PACIFIC SLOPE DRAINAGE

Columbia Basin.--Flash flooding occurred near Mitchell and Picture Gorge on tributaries of the John Day River in Oregon on the 21st. Washouts and slides blocked highways in the area.

Precipitation in Oregon during the month ranged from 430 to 580 percent of normal in the east and from 110 to 320 percent in the west. In the Willamette Basin, precipitation ranged from near normal along the coast range side of the Willamette Basin to about twice the monthly normal along the coast slopes of the Cascades.

FLOOD STAGE DATA

(All dates in August unless otherwise specified)

AUGUST 1965

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
ATLANTIC SLOPE DRAINAGE	*Ft.*			*Ft.*	
Tar: Greenville, N. C.	13	4	6	#13.7	5
Neuse: Smithfield, N. C.	13	Jul. 28	1	19.3	Jul. 30
		4	6	14.5	5
Goldsboro, N. C.	14	Jul. 29	9	#21.85	3
Kinston, N. C.	14	1	12	#18.6	6
Cape Fear: Fayetteville, N. C.	35	Jul. 29		44.2	Jul. 29
Lock #3, Tarheel (nr), N. C.	42	Jul. 28	Aug. 3	56.7	Jul. 30
Lock #2, Elizabethtown, N. C.	20	Jul. 29	Aug. 4	30.4	Jul. 31
Lumber: Lumberton, N. C.	108	1	9	#109.3	3
North Fork Edisto: Orangeburg, S. C.	8	Jul. 30	5	(8.7	Jul. 31
				(9.2	3
Edisto: Givhans, S. C.	10	Jul. 30	1	10.05	Jul. 31
EAST GULF OF MEXICO DRAINAGE	*Ft.*			*Ft.*	
Hillsborough: State Park, Fla.	10	8	14	11.85	9
Tampa Dam (TW), Fla.	9	10	18	10.7	14
MISSISSIPPI SYSTEM					
Missouri Basin					
Lamine: Clifton City, Mo.	19	25	25	20.3	25
White Basin					
Cache: Patterson, Ark.	7	2	4	7.1	2
Arkansas Basin					
Cimarron: Waynoka, Okla.	8	26	26	8.2	26

* Provisional
# Highest Stage Observed

RAWINSONDE DATA

Average monthly values

AUGUST 1965

Standard pressure surface (mb.)	ALBANY, N. Y. 1005 MB						ALBUQUERQUE, N. MEX. 840 MB						AMARILLO, TEXAS 893 MB						ANCHORAGE, ALASKA 1011 MB						* ANNETTE, ALASKA 1013 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed					Direction	Speed					Direction	Speed					Direction	Speed					Direction	Speed
SURFACE	31	86	16.6	91	192	3.7	31	1,619	18.2	61	98	3.3	31	1,095	18.5	77	184	5.1	31	29	11.5	73	164	4.7	31	37	11.9	89	17	1.0
1000	31	124			205	3.1	31	96					31	107					31	138	11.7	72	164	5.2	31	147	12.1	86	349	1.0
950	31	563	16.6	71	243	8.4	31	545					31	557					31	565	9.2	72	164	6.2	31	580	11.6	81	299	2.5
900	31	1,023	14.4	66	259	10.9	31	1,021					31	1,032					31	1,012	6.4	75	168	6.0	31	1,029	9.8	75	272	3.3
850	31	1,504	12.0	62	274	14.2	31	1,519					31	1,519	20.1	55	212	15.5	31	1,479	3.5	78	186	4.9	31	1,503	7.4	68	263	4.3
800	31	2,010	9.2	61	273	15.9	31	2,040	18.2	50	189	4.3	31	2,041	17.4	50	224	13.6	31	1,969	.9	76	201	6.2	31	2,001	5.8	53	260	5.6
750	31	2,541	6.7	51	270	17.7	31	2,589	15.1	48	231	4.3	31	2,585	13.5	54	236	8.5	31	2,486	- 1.5	71	221	7.0	31	2,524	3.2	54	259	7.4
700	31	3,108	3.8	47	268	19.6	31	3,172	11.3	49	270	6.0	31	3,166	8.9	62	268	6.4	31	3,033	- 4.6	66	228	7.8	31	3,085	.2	50	252	8.5
650	31	3,707	.8	40	267	23.5	31	3,782	6.6	52	278	6.8	31	3,773	4.6	60	294	4.1	31	3,611	- 7.3	57	232	9.5	31	3,673	- 3.1	47	244	8.7
600	31	4,348	- 2.4	36	267	27.8	31	4,438	1.5	57	297	7.2	31	4,423	.1	56	315	3.5	31	4,233	-10.8	55	240	12.0	31	4,306	- 6.8	53	247	10.3
550	31	5,026	- 6.2	35	266	31.3	31	5,123	- 3.7	56	312	7.8	31	5,109	- 4.4	50	315	2.5	31	4,890	-14.9	50	246	12.8	31	4,975	-11.0	54	238	9.3
500	31	5,774	-10.7	R33	266	32.4	31	5,879	- 8.8	49	298	7.0	31	5,861	- 8.9	42	294	4.3	31	5,611	-19.6	48	248	14.8	31	5,707	-16.0	55	233	10.1
450	31	6,569	-16.1	R28	265	35.4	31	6,683	-13.2	34	311	9.5	31	6,667	-13.8	37	311	6.4	31	6,379	-24.8	45	250	17.1	31	6,488	-21.6	54	228	12.2
400	31	7,454	-22.2	R29	265	36.1	31	7,577	-18.9	R28	299	11.5	31	7,556	-19.8	32	308	8.9	31	7,232	-30.9	43	258	19.8	31	7,353	-27.8	52	222	14.2
350	31	8,422	-29.3	R30	265	38.7	31	8,558	-25.9	R26	296	13.2	31	8,531	-26.6	31	304	11.3	31	8,165	-37.9	45	261	22.9	31	8,299	-34.8	50	222	16.3
300	31	9,507	-37.3	R28	268	41.6	31	9,657	-33.8	R25	294	16.9	31	9,625	-34.7	33	308	13.6	31	9,210	-45.4		266	26.4	31	9,356	-42.9		223	15.7
250	30	10,740	-46.5		268	45.1	31	10,911	-42.8		288	18.3	31	10,873	-44.1		310	16.9	31	10,407	-51.3		266	29.9	31	10,562	-51.8		227	17.5
200	30	12,192	-54.8		266	44.3	31	12,382	-53.4		288	19.6	31	12,337	-53.9		316	20.8	31	11,855	-50.6		263	25.1	31	11,986	-56.8		239	16.7
175	30	13,041	-57.1		267	41.4	31	13,231	-59.1		297	20.6	31	13,184	-59.0		321	20.2	30	12,730	-50.1		260	23.1	31	12,836	-54.8		242	14.0
150	30	14,013	-58.5		265	39.6	31	14,186	-64.4		307	17.9	31	14,140	-63.6		326	19.8	30	13,736	-50.4		256	18.6	31	13,824	-53.7		241	12.8
125	30	15,156	-59.8		264	28.2	31	15,288	-69.0		317	13.2	31	15,247	-67.8		335	15.7	30	14,924	-50.6		252	16.5	31	14,994	-54.2		248	11.3
100	29	16,550	-60.3		268	21.2	31	16,620	-69.3		359	6.0	31	16,584	-68.5		1	7.8	30	16,378	-50.5		246	11.8	31	16,423	-54.7		250	8.9
80	29	17,948	-57.8		264	12.0	31	17,965	-65.1		44	5.2	31	17,934	-64.4		59	6.0	30	17,833	-50.4		245	8.7	31	17,851	-54.3		251	4.9
70	29	18,792	-56.3		261	9.5	30	18,782	-62.3		67	7.2	31	18,753	-62.2		70	7.4	30	18,703	-50.4		242	5.8	31	18,706	-53.9		256	3.3
60	29	19,777	-54.0		265	6.6	30	19,743	-59.2		86	10.9	31	19,711	-59.2		84	9.9	30	19,710	-50.2		245	3.7	30	19,702	-53.5		287	1.6
50	29	20,952	-52.3		173	1.6	30	20,894	-56.4		90	13.8	31	20,860	-56.6		90	11.7	30	20,900	-50.0		228	1.9	30	20,976	-52.8		11	1.6
40	28	22,402	-50.4		92	7.6	29	22,318	-53.8		89	16.1	31	22,284	-54.1		90	14.8	29	22,355	-49.6		107	1.4	30	22,319	-51.7		62	2.9
30	27	24,288	-47.7		93	11.5	28	24,180	-50.9		91	19.2	31	24,143	-50.9		88	18.6	29	24,244	-48.1		90	3.5	30	24,193	-49.7		70	5.4
25	26	25,497	-46.1		90	14.8	25	25,375	-48.4		89	21.0	31	25,335	-49.2		87	20.0	29	25,448	-46.8		98	3.9	29	25,390	-48.0		71	6.6
20	22	26,990	-44.2		86	15.3	22	26,849	-46.4		87	19.6	31	26,806	-47.0		84	22.1	29	26,932	-45.2		91	4.3	26	26,872	-46.0		93	7.4
15	12	28,905	-41.4				15	28,772	-44.6		90	23.5	21	28,718	-45.2		80	26.8	26	28,869	-42.7		84	4.9	25	28,904	-43.0		79	9.7
10													16	31,457	-40.7		87	34.2	16	31,641	-38.9				23	31,555	-38.7		87	8.4
7													15	33,987	-38.1		87	38.1							16	34,055	-34.4			
5													12	36,209	-35.0															
	ATHENS, GA. 989 MB						* BARROW, ALASKA 1010 MB						BARTER IS., ALASKA 1010 MB						BETHEL, ALASKA 1010 MB						BISMARCK, N. DAK. 955 MB					
SURFACE	31	246	20.5	95	269	1.7	31	8	2.1	93	203	.6	31	15	2.1	96	123	1.6	31	39	8.6	94	193	6.4	31	505	13.5	81	101	.8
1000	31	148					31	88	2.4	88	218	2.5	31	97	3.8	87	140	1.4	31	117	8.4	89	193	7.8	31	113				
950	31	594	21.9	78	273	4.9	31	504	1.5	81	231	6.6	31	514	5.1	75	246	2.1	31	543	6.3	89	198	15.5	31	549			121	1.2
900	31	1,064	19.4	71	258	6.0	31	937	- .2	79	234	8.2	31	956	3.4	74	249	6.0	31	982	4.1	89	204	17.9	31	1,009	17.3	54	262	3.1
850	31	1,554	16.3	70	256	7.8	31	1,393	- 2.3	77	231	10.3	31	1,419	1.2	74	255	9.7	31	1,447	2.7	79	211	16.1	31	1,495	14.7	52	294	6.2
800	31	2,069	13.3	65	250	8.5	31	1,873	- 4.8	76	234	11.5	31	1,905	- 1.2	71	255	11.7	31	1,936	1.0	69	215	14.8	31	2,005	11.6	53	294	9.3
750	31	2,605	10.4	59	244	9.5	31	2,379	- 6.9	70	234	13.6	31	2,414	- 4.3	73	255	12.6	31	2,454	- 1.6	70	220	15.9	31	2,538	7.8	55	293	13.0
700	31	3,182	7.0	55	246	9.9	31	2,916	- 9.6	67	234	15.0	31	2,958	- 7.4	74	250	14.2	31	3,000	- 4.5	68	221	15.9	31	3,107	3.9	52	293	15.5
650	31	3,784	3.5	51	251	11.3	31	3,485	-12.5	59	235	16.1	31	3,527	-10.7	71	246	16.5	31	3,579	- 7.5	66	225	16.5	31	3,702	.2	47	291	18.5
600	31	4,434	- .1	48	262	10.7	31	4,094	-16.1	58	238	16.7	31	4,145	-14.2	64	244	17.5	31	4,201	-11.2	60	229	18.5	31	4,343	- 3.4	46	286	19.4
550	31	5,123	- 3.7	41	257	10.7	31	4,742	-20.2	58	238	19.4	31	4,791	-18.2	62	240	19.4	31	4,963	-14.8	53	236	19.6	31	5,019	- 7.4	40	287	21.8
500	31	5,874	- 8.0	37	259	11.7	31	5,445	-24.6	49	236	21.6	31	5,506	-22.9	57	240	22.0	31	5,581	-19.4	47	236	22.1	31	5,762	-12.0	34	290	22.1
450	31	6,681	-13.1	33	263	11.7	31	6,198	-29.8	48	235	22.1	31	6,258	-28.1	55	238	22.3	31	6,358	-24.7	50	239	24.3	31	6,552	-17.4	34	287	22.9
400	31	7,575	-18.9	30	275	11.7	31	7,035	-35.8	47	239	22.5	31	7,107	-34.1	55	238	25.8	31	7,205	-30.8	48	241	27.6	31	7,433	-23.5	R32	286	24.5
350	31	8,555	-26.2	29	274	13.0	31	7,950	-42.4	51	241	24.1	31	8,027	-40.8	51	242	28.4	31	8,139	-37.8	45	245	31.9	31	8,395	-30.9	R30	284	27.2
300	31	9,651	-34.7	27	273	14.8	31	8,978	-48.2		239	26.0	31	9,060	-48.0		243	28.9	31	9,185	-45.4		247	35.7	31	9,470	-39.1	R30	284	31.3
250	31	10,898	-44.5		271	16.5	31	10,172	-49.0		241	21.8	31	10,248	-51.6		243	29.9	31	10,383	-52.0		253	36.5	31	10,695	-48.1		288	34.0
200	31	12,355	-55.9		271	18.8	31	11,650	-45.7		247	16.7	31	11,708	-48.0		244	22.9	31	11,823	-51.7		254	30.9	31	12,138	-54.6		288	42.2
175	31	13,193	-61.3		281	19.0	31	12,540	-45.4		252	15.7	31	12,591	-47.2		246	22.3	31	12,692	-50.2		251	24.7	31	12,989	-55.6		285	45.1
150	31	14,139	-65.8		285	15.3	31	13,566	-46.0		248	12.6	31	13,611	-47.3		249	19.2	31	13,697	-50.6		247	20.4	29	13,964	-56.7		286	39.8
125	31	15,238	-68.2		292	8.9	31	14,777	-46.5		255	9.9	31	14,816	-47.5		249	14.8	30	14,887	-51.0		249	16.3	29	15,114	-58.6		290	31.3
100	31	16,579	-66.6		323	2.5	31	16,258	-46.6		251	8.4	31	16,291	-47.3		246	10.7	30	16,339	-50.7		241	11.7	29	16,514	-58.8		292	23.5
80	31	17,939	-63.6		60	3.7	31	17,737	-46.6		248	5.8	31	17,768	-47.0		248	7.2	30	17,792	-50.4		240	8.5	28	17,918	-57.8		304	13.6
70	31	18,762	-61.3		74	8.5	31	18,623	-46.5		251	3.7	31	18,652	-47.0		248	5.1	30	18,663	-50.3		233	5.2	28	18,762	-56.4		314	9.3
60	31	19,725	-58.4		83	13.8	31	19,644	-46.7		244	2.1	31	19,672	-46.9		241	1.9	30	19,668	-50.2		220	2.9	28	19,745	-55.3		323	6.4
50	31	20,879	-55.7		91	17.7	31	20,853	-46.8		217	.8	30	20,879	-46.8		111	1.2	30	20,857	-49.9		212	2.5	28	20,914	-53.3		3	5.2
40	31	22,308	-53.0		93	19.8	30	22,330	-46.8		94	1.7	29	22,363	-46.3		87	2.9	29	22,316	-49.7		101	1.0	28	22,361	-50.3		43	4.3
30	30	24,176	-49.8		91	21.6	30	24,239	-46.0		100	4.3	29	24,279	-45.1		90	4.1	28	24,199	-48.9		72	2.7	28	24,252	-47.4		85	4.7
25	30	25,373	-48.0		90	22.3	30	25,454	-45.1		83	6.2	29	25,500	-44.0		78	3.9	28	25,398	-47.9		83	2.3	27	25,458	-45.8		84	4.5
20	28	26,847	-46.7		85	22.9	30	26,948	-43.7		77	6.0	25	27,029	-42.2		77	4.5	24	26,878	-46.0		75	4.7	27	26,953	-43.4		79	7.4
15	18	28,764	-44.7		87	28.0	28	28,883	-41.7		84	7.0	16	29,019	-39.1		68	4.3	17	28,798	-43.7		72	3.1	17	28,868	-42.2		98	9.5
10	5	31,505	-38.7				26	31,642	-37.8		82	8.4													6	31,624	-37.2			
7							17	34,158	-33.0		101	6.4																		
5							5	36,403	-31.3																					
	BOISE, IDAHO 916 MB						* BOOTHVILLE, LA. 1016 MB						* BROWNSVILLE, TEXAS 1013 MB						BUFFALO, N. Y. 989 MB						*CANTON IS., PACIFIC AREA + 1009 MB					
SURFACE	31	868	16.1	61	151	4.1	31	1	24.7	94	210	1.7	31	7	23.9	94	134	3.3	31	218	16.3	87	202	4.1	31	4	29.9	70	99	9.9
1000	31	111					31	140	25.6	87	216	2.5	31	122	24.9	92	142	6.0	31	125					31	83	28.7	69	96	11.3
950	31	553					31	594	22.7	81	221	4.7	31	575	22.7	85	161	13.4	31	562	16.6	70	247	9.3	31	533	23.5	71	98	12.4
900	31	1,017	18.2	51	142	3.9	31	1,061	19.9	76	200	4.9	31	1,044	20.1	74	161	15.5	31	1,022	14.1	68	266	11.7	31	1,006	20.2	67	98	13.2
850	31	1,507	17.6	43	134	1.9	31	1,553	17.0	73	195	5.6	31	1,536	17.4	67	160	14.0	31	1,503	11.7	64	272	13.8	31	1,499	17.8	60	95	13.0
800	31	2,023	14.2	44	237	1.0	31	2,069	13.8	67	200	5.1	31	2,052	14.6	63	153	12.2	31	2,008	9.2	55	273	16.3	31	2,015	15.1	56	89	13.2
750	31	2,564	10.5	47	246	4.1	31	2,609	10.7	65	221	4.9	31	2,593	11.6	60	144	10.9	31	2,541	6.8	50	276	19.4	31	2,555	12.3	51	85	12.8
700	31	3,135	6.6	46	253	8.9	31	3,183	7.5	59	221	4.7	31	3,171	8.3	57	137	10.5	31	3,106	4.2	47	272	22.3	31	3,136	9.5	43	89	14.2
650	31	3,737	2.3	45	244	11.5	31	3,788	4.0	60	229	4.5	31	3,780	4.7	57	140	8.2	31	3,702	.8	48	270	25.1	31	3,743	6.2	41	91	13.8
600	31	4,381	- 2.2	47	238	14.4	31	4,438	.4	57	232	3.7	31	4,429	.8	56	134	6.0	31	4,345	- 2.7	46	272	26.6	31	4,400	2.4	35	91	15.5
550	31	5,061	- 6.9	42	240	17.9	31	5,127	- 3.3	51	239	4.1	31	5,117	- 3.2	48	133	4.7	31	5,024	- 6.8	41	272	27.8	31	5,090	- 1.7	32	90	15.3
500	31	5,805	-11.4	39	240	19.0	31	5,880	- 7.6	47	230	3.5	31	5,872	- 8.0	44	122	3.3	31	5,768	-11.4	35	271	29.7	31	5,850	- 6.2	30	86	18.6
450	31	6,605	-17.0	R36	242	21.0	31	6,691	-12.7	44	232	4.1	31	6,680	-13.2	44	106	2.3	31	6,564	-16.7	34	270	31.7	31	6,666	-10.6	30	90	16.3
400	31	7,480	-23.1	R31	243	22.3	31	7,583	-18.6	40	234	4.1	31	7,573	-19.3	44	111	1.7	31	7,443	-22.7	31	272	33.6	31	7,564	-16.2	26	94	19.4
350	31	8,445	-30.1	R30	244	25.8	31	8,566	-25.4	35	225	4.3	31	8,551	-26.3	44	224	2.3	31	8,409	-29.8	33	274	37.1	31	8,556	-22.9	28	90	16.1
300	30	9,529	-38.2	R29	242	31.7	31	9,666	-33.6	31	195	5.4	31	9,647	-34.8	43	219	3.1	31	9,490	-37.9	31	275	40.0	31	9,667	-31.3	27	87	15.0
250	30	10,760	-46.7		245	37.3	30	10,917	-43.6		173	6.0	31	10,893	-44.7		225	3.9	31	10,722	-47.1		278	42.9	31	10,930	-41.6		75	13.6
200	29	12,222	-53.2		245	43.7	30	12,379	-55.2		154	6.6	31	12,348	-55.8		256	1.4	31	12,173	-54.4		276	45.5	31	12,402	-54.1		70	12.4
175	29	13,078	-55.5		245	42.3	30	13,220	-61.0		146	7.0	31	13,187	-61.4		28	1.2	30	13,023	-57.3		272	44.9	30	13,246	-61.0		84	13.8
150	29	14,054	-58.3		248	37.5	30	14,165	-66.0		114	6.8	31	14,131	-66.5		23	4.5	30	13,994	-58.5		267	38.9	30	14,186	-68.5		92	13.0
125	29	15,194	-61.1		250	27.0	30	15,259	-70.2		80	7.6	31	15,221	-70.8		39	9.1	30	15,136	-59.9		268	34.6	30	15,260	-74.5		82	10.9
100	29	16,576	-61.9		248	14.0	30	16,589	-68.3		75	10.1	31	16,541	-70.9		61	14.2	30	16,527	-60.2		270	29.5	30	16,553	-75.1		128	3.9
80	27	17,957	-60.2		251	5.1	30	17,938	-65.2		81	11.8	31	17,875	-66.9		85	19.0	30	17,922	-58.7		272	18.5	30	17,864	-69.7		278	15.5
70	26	18,796	-58.8		242	.8	30	18,754	-62.9		82	15.5	31	18,685	-64.7		87	19.6	30	18,764	-56.6		273	11.8	29	18,663	-67.4		280	18.5
60	26	19,766	-57.3		66	3.9	30	19,710	-59.7		82	20.6	30	19,632	-62.0		84	23.3	29	19,746	-54.6		276	7.2	29	19,597	-65.3		280	11.5
50	26	20,923	-55.5		80	5.2	30	20,858	-56.7		87	25.8	30	20,766	-59.4		87	28.4	29	20,919	-52.4		334	1.6	29	20,713	-63.1		94	15.9
40	25	22,357	-53.0		74	7.0	30	22,282	-53.9		91	29.3	30	22,173	-56.2		89	32.2	29	22,366	-50.5		91	6.4	29	22,095	-59.7		90	48.2
30	23	24,225	-49.9		85	6.6	29	24,140	-51.3		92	33.6	30	24,016	-52.7		87	37.3	28	24,250	-48.1		86	8.0	29	23,916	-54.7		89	56.3
25	23	25,421	-48.3		83	9.3	29	25,329	-49.6		93	33.6	30	25,198	-50.6		88	38.1	28	25,455	-46.6		84	11.8	29	25,089	-52.5		90	59.4
20	22	26,891	-46.7		83	11.8	26	26,792	-47.4		90	33.6	28	26,661	-48.4		89	37.9	24	26,937	-44.9		90	13.6	28	26,539	-50.0		[illegible]	63.1
15	19	28,808	-43.9		85	15.3	26	28,709	-44.3		86	35.7	26	28,562	-45.4		85	40.4	15	28,866	-42.7				25	28,438	-45.5		87	69.3
10							19	31,450	-40.8		88	41.6	25	31,291	-41.6		87	44.3	5	31,596	-38.9				16	31,183	-37.9			
7							10	33,913	-36.1				14	33,726	-38.7															

See reference note at end of table

RAWINSONDE DATA

Average monthly values

AUGUST 1965

* CAPE HATTERAS, N. C.
1016 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	4	23.4	90	220	4.1
1000	31	140	23.7	82	242	3.7
950	31	588	21.4	73	273	6.8
900	31	1,055	18.7	67	272	8.5
850	31	1,544	15.7	64	273	9.9
800	31	2,057	12.8	59	272	11.1
750	31	2,596	9.7	58	274	13.2
700	31	3,168	6.6	53	273	14.2
650	31	3,773	3.5	47	273	14.2
600	31	4,420	.0	48	274	15.2
550	31	5,107	- 4.0	48	270	15.2
500	31	5,960	- 8.2	42	272	15.3
450	31	6,671	-13.1	40	269	17.1
400	31	7,560	-19.0	39	270	17.7
350	31	8,541	-26.0	38	268	17.5
300	31	9,639	-34.3	32	274	19.0
250	31	10,887	-44.4		277	21.6
200	31	12,344	-55.8		283	20.8
175	31	13,184	-61.1		285	20.0
150	31	14,131	-65.2		282	18.8
125	31	15,236	-66.4		276	13.8
100	31	16,591	-65.2		258	7.0
80	30	17,955	-62.5		63	2.5
70	30	18,783	-60.4		89	6.6
60	29	19,746	-58.3		88	10.3
50	29	20,899	-55.6		39	16.7
40	26	22,328	-52.2		92	18.5
30	23	24,199	-49.4		95	20.4
25	23	25,396	-48.3		93	21.2
20	22	26,970	-46.4		91	22.3
15	21	28,786	-43.8		85	27.4
10	11	31,502	-40.7			
7						

* CARIBOU, ME.
990 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	191	12.7	90	227	3.1
1000	31	108				
950	31	543	13.3	70	241	8.5
900	31	993	11.1	69	262	12.6
850	31	1,469	8.5	69	270	14.4
800	31	1,968	5.8	66	270	17.7
750	31	2,496	3.5	59	267	20.4
700	31	3,054	1.2	48	263	22.1
650	31	3,645	- 2.0	49	261	25.1
600	31	4,280	- 5.5	49	262	28.4
550	31	4,956	- 9.6	45	261	30.3
500	31	5,689	-13.8	39	261	34.6
450	31	6,482	-19.0	37	260	36.1
400	31	7,351	-25.2	35	259	38.5
350	31	8,307	-32.2	31	260	41.6
300	31	9,378	-39.9	35	261	46.0
250	31	10,601	-48.2		259	51.5
200	31	12,050	-53.8		261	54.8
175	31	12,905	-54.9		261	51.9
150	31	13,890	-55.1		259	44.5
125	31	15,051	-56.2		258	37.5
100	30	16,470	-56.3		259	28.6
80	30	17,891	-54.6		256	20.8
70	30	18,746	-53.4		253	14.2
60	30	19,741	-52.0		244	11.5
50	29	20,924	-50.5		234	6.4
40	29	22,381	-49.2		204	2.7
30	29	24,273	-47.4		107	4.7
25	28	25,484	-45.8		102	6.4
20	28	26,974	-43.9		87	10.5
15	25	28,919	-41.2		89	13.4
10	20	31,704	-37.6		98	18.8
7	8	34,193	-33.6			

CHARLESTON, S. C.
1015 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	13	22.4	85	231	1.2
1000	31	146	23.4	81	245	4.3
950	31	593	22.9	73	259	9.5
900	31	1,066	20.3	69	257	8.4
850	31	1,558	17.1	67	253	6.2
800	31	2,073	13.8	64	247	6.0
750	31	2,611	10.6	56	251	7.0
700	31	3,187	7.4	54	257	8.0
650	31	3,793	3.8	55	264	8.7
600	31	4,441	.3	52	267	9.3
550	31	5,131	- 3.3	44	270	9.5
500	31	5,984	- 7.5	39	271	8.5
450	31	6,694	-12.5	36	273	8.7
400	31	7,588	-18.4	33	270	8.9
350	31	8,571	-25.4	R28	288	8.5
300	31	9,671	-34.0	R26	289	9.5
250	31	10,921	-44.1		291	11.8
200	31	12,380	-55.7		293	11.7
175	31	13,219	-61.4		300	12.4
150	31	14,163	-66.2		309	10.5
125	31	15,260	-68.6		318	6.4
100	31	16,600	-66.7		356	1.0
80	31	17,958	-63.8		62	6.4
70	31	18,780	-61.5		79	11.3
60	31	19,741	-58.8		82	15.7
50	31	20,892	-55.8		91	20.6
40	31	22,321	-52.7		95	24.7
30	31	24,192	-49.3		97	24.1
25	28	25,391	-47.8		92	24.9
20	25	26,865	-46.6		85	26.4
15	15	28,775	-43.9		86	32.2
10						
7						

* COLD BAY, ALASKA
1012 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	30	9.0	91	168	7.6
1000	31	128	8.6	89	174	7.8
950	31	552	7.2	86	185	8.9
900	31	997	6.1	87	205	8.4
850	31	1,465	5.2	74	226	10.3
800	31	1,959	3.4	66	229	10.7
750	31	2,480	1.3	62	232	11.1
700	31	3,035	- 1.1	58	235	12.2
650	31	3,619	- 4.4	59	232	16.3
600	31	4,251	- 7.2	52	237	16.1
550	31	4,920	-11.0	47	245	16.1
500	31	5,651	-15.8	48	244	19.0
450	31	6,431	-21.2	48	247	21.4
400	31	7,297	-27.2	48	249	24.1
350	31	8,245	-34.1	47	251	28.4
300	31	9,307	-42.0	49	260	30.5
250	31	10,518	-50.4		262	33.6
200	31	11,955	-54.7		265	32.2
175	31	12,812	-53.4		258	28.4
150	31	13,804	-53.2		258	22.7
125	31	14,978	-53.2		255	18.3
100	30	16,414	-52.4		249	12.6
80	30	17,956	-51.9		243	8.2
70	29	18,723	-51.7		233	5.8
60	29	19,722	-51.5		225	3.3
50	29	20,906	-51.3		214	1.9
40	29	22,356	-50.7		133	2.3
30	29	24,234	-49.3		109	3.5
25	29	25,432	-47.9		87	5.2
20	27	26,914	-45.8		83	6.8
15	27	28,839	-43.1		95	6.8
10	24	31,592	-38.7		76	8.2
7	9	34,051	-36.2			

COLUMBIA, MO.
987 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	238	19.1	84	187	2.5
1000	31	124				
950	31	565	20.4	69	236	8.5
900	31	1,034	18.6	67	267	13.2
850	31	1,523	16.1	62	275	14.2
800	31	2,036	13.1	58	284	16.1
750	31	2,575	10.1	53	283	14.0
700	31	3,147	6.7	48	282	14.8
650	31	3,747	3.0	49	277	15.2
600	31	4,396	- 1.1	52	279	16.1
550	31	5,080	- 4.8	46	275	14.4
500	31	5,830	- 9.4	41	272	16.9
450	31	6,631	-14.6	37	272	18.1
400	31	7,520	-20.9	39	274	19.0
350	31	8,493	-28.0	35	279	20.2
300	31	9,581	-36.6	34	280	23.3
250	31	10,819	-45.7		278	26.4
200	31	12,273	-55.2		284	30.1
175	31	13,117	-58.8		286	30.1
150	31	14,077	-61.9		290	25.6
125	31	15,198	-64.5		293	18.6
100	31	16,559	-64.5		303	11.5
80	31	17,928	-62.4		330	6.2
70	31	18,755	-60.3		359	4.7
60	31	19,721	-57.5		46	3.7
50	30	20,882	-54.6		72	5.6
40	28	22,324	-52.1		80	9.3
30	27	24,201	-49.4		89	12.2
25	26	25,398	-48.2		85	13.4
20	24	26,877	-46.4		84	16.1
15	18	28,902	-43.9		82	17.3
10	7	31,553	-40.9			
7						

CORPUS CHRISTI, TEXAS
1013 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	27	6	27.0	87	176	3.1
1000	27	119	26.2	89	168	7.0
950	27	568	22.8	90	168	13.6
900	27	1,043	20.8	77	165	12.2
850	27	1,536	18.2	70	161	12.2
800	27	2,053	15.1	68	156	11.7
750	27	2,593	12.1	63	149	9.7
700	27	3,173	8.8	62	144	8.2
650	27	3,777	5.0	63	147	6.6
600	27	4,432	1.3	62	154	3.9
550	27	5,120	- 3.0	63	156	2.1
500	27	5,875	- 7.8	62	154	2.1
450	27	6,680	-13.0	61	161	3.1
400	27	7,575	-18.9	52	158	2.7
350	27	8,556	-25.9	51	165	3.7
300	27	9,652	-34.5	50	152	2.3
250	27	10,900	-44.4		116	1.2
200	27	12,358	-55.3		89	3.5
175	26	13,200	-60.5		77	5.1
150	26	14,149	-65.0		82	6.2
125	26	15,248	-69.2		62	8.2
100	26	16,581	-68.7		58	9.7
80	26	17,928	-65.1		83	13.0
70	26	18,744	-63.1		81	15.2
60	26	19,698	-60.8		84	18.3
50	26	20,841	-57.8		87	21.6
40	26	22,258	-54.8		87	22.5
30	25	24,117	-51.4		86	29.1
25	25	25,307	-49.1		88	28.9
20	23	26,781	-46.8		85	29.7
15	23	28,701	-43.7		84	32.6
10	21	31,447	-40.2			
7	16	33,889	-36.8			
5	7	36,222	-33.3			

DAYTON, OHIO
981 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	297	16.9	86	273	1.0
1000	31	132				
950	31	573	18.7	71	249	6.4
900	31	1,036	16.4	66	269	11.3
850	31	1,521	13.9	64	272	14.0
800	31	2,031	11.5	58	271	15.9
750	31	2,568	8.8	54	272	17.3
700	31	3,138	6.1	49	269	19.2
650	31	3,738	2.5	50	267	20.0
600	31	4,385	- 1.3	41	265	21.4
550	31	5,067	- 5.1	39	264	23.3
500	31	5,818	- 9.6	39	267	24.5
450	31	6,623	-14.9	37	268	26.6
400	31	7,507	-21.1	35	270	28.4
350	31	8,479	-28.3	33	271	30.1
300	31	9,565	-36.9	33	274	31.5
250	31	10,802	-46.4		278	35.5
200	31	12,254	-55.2		275	37.9
175	31	13,100	-58.5		276	37.9
150	31	14,063	-61.3		279	30.9
125	31	15,189	-63.4		280	24.3
100	30	16,554	-63.1		282	16.5
80	30	17,931	-60.9		290	8.0
70	30	18,765	-58.8		299	3.9
60	30	19,738	-56.3		9	.8
50	30	20,902	-53.9		83	3.1
40	29	22,339	-51.5		83	7.4
30	29	24,215	-49.1		83	10.3
25	29	25,414	-47.8		85	11.7
20	27	26,896	-45.9		87	14.6
15	16	28,927	-43.8		82	16.3
10						
7						
5						

DEL RIO, TEXAS
978 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	314	24.0	75	115	8.4
1000	31	116				
950	31	569	23.0	73	137	14.6
900	31	1,037	20.7	71	163	19.6
850	31	1,531	18.8	64	159	16.3
800	31	2,049	15.4	64	153	14.8
750	31	2,592	12.3	56	144	11.3
700	31	3,171	9.1	50	130	6.2
650	31	3,778	5.0	50	122	4.5
600	31	4,430	.9	49	122	3.3
550	31	5,115	- 3.4	43	127	1.0
500	31	5,873	- 8.0	36	122	1.6
450	31	6,680	-13.2	37	72	2.5
400	31	7,574	-19.1	31	25	4.3
350	30	8,555	-26.1	R28	17	7.8
300	30	9,653	-34.1	R25	11	11.1
250	30	10,904	-43.9		9	11.8
200	30	12,366	-54.7		15	13.6
175	30	13,209	-60.2		7	11.1
150	30	14,159	-65.0		[illegible]	14.0
125	30	15,259	-69.2		29	14.2
100	30	16,587	-69.6		60	13.4
80	29	17,926	-66.4		80	14.2
70	29	18,739	-63.7		84	15.5
60	29	19,689	-61.0		85	19.2
50	28	20,830	-58.2		88	24.1
40	28	22,245	-55.0		87	28.2
30	27	24,094	-51.5		91	32.6
25	27	25,285	-49.1		90	33.0
20	26	26,755	-47.5		91	33.0
15	26	28,668	-44.4		83	34.0
10	22	31,405	-40.0		89	41.2
7						
5						

DENVER, COLO.
840 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,611	14.7	70	201	4.5
1000	31	107				
950	31	551				
900	31	1,020				
850	31	1,511				
800	31	2,027	17.0	50	248	4.5
750	31	2,576	14.5	44	260	3.7
700	31	3,156	10.5	42	281	4.9
650	31	3,767	5.8	43	288	8.0
600	31	4,417	.7	48	287	11.7
550	31	5,104	- 4.4	48	289	13.4
500	31	5,854	- 9.5	44	287	12.2
450	31	6,660	-14.7	36	279	14.0
400	31	7,543	-20.7	36	276	16.7
350	31	8,517	-27.6	34	278	20.2
300	31	9,608	-35.8	35	277	23.3
250	31	10,851	-44.5		279	29.3
200	31	12,317	-53.2		279	35.9
175	31	13,168	-57.7		282	35.7
150	31	14,131	-62.1		287	31.9
125	31	15,248	-65.5		295	21.2
100	31	16,601	-66.0		294	8.5
80	30	17,962	-63.6		325	4.9
70	30	18,788	-60.4		45	4.1
60	30	19,754	-57.6		61	5.6
50	30	20,912	-55.4		76	5.2
40	30	22,347	-51.9		83	8.0
30	30	24,224	-49.1		89	11.5
25	30	25,424	-48.0		86	12.2
20	28	26,904	-46.1		83	15.2
15	25	28,829	-43.9		79	16.9
10	9	31,579	-40.2			
7						
5						

DODGE CITY, KANS.
925 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	792	18.3	82	180	2.9
1000	30	114				
950	30	561				
900	30	1,027	20.9	62	199	10.7
850	30	1,522	19.9	51	219	13.6
800	30	2,042	16.6	50	233	10.7
750	30	2,586	12.7	53	256	9.1
700	30	3,164	8.5	52	276	8.2
650	30	3,771	4.1	51	282	7.6
600	30	4,419	- .2	49	291	8.2
550	30	5,106	- 4.5	46	290	8.7
500	30	5,855	- 9.3	44	295	9.9
450	30	6,659	-14.2	35	289	9.7
400	30	7,548	-20.4	38	276	12.2
350	30	8,524	-27.5	36	281	14.4
300	30	9,614	-35.7	32	286	15.9
250	30	10,859	-44.4		291	21.8
200	30	12,322	-54.0		300	25.4
175	30	13,170	-58.5		300	25.6
150	30	14,131	-62.4		307	23.1
125	30	15,245	-66.0		309	18.1
100	30	16,595	-66.6		318	10.9
80	30	17,955	-63.4		14	5.6
70	30	18,779	-60.9		42	5.8
60	30	19,744	-57.9		79	6.6
50	30	20,900	-55.4		88	8.7
40	30	22,332	-52.6		89	11.5
30	30	24,203	-49.7		87	14.2
25	28	25,401	-48.3		82	17.1
20	25	26,879	-46.3		79	18.6
15	19	28,794	-44.4		81	24.5
10	9	31,548	-40.3			
7						
5						

EL PASO, TEXAS
883 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,193	21.1	60	84	.6
1000	31	101				
950	31	555				
900	31	1,034				
850	31	1,527	21.4	47	135	3.9
800	31	2,050	18.6	47	167	4.7
750	31	2,600	15.0	48	204	2.1
700	31	3,181	10.7	50	354	1.4
650	31	3,791	6.1	53	23	3.9
600	31	4,445	1.2	55	18	6.4
550	31	5,134	- 3.7	54	16	7.2
500	31	5,888	- 8.4	47	16	6.4
450	31	6,696	-12.8	33	3	6.6
400	31	7,589	-18.7	R30	5	7.2
350	31	8,571	-25.4	R27	347	7.4
300	31	9,671	-33.7	R26	322	8.0
250	31	10,924	-43.2		317	11.3
200	31	12,391	-54.3		320	14.2
175	31	13,235	-60.3		334	15.0
150	31	14,183	-65.8		348	14.8
125	30	15,277	-70.6		5	11.7
100	30	16,596	-70.5		44	8.7
80	30	17,932	-66.5		65	10.1
70	30	18,744	-64.0		77	13.4
60	30	19,694	-61.1		86	15.9
50	30	20,834	-58.1		90	21.2
40	30	22,249	-55.0		91	22.5
30	30	24,100	-51.5		91	26.0
25	30	25,288	-49.4		87	27.6
20	29	26,757	-47.0		89	27.2
15	20	28,675	-45.1		89	28.6
10	12	31,414	-41.7		82	35.7
7	11	33,863	-37.3		92	44.9
5	9	36,217	-32.2			

ELY, NEV.
812 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,908	9.9	70	195	5.4
1000	31	131				
950	31	572				
900	31	1,034				
850	31	1,519				
800	31	2,028	13.9	56	191	4.7
750	31	2,572	13.3	45	176	5.1
700	31	3,151	9.7	44	230	8.2
650	31	3,760	5.2	48	235	12.4
600	31	4,410	- .1	53	232	15.0
550	31	5,094	- 5.4	55	239	15.9
500	31	5,842	-10.1	45	243	18.1
450	31	6,643	-15.2	R37	245	21.4
400	31	7,528	-21.3	R35	246	23.3
350	31	8,499	-28.5	R28	244	26.2
300	31	9,585	-36.7	R30	246	28.9
250	31	10,824	-45.2		250	36.3
200	31	12,288	-52.8		250	38.7
175	31	13,142	-57.1		252	37.7
150	31	14,106	-61.7		252	32.1
125	31	15,224	-65.2		251	24.5
100	30	16,579	-66.2		254	12.4
80	30	17,939	-63.2		228	1.7
70	30	18,764	-61.3		83	1.6
60	30	19,725	-58.7		80	4.5
50	30	20,877	-56.1		86	6.6
40	29	22,302	-53.4		82	8.0
30	28	24,168	-50.6		82	9.9
25	28	25,360	-49.2		85	12.2
20	28	26,829	-47.0		85	16.7
15	28	28,745	-44.3		90	20.0
10	20	31,502	-39.4		90	24.7
7	15	33,942	-35.5		94	28.2
5	7	36,325	-31.6			

EMPALME, MEXICO
1010 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	12	26.6	82	58	2.1
1000	31	98	26.9	79	91	2.5
950	31	549	25.3	66	149	5.6
900	31	1,026	23.1	61	161	6.0
850	31	1,523	20.3	61	132	4.9
800	31	2,045	17.4	59	99	6.0
750	31	2,593	14.1	58	85	7.8
700	31	3,173	10.4	57	91	7.8
650	31	3,784	6.0	60	103	8.9
600	31	4,437	1.3	69	106	9.5
550	31	5,128	- 3.0	63	103	9.5
500	30	5,882	- 7.3	49	91	7.0
450	30	6,695	-11.7	38	85	6.4
400	30	7,592	-17.1	35	85	7.2
350	29	8,578	-24.1	33	93	4.7
300	29	9,685	-32.4	34	118	4.5
250	29	10,944	-42.3		150	2.9
200	29	12,414	-54.1		221	2.9
175	29	13,259	-60.1		341	1.2
150	29	14,208	-66.3		44	3.7
125	29	15,297	-71.5		49	8.4
100	26	16,604	-72.1		65	13.4
80	24	17,931	-67.0		78	17.5
70	22	18,740	-64.3		86	22.1
60	17	19,686	-61.1		86	25.8
50	14	20,829	-58.5		94	30.7
40	13	22,251	-54.8		89	29.5
30	11	24,098	-52.7		90	34.6
25	11	25,282	-49.8		93	34.2
20	10	26,748	-47.4			
15	9	28,658	-44.9			
10						
7						
5						

* FAIRBANKS, ALASKA
998 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	135	8.8	78	200	1.2
1000	31	119			171	1.9
950	31	545	9.3	73	244	8.9
900	31	992	6.5	74	247	12.2
850	31	1,458	3.2	78	243	13.2
800	31	1,947	- .2	83	242	14.6
750	31	2,460	- 3.0	84	244	15.9
700	31	3,006	- 5.7	77	248	16.5
650	31	3,581	- 8.8	74	246	16.1
600	31	4,200	-12.6	69	243	16.7
550	31	4,858	-16.7	62	240	18.6
500	31	5,570	-21.4	51	240	19.6
450	31	6,333	-26.8	49	241	20.2
400	31	7,178	-32.7	48	243	21.8
350	31	8,105	-39.6	46	246	23.7
300	31	9,143	-47.0		247	22.5
250	31	10,335	-51.6		253	25.8
200	31	11,787	-49.7		250	24.1
175	31	12,663	-48.7		252	22.5
150	31	13,675	-49.0		249	19.4
125	31	14,871	-49.3		249	16.9
100	31	16,334	-49.3		246	13.2
80	31	17,796	-49.2		240	9.9
70	31	18,671	-49.0		249	7.4
60	31	19,682	-49.1		262	3.7
50	31	20,877	-49.1		246	1.9
40	31	22,341	-48.7		132	1.6
30	31	24,236	-47.4		94	3.7
25	31	25,444	-46.2		92	5.2
20	29	26,932	-44.3		85	7.6
15	27	28,867	-42.0		76	7.4
10	17	31,640	-38.0		91	8.2
7	6	34,060	-35.4			
5						

FLINT, MICH.
987 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	234	15.9	85	233	1.9
1000	31	122				
950	31	558	16.3	71	251	7.0
900	31	1,019	14.4	65	264	10.5
850	31	1,501	11.9	61	271	12.6
800	31	2,007	9.5	53	276	14.6
750	31	2,538	7.0	49	272	17.5
700	31	3,106	4.1	47	272	19.4
650	31	3,701	.8	47	273	21.0
600	31	4,345	- 2.8	43	275	22.3
550	31	5,021	- 6.6	39	277	25.8
500	31	5,769	-11.5	37	277	27.8
450	31	6,561	-16.6	33	275	30.1
400	31	7,445	-22.7	33	277	33.4
350	31	8,411	-29.5	32	277	36.9
300	31	9,493	-37.4	33	276	42.2
250	30	10,720	-46.8		276	48.6
200	30	12,171	-54.4		278	52.3
175	30	13,021	-56.7		283	47.4
150	30	13,996	-57.8		281	36.7
125	30	15,139	-59.7		279	31.1
100	30	16,531	-60.1		278	22.9
80	30	17,928	-58.4		283	13.4
70	30	18,770	-56.9		283	9.5
60	29	19,751	-55.1		290	7.0
50	28	20,925	-52.7		297	1.2
40	28	22,373	-50.3		87	3.7
30	28	24,260	-48.1		83	5.4
25	27	25,469	-46.5		92	8.0
20	24	26,954	-45.1		87	8.0
15	17	28,888	-43.0		85	12.4
10	12	31,618	-39.8			
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See reference note at end of table

RAWINSONDE DATA

Average monthly values

AUGUST 1965

FORT WORTH, TEXAS
995 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	180	23.3	78	188	3.9
1000	31	132				
950	31	586	24.2	64	208	14.6
900	31	1,054	22.1	59	205	13.8
850	31	1,549	18.8	59	204	8.2
800	31	2,067	15.0	60	205	4.9
750	31	2,607	11.0	61	196	2.1
700	31	3,184	7.4	53	226	1.7
650	31	3,790	3.7	49	211	2.3
600	31	4,436	- .3	43	214	1.9
550	31	5,120	- 4.5	43	225	2.5
500	31	5,872	- 8.9	40	253	2.7
450	31	6,679	-13.9	34	284	3.3
400	31	7,567	-19.7	31	279	3.1
350	31	8,545	-26.7	31	276	4.3
300	31	9,639	-35.0	29	309	5.4
250	31	10,886	-44.5		323	5.4
200	31	12,348	-54.4		320	7.8
175	31	13,194	-59.3		324	7.0
150	31	14,149	-64.0		332	7.0
125	31	15,255	-68.1		5	8.2
100	31	16,593	-67.8		40	7.4
80	31	17,943	-64.9		64	8.4
70	31	18,762	-62.6		71	11.3
60	31	19,720	-59.1		83	15.5
50	31	20,870	-56.6		90	17.5
40	30	22,295	-53.9		90	20.0
30	30	24,154	-51.1		87	25.3
25	29	25,345	-49.0		88	27.6
20	28	26,818	-46.3		88	29.3
15	24	28,730	-45.1		85	30.1
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GLASGOW, MONT.
934 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	696	15.0	70	112	2.5
1000	31	109				
950	31	544				
900	31	1,011	17.3	57	242	3.3
850	31	1,497	15.4	53	270	4.7
800	31	2,008	12.0	54	288	7.2
750	31	2,539	8.1	55	292	8.0
700	31	3,111	4.0	56	291	10.7
650	31	3,705	.3	50	280	12.2
600	31	4,347	- 3.5	46	282	14.4
550	31	5,021	- 7.9	41	279	15.5
500	31	5,764	-12.5	37	279	17.9
450	31	6,551	-18.1	R32	286	19.4
400	31	7,430	-24.3	31	286	20.8
350	31	8,389	-31.5	R30	288	23.7
300	31	9,462	-39.7	R28	292	26.0
250	31	10,682	-49.1		289	26.8
200	31	12,124	-54.7		285	36.3
175	31	12,977	-55.5		281	37.7
150	30	13,955	-57.1		282	36.3
125	30	15,103	-59.0		284	28.4
100	29	16,504	-59.3		287	20.4
80	29	17,906	-57.6		298	11.8
70	29	18,749	-56.9		315	7.8
60	29	19,727	-55.7		353	4.7
50	29	20,892	-54.0		27	3.5
40	29	22,330	-51.6		35	3.7
30	29	24,209	-48.3		78	3.5
25	29	25,414	-46.4		82	3.9
20	29	26,903	-44.3		93	7.0
15	20	28,831	-42.0		90	6.4
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*** GRAND JUNCTION, COLO.**
853 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,474	18.1	52	113	5.2
1000	31	87				
950	31	533				
900	31	1,010				
850	31	1,508	18.5	50	118	6.0
800	31	2,029	18.0	43	149	8.2
750	31	2,580	14.9	46	211	5.4
700	31	3,159	10.7	50	251	8.4
650	31	3,768	6.0	51	265	10.7
600	31	4,423	.8	56	266	13.0
550	31	5,106	- 4.7	62	266	15.7
500	31	5,860	- 9.9	59	265	17.5
450	31	6,662	-14.6	45	267	18.1
400	31	7,549	-20.7	37	271	20.8
350	31	8,522	-27.9	37	268	24.9
300	31	9,610	-36.0	35	268	29.3
250	31	10,852	-44.7		269	34.2
200	31	12,316	-53.3		266	37.9
175	31	13,166	-57.8		270	36.7
150	31	14,127	-62.6		276	30.5
125	31	15,238	-67.0		274	22.0
100	31	16,577	-67.9		296	8.4
80	31	17,932	-64.1		358	1.7
70	31	18,752	-61.8		54	3.3
60	31	19,713	-59.2		74	6.0
50	31	20,863	-56.5		82	7.8
40	31	22,289	-53.7		94	8.9
30	31	24,151	-50.6		85	12.4
25	31	25,344	-48.9		83	14.4
20	31	26,814	-47.2		86	16.1
15	29	28,732	-44.3		86	20.8
10	26	31,481	-39.8		88	25.1
7	19	33,924	-36.0		89	30.7

*** GREAT FALLS, MONT.**
888 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,123	14.2	67	223	5.8
1000	31	105				
950	31	548				
900	31	1,015				
850	31	1,496	15.2	50	248	8.4
800	31	2,008	12.2	51	256	9.4
750	31	2,544	8.4	55	263	8.9
700	31	3,112	4.3	59	264	8.7
650	31	3,710	.5	57	257	11.8
600	31	4,350	- 3.7	58	257	14.0
550	31	5,028	- 7.6	47	259	15.3
500	31	5,770	-12.4	46	261	15.7
450	31	6,566	-17.6	40	261	16.9
400	31	7,441	-23.7	38	266	18.5
350	31	8,402	-31.0	42	261	18.8
300	31	9,477	-39.3	36	256	21.9
250	31	10,701	-48.6		263	25.1
200	31	12,146	-54.7		267	31.5
175	31	12,999	-55.5		265	35.4
150	31	13,977	-57.5		264	[illegible]
125	31	15,124	-59.1		267	25.8
100	31	16,519	-59.6		272	18.1
80	31	17,919	-58.4		285	10.3
70	30	18,762	-57.5		303	6.2
60	30	19,738	-56.0		318	3.3
50	30	20,903	-54.3		21	3.9
40	30	22,339	-52.3		48	4.5
30	30	24,214	-48.7		80	5.9
25	30	25,418	-46.9		82	6.0
20	28	26,907	-44.5		87	9.2
15	28	28,844	-42.2		76	10.7
10	26	31,608	-37.7		80	15.7
7	13	34,067	-35.2			

GREEN BAY, WIS.
989 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	210	14.7	89	284	1.4
1000	31	117				
950	31	556	15.8	74	281	[illegible]
900	31	1,011	13.9	70	[illegible]	7.2
850	31	1,492	11.6	65	285	9.3
800	31	1,998	9.2	58	287	12.0
750	31	2,530	6.3	54	297	13.6
700	31	3,094	3.5	50	287	16.5
650	31	3,688	.2	50	286	18.5
600	31	4,330	- 3.6	48	287	21.4
550	31	[illegible]	- 7.7	44	287	22.5
500	31	5,748	-12.3	34	294	24.7
450	31	6,539	-17.3	[illegible]	[illegible]	27.8
400	31	7,419	-23.4	R33	284	[illegible]
350	31	8,381	-30.4	R32	284	37.1
300	31	9,459	-38.6	R30	294	40.6
250	31	10,688	-47.4		279	45.8
200	31	12,139	-54.1		282	50.1
175	31	12,991	-56.1		284	49.0
150	31	13,969	-57.1		298	43.3
125	31	15,118	-58.7		294	33.9
100	30	16,517	-59.2		297	25.3
80	30	17,917	-58.1		[illegible]	15.3
70	30	18,760	-56.5		305	9.7
60	30	19,743	-54.4		[illegible]	[illegible]
50	30	20,917	-52.2		357	3.1
40	29	22,366	-50.1		[illegible]	4.5
30	29	24,257	-47.5		94	8.5
25	28	25,465	-46.0		91	10.1
20	26	26,958	-44.0		92	[illegible]
15	17	28,886	-41.9		95	16.1
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GREENSBORO, N. C.
985 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	273	20.0	92	226	1.4
1000	31	145				
950	31	590	21.4	70	286	5.6
900	31	1,059	19.3	63	291	6.8
850	31	1,549	16.4	63	284	7.8
800	31	2,063	13.4	60	276	10.3
750	31	2,604	10.2	58	270	12.2
700	31	3,177	6.8	54	270	13.4
650	31	3,780	3.2	51	272	14.4
600	31	4,428	- .4	48	270	15.5
550	31	5,118	- 4.2	40	274	15.5
500	31	5,867	- 8.3	33	271	16.3
450	31	6,678	-13.3	28	271	16.9
400	31	7,566	-19.2	28	275	16.9
350	31	8,547	-26.3	27	280	20.2
300	31	9,644	-34.8	27	276	24.1
250	31	10,891	-44.7		280	27.2
200	31	12,349	-55.7		281	28.6
175	31	13,189	-60.9		285	28.4
150	31	14,140	-64.3		287	24.1
125	31	15,248	-66.3		286	15.2
100	31	16,602	-65.1		282	7.2
80	31	17,967	-62.8		309	.4
70	31	18,794	-60.3		75	3.3
60	31	19,760	-58.0		86	8.5
50	31	20,915	-55.2		91	12.8
40	31	22,350	-52.0		94	16.7
30	31	24,224	-49.3		96	19.2
25	29	25,425	-47.8		91	19.4
20	22	26,900	-46.5		92	22.9
15	7	28,838	-43.8			
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HILO, HAWAII
1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	11	21.1	82	244	6.4
1000	31	136	23.1	75	251	4.7
950	31	577	19.6	83	91	3.5
900	31	1,046	16.3	85	84	6.6
850	31	1,531	13.2	87	82	8.0
800	31	2,040	10.6	81	78	8.9
750	31	2,577	9.2	59	78	8.9
700	31	3,148	7.8	34	68	6.6
650	31	3,756	5.3	24	67	4.1
600	31	4,406	2.3	25	23	1.0
550	31	5,099	- 1.7	21	230	3.5
500	31	5,855	- 6.5	19	249	8.0
450	31	6,665	-11.9	19	251	10.9
400	31	7,561	-18.1	19	258	15.5
350	31	8,545	-25.2	20	259	22.0
300	31	9,646	-33.5	21	257	26.4
250	31	10,900	-43.3		263	31.7
200	31	12,364	-54.8		266	30.9
175	31	13,206	-61.1		263	29.3
150	31	14,149	-67.5		255	24.7
125	31	15,231	-72.5		237	17.3
100	31	16,541	-72.3		141	9.5
80	31	17,866	-68.7		97	18.8
70	31	18,672	-65.3		94	24.7
60	31	19,615	-62.5		90	30.5
50	30	20,746	-60.0		89	37.3
40	30	22,149	-56.9		90	44.1
30	30	23,987	-53.0		91	48.0
25	28	25,168	-51.0		91	51.3
20	27	26,627	-48.9		92	54.4
15	22	28,528	-46.8		94	59.1
10	7	31,223	-43.1			
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HUNTINGTON, W. VA.
988 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	246	17.8	89	194	2.3
1000	31	138				
950	31	580	20.0	73	247	7.8
900	31	1,046	18.0	67	271	11.7
850	31	1,534	15.1	66	271	13.6
800	31	2,045	12.5	59	268	17.7
750	31	2,582	9.9	53	270	18.6
700	31	3,157	6.7	51	268	19.2
650	31	3,758	3.1	50	269	18.8
600	31	4,407	- .6	43	266	19.6
550	31	5,095	- 4.3	34	268	19.6
500	31	5,844	- 8.5	R25	268	22.7
450	31	6,650	-13.9	R23	270	23.5
400	31	7,539	-20.2	R25	271	23.9
350	31	8,515	-27.1	R25	275	27.4
300	31	9,607	-35.5	R25	274	29.9
250	31	10,851	-45.0		273	33.8
200	30	12,305	-55.2		274	39.6
175	30	13,149	-59.0		277	35.5
150	30	14,108	-62.3		279	31.5
125	30	15,229	-64.2		278	22.0
100	30	16,593	-63.9		285	13.0
80	30	17,967	-61.3		281	5.2
70	30	18,799	-59.1		268	1.9
60	30	19,773	-56.4		51	2.5
50	29	20,936	-53.9		82	7.8
40	29	22,375	-51.8		90	10.9
30	29	24,253	-48.9		87	14.2
25	25	25,453	-47.3		89	16.7
20	21	26,938	-45.3		85	21.6
15	7	28,862	-43.4			
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*** INTERNAT. FALLS, MINN.**
971 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	360	11.2	89	201	1.0
1000	31	115				
950	31	543	14.6	72	230	[illegible]
900	31	1,003	13.2	62	281	6.4
850	31	1,481	10.3	62	297	10.1
800	31	1,983	7.3	60	301	12.0
750	31	2,507	4.7	51	300	14.4
700	31	3,071	1.5	50	296	15.5
650	31	3,659	- 1.7	48	297	19.4
600	31	4,297	- 5.4	42	295	23.1
550	31	4,968	- 9.5	44	295	24.9
500	31	5,704	-14.4	39	296	27.4
450	31	6,488	-19.5	39	294	29.5
400	31	7,362	-25.5	36	294	32.6
350	31	8,316	-32.9	37	291	34.0
300	31	9,382	-41.2	42	291	39.8
250	31	10,597	-49.9		291	44.1
200	31	12,033	-55.2		289	47.2
175	31	12,984	-55.2		289	47.6
150	31	13,867	-55.8		290	40.0
125	30	15,029	-56.8		296	33.9
100	30	16,443	-56.9		298	[illegible]
80	29	17,856	-55.9		306	19.4
70	29	18,706	-55.0		310	15.0
60	29	19,694	-54.0		312	10.9
50	29	20,869	-52.3		331	6.8
40	29	22,318	-50.4		346	[illegible]
30	29	24,207	-47.5		69	4.1
25	29	25,417	-45.8		87	6.0
20	29	26,908	-44.3		91	6.9
15	27	28,859	-41.5		86	9.9
10	23	31,632	-37.5		78	14.0
7	12	34,149	-33.3		90	17.0

JACKSON, MISS.
1005 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	94	21.8	94	205	1.6
1000	31	140	22.2	91	218	2.1
950	31	588	22.8	77	254	7.4
900	31	1,059	20.1	74	248	4.7
850	31	1,552	17.0	73	225	3.7
800	31	2,067	13.7	72	237	2.9
750	31	2,605	10.4	71	239	3.3
700	31	3,182	7.1	65	[illegible]	4.1
650	31	3,783	3.7	[illegible]	[illegible]	4.3
600	31	4,435	.0	52	251	4.5
550	31	5,119	- 3.9	50	248	5.4
500	31	5,875	- 8.1	[illegible]	243	[illegible]
450	31	6,682	-13.0	40	243	5.4
400	31	7,575	-18.9	34	244	[illegible]
350	31	8,556	-25.9	35	233	6.6
300	31	9,654	-34.2	R33	237	9.7
250	31	10,903	-44.2		240	11.7
200	31	12,361	-55.6		[illegible]	[illegible]
175	31	13,201	-61.0		235	9.1
150	31	14,147	-65.9		256	5.4
125	31	15,242	-69.3		1	1.4
100	31	16,576	-67.6		50	5.6
80	31	17,929	-64.5		77	9.3
70	31	18,750	-61.5		79	11.7
60	30	19,710	-59.2		85	15.0
50	30	20,860	-56.3		[illegible]	19.2
40	30	22,287	-53.6		[illegible]	22.1
30	30	24,150	-50.5		92	25.4
25	30	25,343	-48.8		93	[illegible]
20	26	26,806	-46.7		88	27.4
15	23	28,709	-44.5		87	30.3
10	7	31,442	-41.7			
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*** JACKSONVILLE, FLA.**
1018 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	5	23.6	93	249	2.7
1000	31	160	23.7	87	245	3.5
950	31	605	22.2	77	235	6.4
900	31	1,079	19.3	74	235	6.4
850	31	1,569	16.3	72	223	6.2
800	31	2,083	13.2	69	223	6.2
750	31	2,618	10.6	64	228	5.4
700	31	3,195	7.0	59	239	5.6
650	31	3,794	3.6	56	248	5.6
600	31	4,447	- .2	51	249	6.2
550	31	5,127	- 3.8	45	259	6.0
500	31	5,885	- 8.2	42	263	4.3
450	31	6,689	-13.2	37	237	4.1
400	31	7,584	-18.7	31	304	2.1
350	31	8,565	-26.0	31	293	1.9
300	31	9,662	-34.5	27	317	2.3
250	31	10,909	-44.5		7	3.3
200	31	12,365	-56.2		12	5.1
175	30	13,201	-62.1		7	8.2
150	29	14,140	-67.6		25	8.0
125	29	15,228	-70.6		32	7.0
100	29	16,558	-68.3		93	7.0
80	28	17,907	-65.0		79	10.5
70	28	18,725	-62.4		82	16.7
60	28	19,682	-59.8		88	20.4
50	28	20,828	-57.1		91	26.2
40	28	22,250	-54.0		94	28.6
30	28	24,108	-51.3		96	29.7
25	28	25,295	-49.8		92	29.9
20	26	26,767	-47.8		87	30.5
15	24	28,674	-45.6		82	35.5
10	15	31,418	-40.3		90	41.2
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JOHN F. KENNEDY INT. ARPT.NY
1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	5	20.0	80	277	3.9
1000	31	137	19.6	75	274	4.9
950	31	576	18.0	66	270	7.4
900	31	1,040	15.5	63	267	8.5
850	31	1,524	12.8	60	269	10.5
800	31	2,031	10.2	54	271	13.6
750	31	2,570	8.2	44	272	16.7
700	31	3,133	5.3	44	271	18.8
650	31	3,736	2.2	40	271	21.4
600	31	4,378	- 1.3	37	267	24.3
550	31	5,065	- 5.4	33	266	24.9
500	31	5,807	-10.0	32	268	28.2
450	31	6,615	-15.2	28	263	30.7
400	31	7,491	-21.3	28	265	31.5
350	31	8,463	-28.1	26	266	35.7
300	31	9,551	-36.5	24	264	39.0
250	31	10,788	-46.2		264	43.5
200	31	12,239	-55.3		270	45.6
175	30	13,080	-58.6		270	41.8
150	30	14,043	-60.4		266	36.7
125	30	15,175	-61.8		268	29.7
100	30	16,556	-61.5		272	20.0
80	30	17,946	-59.1		272	10.3
70	30	18,786	-56.7		269	5.6
60	30	19,767	-55.0		265	1.0
50	30	20,936	-52.9		84	4.1
40	30	22,383	-50.4		87	8.0
30	29	24,269	-47.7		87	12.4
25	29	25,475	-46.4		87	13.8
20	25	26,960	-44.4		87	14.8
15	15	28,892	-42.1			
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JOHNSTON IS., PACIFIC AREA
1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	3	26.3	77	105	12.8
1000	31	121	25.2	80	94	15.0
950	31	578	21.3	87	87	18.5
900	31	1,039	18.5	78	88	18.8
850	31	1,528	15.8	74	86	17.5
800	31	2,042	13.1	71	85	15.9
750	31	2,585	10.7	59	81	14.6
700	31	3,157	8.4	45	81	12.0
650	31	3,767	5.6	32	83	9.9
600	31	4,417	2.0	32	74	7.2
550	31	5,112	- 1.7	27	70	4.1
500	31	5,869	- 6.0	25	105	4.1
450	31	6,684	-11.3	23	118	3.9
400	31	7,580	-17.6	22	160	3.1
350	30	8,567	-24.8	26	193	4.9
300	29	9,671	-33.0	26	230	9.1
250	29	10,926	-43.1		242	14.4
200	29	12,390	-55.2		252	18.1
175	29	13,229	-61.8		249	17.7
150	28	14,170	-68.9		247	16.3
125	27	15,242	-74.8		239	12.2
100	27	16,534	-74.2		126	7.4
80	27	17,847	-70.0		90	17.9
70	27	18,645	-67.3		87	23.3
60	27	19,581	-64.1		91	29.7
50	26	20,705	-61.3		88	36.5
40	24	22,099	-58.4		87	44.1
30	22	23,917	-54.5		92	52.1
25	20	25,093	-51.9		92	57.5
20	18	26,553	-49.7		91	61.8
15	12	28,448	-48.0			
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KEY WEST, FLORIDA
1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	3	27.5	77	108	6.4
1000	28	143	26.3	80	106	8.4
950	28	591	22.4	87	117	10.3
900	28	1,065	19.9	72	113	11.1
850	28	1,557	17.2	63	112	9.1
800	28	2,073	14.5	59	103	7.4
750	28	2,609	11.5	52	101	7.2
700	28	3,191	8.4	46	99	7.9
650	28	3,792	4.8	48	102	7.2
600	28	4,449	.9	46	94	7.0
550	28	5,133	- 3.4	45	85	7.2
500	28	5,893	- 7.9	40	79	7.8
450	28	6,699	-13.1	35	61	8.2
400	28	7,595	-19.1	30	65	9.1
350	28	8,575	-26.2	29	63	10.7
300	28	9,672	-34.8	25	52	11.8
250	28	10,919	-45.0		49	13.4
200	28	12,371	-57.2		48	15.2
175	28	13,205	-62.9		54	17.9
150	28	14,141	-68.4		54	16.5
125	28	15,231	-69.5		57	13.0
100	28	16,557	-70.8		81	15.0
80	28	17,890	-67.5		83	18.5
70	28	18,698	-64.9		78	22.7
60	28	19,644	-62.0		87	28.7
50	28	20,779	-59.1		90	31.5
40	27	22,190	-55.6		92	34.8
30	26	24,039	-52.0		91	37.7
25	26	25,225	-50.0		90	39.2
20	25	26,686	-47.7		84	39.8
15	25	28,594	-45.7		84	[illegible]
10	20	31,315	-41.6		88	[illegible]
7	16	33,756	-37.9		86	57.1
5	10	36,081	-35.1			

KING SALMON, ALASKA
1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	15	8.1	92	179	4.5
1000	30	127	9.0	86	[illegible]	5.1
950	30	554	7.6	79	207	6.8
900	30	996	5.3	78	204	6.6
850	30	1,461	3.3	72	219	6.8
800	30	1,952	1.4	66	233	7.0
750	30	2,471	- .4	58	[illegible]	7.8
700	30	3,019	- 3.2	61	244	[illegible]
650	30	3,601	- 6.1	53	251	10.7
600	30	4,226	- 9.6	52	253	12.0
550	30	4,892	-13.5	51	257	14.0
500	30	5,612	-17.8	50	261	16.1
450	30	6,389	-23.0	45	265	18.1
400	30	7,245	-29.1	47	271	20.2
350	29	8,182	-36.3	42	273	[illegible]
300	29	9,234	-44.1		277	26.0
250	29	10,436	-51.8		277	31.1
200	29	11,873	-52.8		267	26.8
175	29	12,738	-51.2		263	24.9
150	29	13,739	-51.3		261	20.4
125	29	14,923	-51.5		256	16.7
100	28	16,373	-51.3		250	10.3
80	27	17,822	-50.9		243	7.8
70	27	18,691	-50.9		[illegible]	6.0
60	27	19,695	-50.8		236	3.3
50	27	20,883	-50.4		205	1.4
40	27	22,341	-49.9		74	[illegible]
30	24	24,227	-48.6		87	4.5
25	23	25,427	-47.3		93	[illegible]
20	22	26,905	-45.3		87	5.6
15	13	28,858	-42.7			
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See reference note at end of table

RAWINSONDE DATA

Average monthly values

AUGUST 1965

KOROR, CAROLINE IS. +
1007 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	30	27.7	82	252	2.1
1000	31	91	26.8	79	248	2.9
950	31	540	22.7	75	248	6.4
900	31	1,013	19.9	72	254	6.6
850	31	1,504	17.1	69	266	4.9
800	31	2,020	14.6	63	272	3.5
750	31	2,562	12.1	57	304	1.6
700	31	3,140	9.1	52	56	1.9
650	31	3,749	5.9	49	90	2.1
600	31	4,402	1.9	50	87	3.7
550	31	5,097	- 2.1	47	96	7.2
500	31	5,852	- 6.3	41	99	10.1
450	31	6,668	-11.0	36	101	14.2
400	31	7,566	-16.8	31	98	14.4
350	31	8,555	-23.7	27	91	15.7
300	31	9,663	-32.1	24	87	17.1
250	31	10,922	-42.4		78	21.0
200	31	12,389	-54.7		69	25.6
175	31	13,230	-61.6		74	28.7
150	31	14,169	-68.9		77	26.2
125	31	15,240	-75.5		81	18.8
100	31	16,525	-75.9		80	14.8
80	31	17,833	-70.5		86	16.1
70	30	18,630	-67.8		82	18.8
60	30	19,562	-65.2		84	21.8
50	30	20,678	-63.1		89	32.4
40	30	22,062	-59.6		91	51.5
30	30	23,877	-56.0		91	68.4
25	29	25,042	-52.7		91	75.2
20	23	26,496	-49.9		92	80.8
15	7	28,390	-47.2			
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KOTZEBUE, ALASKA
1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	5	8.3	89	221	3.5
1000	31	83	7.4	87	221	4.1
950	31	505	4.6	84	208	8.4
900	31	943	1.9	85	211	8.7
850	31	1,403	- .4	87	208	9.3
800	31	1,887	- 2.6	81	207	9.9
750	31	2,397	- 4.9	72	214	11.7
700	31	2,938	- 7.8	72	218	13.4
650	31	3,508	-11.0	64	224	14.6
600	31	4,122	-14.7	62	227	15.7
550	31	4,775	-18.9	58	232	16.9
500	31	5,479	-23.8	53	234	18.5
450	31	6,240	-28.8	48	239	20.6
400	31	7,076	-34.5	47	246	23.3
350	31	7,995	-41.0	47	247	26.4
300	31	9,028	-47.7		246	27.8
250	31	10,222	-50.3		250	27.4
200	31	11,688	-47.5		247	20.2
175	31	12,571	-47.4		247	19.8
150	31	13,590	-47.7		244	16.9
125	31	14,793	-47.9		248	11.8
100	31	16,262	-48.7		247	9.7
80	31	17,731	-48.3		241	7.2
70	31	18,611	-48.1		238	5.8
60	31	19,627	-48.3		230	3.3
50	31	20,828	-48.3		195	1.4
40	31	22,297	-48.4		106	1.9
30	31	24,194	-47.5		95	4.5
25	31	25,402	-46.4		104	6.0
20	30	26,893	-45.0		87	6.2
15	27	28,832	-42.6		88	6.4
10	14	31,579	-39.6			
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KWAJALEIN, MARSHALL IS.
1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	4	27.3	78	77	6.2
1000	30	96	26.8	77	83	7.2
950	30	549	23.4	81	86	9.3
900	30	1,020	20.5	78	88	10.3
850	30	1,513	17.9	77	89	10.5
800	30	2,031	15.2	74	88	11.3
750	30	2,577	12.6	65	87	11.3
700	30	3,154	9.6	56	87	11.8
650	30	3,766	5.9	59	86	12.6
600	30	4,418	1.9	59	87	12.6
550	30	5,115	- 2.1	50	86	12.6
500	30	5,867	- 6.5	44	93	11.5
450	30	6,682	-11.7	38	88	9.9
400	30	7,575	-17.2	40	82	8.2
350	30	8,566	-22.9	35	81	8.0
300	30	9,675	-32.0	32	98	7.8
250	30	10,935	-42.3	31	117	6.4
200	30	12,404	-54.5	26	122	7.9
175	30	13,244	-62.0	26	138	6.0
150	30	14,180	-69.8	26	142	4.5
125	30	15,247	-76.2		90	4.1
100	28	16,526	-77.1		88	6.0
80	28	17,825	-71.4		97	15.2
70	28	18,620	-68.6		89	16.7
60	28	19,549	-65.8		84	23.1
50	28	20,662	-63.3		87	34.4
40	27	22,046	-60.0		88	49.0
30	25	23,858	-55.3		88	63.3
25	25	25,027	-53.1		89	67.0
20	23	26,472	-50.0		90	73.8
15	21	28,376	-45.5		87	71.7
10	14	31,102	-42.8		95	61.0
7	9	33,498	-38.6			
5	5	35,836	-35.5			

LAKE CHARLES, LA.
1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	5	22.2	94	90	1.6
1000	31	138	24.6	84	181	3.1
950	31	588	22.9	77	208	7.6
900	31	1,060	20.1	69	200	7.2
850	31	1,552	17.3	63	197	6.6
800	31	2,067	14.2	61	198	2.9
750	31	2,605	10.9	58	197	1.9
700	31	3,183	7.6	55	231	1.2
650	31	3,787	4.0	53	281	.8
600	31	4,437	.1	53	294	2.3
550	31	5,125	- 3.8	47	280	3.3
500	31	5,877	- 8.1	44	267	3.1
450	31	6,687	-13.1	38	255	3.9
400	31	7,577	-18.9	37	228	3.7
350	31	8,558	-25.8	R30	218	4.3
300	31	9,657	-34.0	R27	217	5.6
250	31	10,907	-43.8		202	7.2
200	30	12,372	-54.7		168	6.0
175	30	13,215	-60.2		172	6.4
150	30	14,164	-65.3		163	4.5
125	30	15,262	-69.0		50	4.3
100	30	16,596	-68.3		50	7.8
80	30	17,946	-65.2		81	12.4
70	30	18,762	-62.8		84	14.6
60	30	19,720	-60.0		83	19.0
50	30	20,867	-57.1		86	23.3
40	30	22,291	-54.2		88	26.6
30	30	24,152	-50.7		88	30.9
25	30	25,346	-48.9		91	32.6
20	30	26,818	-47.1		88	33.0
15	27	28,734	-44.6		90	35.0
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LANDER, WYO.
832 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,696	13.6	53	225	2.3
1000	31	107				
950	31	545				
900	31	1,016				
850	31	1,508				
800	31	2,022	15.9	36	291	2.3
750	31	2,563	12.5	35	275	2.5
700	31	3,142	8.5	35	266	6.6
650	31	3,742	3.8	39	261	11.7
600	31	4,396	- .8	41	259	18.1
550	31	5,075	- 5.6	36	260	20.8
500	31	5,827	-10.6	34	263	21.8
450	31	6,623	-15.7	R27	261	20.6
400	31	7,509	-22.1	R28	261	22.5
350	31	8,477	-29.4	R27	263	28.7
300	31	9,558	-37.8	R26	265	31.7
250	31	10,791	-46.4		264	40.4
200	31	12,249	-53.3		265	47.0
175	31	13,102	-56.5		270	42.0
150	31	14,072	-60.2		272	36.9
125	31	15,200	-63.3		273	26.2
100	31	16,567	-63.9		278	14.4
80	31	17,940	-61.5		296	6.2
70	31	18,772	-59.5		321	2.7
60	31	19,740	-57.8		43	2.3
50	31	20,896	-55.5		69	5.4
40	31	22,328	-52.8		84	6.0
30	31	24,196	-49.5		76	7.6
25	31	25,396	-47.6		79	9.7
20	28	26,877	-46.0		86	14.0
15	21	28,816	-43.0		89	17.9
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LAS VEGAS, NEV.
935 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	660	25.9	30	234	4.5
1000	31	62				
950	31	513				
900	31	999	27.5	27	245	6.4
850	31	1,502	24.7	27	249	8.4
800	31	2,030	20.8	30	219	8.9
750	31	2,580	16.2	35	202	10.1
700	31	3,164	11.4	40	194	12.0
650	31	3,774	6.4	43	196	11.1
600	31	4,429	1.5	41	209	11.8
550	31	5,116	- 3.1	37	223	12.4
500	31	5,873	- 7.9	R32	230	15.5
450	31	6,678	-13.5	R30	241	18.1
400	31	7,571	-19.7	R27	251	20.6
350	31	8,548	-26.9	R24	250	24.1
300	31	9,642	-34.7	R25	250	27.0
250	31	10,893	-42.6		251	32.8
200	31	12,368	-52.0		252	35.7
175	31	13,222	-57.2		254	33.4
150	31	14,185	-62.6		252	27.8
125	31	15,294	-67.5		253	20.9
100	31	16,634	-67.9		253	9.3
80	31	17,984	-64.6		70	2.9
70	31	18,804	-61.9		85	6.0
60	30	19,762	-58.8		91	10.1
50	30	20,914	-56.0		83	12.2
40	29	22,343	-53.4		85	15.0
30	29	24,205	-50.6		87	18.8
25	29	25,397	-49.1		91	21.4
20	26	26,866	-46.8		87	21.4
15	25	28,786	-44.1		85	22.5
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* LIHUE, HAWAII
1012 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	36	23.7	80	52	7.6
1000	31	143	23.4	80	56	10.5
950	31	590	19.8	88	65	14.8
900	31	1,054	16.6	85	72	15.5
850	31	1,540	13.6	86	76	15.9
800	31	2,050	10.9	79	75	15.2
750	31	2,587	9.4	55	76	12.0
700	31	3,157	7.2	36	72	8.7
650	31	3,760	4.3	33	66	5.1
600	31	4,411	1.2	24	63	2.5
550	31	5,098	- 3.3	24	25	.6
500	31	5,853	- 7.8	23	287	4.1
450	31	6,661	-13.4	24	281	9.3
400	31	7,551	-19.6	25	272	17.1
350	31	8,528	-26.9	28	270	24.9
300	31	9,621	-35.0	29	272	32.1
250	31	10,868	-44.0		273	40.8
200	30	12,334	-54.8		272	46.6
175	30	13,176	-60.7		271	45.5
150	30	14,121	-66.5		265	34.6
125	29	15,213	-70.6		257	21.8
100	29	16,536	-70.4		193	4.7
80	29	17,868	-67.6		96	14.4
70	28	18,675	-65.1		91	20.6
60	28	19,618	-62.6		86	28.2
50	28	20,750	-60.0		88	33.8
40	27	22,151	-57.4		89	39.0
30	26	23,986	-53.5		90	43.7
25	26	25,163	-51.8		91	46.6
20	26	26,616	-49.7		92	49.5
15	26	28,510	-47.1		92	51.7
10	24	31,219	-43.3		87	53.6
7	12	33,634	-40.8		89	59.8

LITTLE ROCK, ARK.
1007 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	79	21.2	89	254	1.4
1000	31	136	21.9	83	249	1.4
950	31	586	22.9	64	243	7.2
900	31	1,054	20.4	65	245	8.7
850	31	1,547	17.3	64	253	7.8
800	31	2,062	14.0	61	256	7.8
750	31	2,600	11.1	52	252	6.4
700	31	3,178	7.8	46	265	5.6
650	31	3,782	3.9	47	266	5.6
600	31	4,432	.1	43	262	5.8
550	31	5,116	- 3.9	35	247	7.4
500	31	5,872	- 8.2	30	249	8.5
450	31	6,674	-13.4	R30	251	8.9
400	31	7,569	-19.3	R32	251	9.7
350	31	8,549	-26.2	R30	260	13.0
300	31	9,645	-34.5	R28	265	13.6
250	31	10,894	-44.1		274	16.9
200	31	12,358	-54.3		274	17.9
175	31	13,204	-59.3		274	15.7
150	31	14,160	-63.6		280	12.0
125	30	15,268	-67.1		287	7.8
100	30	16,614	-66.2		345	3.7
80	30	17,975	-63.1		40	5.2
70	30	18,800	-60.5		64	6.8
60	30	19,769	-57.6		80	10.3
50	30	20,926	-55.4		83	13.4
40	30	22,358	-52.6		91	16.3
30	29	24,227	-49.9		90	20.8
25	28	25,422	-47.8		90	22.0
20	25	26,901	-45.9		88	22.5
15	15	28,821	-43.9			
10						
7						

MCGRATH, ALASKA
1002 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	103	9.2	84	212	3.5
1000	30	117			226	3.1
950	30	541	8.2	77	226	8.2
900	30	986	5.3	82	222	10.9
850	30	1,452	2.4	85	221	9.1
800	30	1,940	- .2	82	228	11.1
750	30	2,452	- 2.4	77	227	11.1
700	30	3,001	- 5.2	71	224	11.5
650	30	3,575	- 8.2	69	229	12.0
600	30	4,199	-11.8	67	235	12.4
550	30	4,852	-16.1	65	249	13.6
500	30	5,573	-20.6	54	269	15.9
450	30	6,337	-25.8	54	273	18.1
400	30	7,189	-32.0	51	283	20.8
350	30	8,119	-38.8	49	297	25.8
300	30	9,160	-46.3		308	32.4
250	30	10,356	-51.2		305	30.3
200	30	11,808	-49.5		294	22.9
175	30	12,684	-48.8		289	19.4
150	30	13,696	-49.1		285	17.1
125	30	14,891	-49.3		280	12.8
100	30	16,353	-49.4		271	9.7
80	30	17,815	-49.2		267	5.2
70	30	18,690	-49.2		257	3.7
60	30	19,700	-49.2		257	2.7
50	30	20,895	-49.3		67	1.7
40	30	22,358	-48.8		70	3.5
30	29	24,256	-47.5		76	4.5
25	29	25,463	-46.4		85	5.4
20	29	26,949	-44.8		84	6.6
15	26	28,903	-41.9		83	7.2
10	13	31,724	-37.8			
7						

MAJURO, MARSHALL IS. +
1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	3	28.9	76	74	4.5
1000	31	91	27.5	71	73	4.7
950	31	539	23.2	70	72	6.2
900	31	1,013	20.4	68	78	7.0
850	31	1,506	17.6	66	83	7.0
800	31	2,023	15.1	60	91	7.6
750	31	2,566	12.6	52	95	8.2
700	31	3,145	9.5	46	94	9.1
650	31	3,754	6.1	43	90	10.7
600	31	4,408	2.4	40	90	10.7
550	31	5,105	- 1.5	38	87	9.9
500	31	5,861	- 5.6	31	87	11.8
450	31	6,682	-10.4	27	84	11.7
400	31	7,579	-15.7	25	93	9.9
350	31	8,573	-22.7	24	90	9.9
300	31	9,686	-31.2	23	94	9.7
250	31	10,950	-41.5		119	11.1
200	31	12,423	-54.3		116	12.6
175	31	13,265	-61.3		112	11.1
150	31	14,205	-68.8		110	8.2
125	31	15,277	-75.4		107	5.4
100	30	16,561	-75.5		90	4.1
80	29	17,872	-69.4		89	11.1
70	29	18,673	-66.6		95	12.8
60	29	19,609	-64.7		93	18.5
50	29	20,732	-61.7		91	30.1
40	29	22,124	-58.6		91	49.5
30	27	23,950	-54.3		91	62.5
25	20	25,127	-51.3		91	69.5
20	14	26,591	-47.6		91	72.8
15	5	28,522	-43.9			
10						
7						

MARCUS IS., N. PACIFIC +
1011 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	9	29.7	72	119	5.4
1000	31	103	28.1	70	115	6.4
950	31	554	23.7	73	117	7.0
900	31	1,028	20.6	71	121	7.6
850	30	1,521	17.9	66	120	7.4
800	30	2,039	15.1	62	112	6.8
750	30	2,579	12.3	55	111	6.2
700	30	3,160	9.4	49	100	6.4
650	30	3,767	6.0	45	94	7.0
600	30	4,423	2.1	43	96	7.2
550	30	5,114	- 2.0	42	92	7.8
500	30	5,874	- 6.3	35	85	7.4
450	30	6,685	-11.0	32	85	8.9
400	30	7,587	-16.6	31	82	8.9
350	30	8,578	-23.3	27	83	9.5
300	30	9,688	-31.6	26	84	11.7
250	30	10,951	-41.7		81	13.0
200	30	12,426	-53.6		73	15.5
175	30	13,271	-60.3		70	16.7
150	30	14,217	-66.9		62	20.6
125	30	15,303	-72.0		63	24.9
100	29	16,610	-72.8		74	25.8
80	29	17,932	-68.1		81	26.0
70	29	18,740	-64.5		84	27.8
60	28	19,692	-61.3		89	30.3
50	27	20,831	-58.6		90	33.0
40	23	22,244	-55.2		91	39.2
30	19	24,096	-51.6		94	46.2
25	14	25,278	-49.8		94	44.5
20	8	26,741	-47.4			
15						
10						
7						
5						

* MEDFORD, OREG.
969 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	401	14.0	79	271	.8
1000	31	131				
950	31	570	16.3	64	276	1.4
900	31	1,027	15.0	62	280	1.6
850	31	1,510	13.0	60	102	1.4
800	31	2,018	11.1	52	182	3.5
750	31	2,553	8.3	48	205	8.2
700	31	3,121	4.7	46	213	12.4
650	31	3,712	.9	42	212	14.4
600	31	4,360	- 2.9	37	220	15.7
550	31	5,035	- 7.4	40	222	18.3
500	31	5,780	-12.5	36	225	20.2
450	31	6,567	-18.0	32	226	21.8
400	31	7,448	-24.2	32	226	25.6
350	31	8,408	-31.5	31	224	29.3
300	31	9,480	-39.6	30	225	33.4
250	31	10,705	-47.7		229	43.1
200	30	12,158	-53.1		230	55.0
175	30	13,016	-54.6		230	48.2
150	29	14,001	-56.9		232	42.0
125	29	15,149	-59.1		237	29.7
100	28	16,544	-60.6		230	16.9
80	27	17,936	-59.6		215	5.6
70	27	18,772	-58.7		125	2.5
60	26	19,746	-56.9		100	3.5
50	26	20,904	-55.6		78	5.2
40	26	22,332	-53.0		77	7.8
30	26	24,200	-49.6		76	10.1
25	26	25,397	-47.9		75	11.5
20	24	26,880	-45.7		81	15.9
15	24	28,805	-43.4		83	17.5
10	21	31,562	-38.4		94	20.6
7	12	34,032	-34.7		108	23.5
5						

* MIAMI, FLA.
1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	4	24.7	89	76	1.7
1000	31	148	25.9	81	106	5.6
950	31	597	22.5	82	129	10.9
900	31	1,069	19.8	74	127	10.7
850	31	1,561	17.0	67	124	8.7
800	31	2,076	14.0	61	115	7.4
750	31	2,615	11.0	57	112	7.2
700	31	3,191	7.8	53	112	6.4
650	31	3,796	4.1	53	112	5.6
600	31	4,445	.5	44	118	5.4
550	31	5,127	- 3.8	43	118	4.5
500	31	5,885	- 8.4	39	92	4.9
450	31	6,688	-13.5	37	69	6.2
400	31	7,581	-19.3	36	58	7.2
350	31	8,560	-26.4	33	58	9.3
300	31	9,656	-34.8	29	53	11.1
250	31	10,903	-44.8		46	14.2
200	31	12,356	-56.5		45	16.5
175	31	13,191	-62.6		50	21.0
150	31	14,130	-67.5		53	18.1
125	30	15,223	-68.8		56	13.2
100	29	16,551	-70.1		87	12.6
80	29	17,888	-66.8		84	18.1
70	29	18,698	-64.6		83	23.9
60	29	19,646	-62.3		87	29.5
50	29	20,782	-58.4		92	35.5
40	29	22,196	-55.4		96	39.2
30	29	24,044	-52.0		94	41.0
25	29	25,231	-49.6		91	40.8
20	29	26,700	-47.3		88	40.4
15	27	28,614	-45.2		85	46.0
10	22	31,342	-41.6		87	55.4
7	6	33,798	-37.2			
5						

* MIDLAND, TEXAS
916 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	874	20.7	71	156	4.9
1000	31	109				
950	31	561				
900	31	1,029	21.6	61	169	10.3
850	31	1,525	19.8	58	186	18.3
800	31	2,045	17.1	53	190	12.0
750	31	2,591	13.3	55	179	6.0
700	31	3,171	9.2	56	132	1.9
650	31	3,778	5.2	54	62	3.9
600	31	4,431	1.1	52	44	5.2
550	31	5,117	- 3.4	52	38	4.7
500	31	5,873	- 8.1	51	40	3.1
450	31	6,680	-12.8	41	353	5.4
400	31	7,574	-18.8	45	351	8.4
350	31	8,555	-25.7	39	345	11.7
300	31	9,654	-33.8	38	337	14.2
250	31	10,906	-43.5		340	17.7
200	31	12,371	-54.2		344	20.0
175	31	13,216	-59.8		355	18.1
150	31	14,168	-64.6		356	15.5
125	31	15,269	-68.8		9	13.8
100	30	16,599	-69.8		35	10.7
80	27	17,939	-65.3		74	11.7
70	27	18,757	-62.5		83	12.8
60	27	19,713	-60.2		83	16.1
50	27	20,856	-57.9		90	20.4
40	27	22,273	-54.8		90	23.3
30	27	24,127	-51.3		89	27.2
25	27	25,315	-49.8		89	27.8
20	27	26,781	-47.7		86	31.3
15	26	28,691	-44.9		84	32.4
10	21	31,413	-41.3		87	35.5
7	11	33,825	-37.5			
5						

MONTGOMERY, ALA.
1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	61	21.7	99	92	.8
1000	31	146	22.3	93	229	.8
950	31	597	22.5	75	250	3.5
900	31	1,064	19.9	73	238	5.1
850	31	1,556	16.8	71	228	5.8
800	31	2,071	13.6	68	226	6.4
750	31	2,609	10.5	62	236	7.8
700	31	3,185	7.3	55	239	6.8
650	31	3,792	3.9	49	237	7.0
600	31	4,439	.3	46	238	8.2
550	31	5,130	- 3.5	40	243	7.6
500	31	5,881	- 7.8	35	251	7.0
450	31	6,694	-12.7	32	260	7.4
400	31	7,585	-18.3	R27	255	7.4
350	31	8,568	-25.5	R24	255	8.5
300	31	9,667	-33.9	R23	254	9.9
250	31	10,919	-43.8		255	10.5
200	31	12,381	-55.1		258	11.5
175	31	13,222	-61.1		264	13.0
150	31	14,167	-66.2		282	8.7
125	31	15,263	-69.3		346	3.1
100	30	16,599	-67.6		56	4.7
80	29	17,954	-64.1		71	9.7
70	29	18,776	-61.4		78	12.0
60	29	19,740	-58.8		86	15.9
50	29	20,893	-55.7		88	19.4
40	29	22,323	-52.9		93	23.1
30	29	24,192	-50.1		90	25.1
25	29	25,388	-48.5		89	27.8
20	25	26,860	-46.8		89	28.6
15	23	28,775	-43.9		82	31.9
10	22	31,529	-38.4		86	34.0
7	20	33,999	-35.7		93	38.1
5	13	36,373	-32.1			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

AUGUST 1965

	* NANTUCKET, MASS. 1014 MB				Wind	
Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	31	14	19.2	88	221	3.5
1000	31	134	19.1	80	221	7.4
950	31	571	17.7	64	245	12.2
900	31	1,035	14.9	57	253	11.3
850	31	1,517	12.2	55	254	11.5
800	31	2,023	9.7	46	260	13.8
750	31	2,553	7.4	38	261	15.2
700	31	3,123	4.8	37	259	18.1
650	31	3,718	1.8	37	258	22.7
600	31	4,366	- 1.7	36	260	26.2
550	31	5,047	- 5.6	32	258	26.4
500	31	5,795	-10.3	29	258	29.1
450	31	6,593	-15.4	26	256	32.8
400	31	7,480	-21.2	25	253	35.7
350	31	8,453	-28.1	26	256	38.9
300	31	9,541	-36.4	24	255	40.0
250	31	10,780	-45.9		257	42.5
200	31	12,231	-55.9		262	42.0
175	31	13,073	-59.4		263	37.7
150	31	14,035	-60.7		258	33.0
125	31	15,167	-61.5		260	28.7
100	31	16,549	-61.4		261	19.0
80	31	17,939	-58.8		256	12.0
70	30	18,780	-57.0		251	8.2
60	30	19,759	-55.4		245	4.3
50	30	20,927	-53.2		139	2.7
40	30	22,370	-51.2		107	5.6
30	29	24,249	-48.7		95	9.1
25	29	25,451	-47.0		89	12.6
20	28	26,935	-45.1		87	14.0
15	25	28,868	-42.7		90	17.9
10	21	31,613	-39.2		92	21.6
7						

	* NASHVILLE, TENN. 996 MB				Wind	
Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	31	177	19.8	91	160	2.1
1000	31	146				
950	31	593	21.4	73	246	6.6
900	31	1,058	19.0	70	252	9.3
850	31	1,548	15.9	69	261	9.7
800	31	2,061	13.0	62	262	9.7
750	31	2,598	10.0	55	267	9.5
700	31	3,172	6.8	51	265	10.5
650	31	3,774	3.3	47	263	11.8
600	31	4,423	- .5	42	263	12.0
550	31	5,107	- 4.3	36	259	13.2
500	31	5,860	- 8.5	30	257	14.2
450	31	6,667	-13.7	27	267	15.0
400	31	7,556	-19.8	28	267	17.7
350	31	8,533	-26.8	29	268	22.0
300	31	9,626	-35.1	29	266	25.4
250	31	10,872	-44.6		266	28.7
200	31	12,329	-55.1		265	30.9
175	31	13,172	-59.7		268	31.7
150	31	14,126	-63.8		272	24.7
125	31	15,235	-66.3		270	14.8
100	31	16,587	-65.3		274	7.0
80	31	17,956	-62.2		17	2.9
70	31	18,784	-59.9		50	5.6
60	31	19,752	-57.3		73	8.5
50	31	20,912	-54.6		86	9.5
40	31	22,348	-52.2		97	13.6
30	31	24,218	-50.2		86	15.7
25	30	25,411	-48.4		80	19.2
20	30	26,886	-46.5		82	22.3
15	29	28,806	-43.6		84	25.6
10	26	31,549	-40.0		80	30.1
7	12	34,016	-35.7			

	NOME, ALASKA 1010 MB				Wind	
Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	31	7	6.9	88	189	3.1
1000	31	87	6.9	86	198	4.3
950	31	504	4.7	85	206	7.2
900	31	947	2.7	87	210	10.3
850	31	1,409	.7	79	214	12.2
800	31	1,895	- .9	70	216	12.6
750	31	2,404	- 3.3	66	217	14.0
700	31	2,952	- 6.3	66	218	14.0
650	31	3,523	- 9.2	63	227	15.2
600	31	4,145	-12.3	59	231	15.9
550	31	4,800	-16.3	56	238	16.9
500	31	5,516	-21.0	56	242	18.5
450	31	6,280	-26.5	56	251	21.0
400	31	7,128	-32.7	52	253	22.0
350	31	8,055	-39.5	52	250	24.3
300	31	9,094	-46.4		252	25.4
250	31	10,291	-50.7		255	27.6
200	31	11,750	-48.3		251	23.1
175	31	12,631	-47.5		249	19.4
150	31	13,649	-47.9		252	15.0
125	31	14,850	-48.3		245	12.8
100	31	16,319	-48.4		243	9.9
80	31	17,787	-48.4		241	7.0
70	31	18,665	-48.6		232	6.4
60	31	19,678	-48.5		236	3.5
50	31	20,877	-48.5		216	.8
40	29	22,348	-48.6		81	2.5
30	29	24,242	-47.7		86	4.1
25	29	25,449	-46.6		85	4.3
20	28	26,933	-45.0		93	4.9
15	24	28,874	-42.4		77	4.0
10	10	31,668	-39.2			
7						

	* NORTH PLATTE, NEBR. 917 MB				Wind	
Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	31	848	14.9	84	308	.6
1000	31	106				
950	31	545				
900	31	1,008	17.8	71	231	2.5
850	31	1,499	18.4	57	245	8.4
800	31	2,017	15.6	52	256	6.4
750	31	2,560	12.0	51	282	6.6
700	31	3,136	8.0	51	301	9.3
650	31	3,741	3.7	48	306	10.7
600	31	4,388	- .8	47	304	13.2
550	31	5,069	- 5.5	43	298	14.6
500	31	5,818	-10.1	38	[illegible]	15.0
450	31	6,620	-15.2	32	[illegible]	17.5
400	31	7,503	-21.5	36	247	21.4
350	31	8,473	-28.5	38	284	24.3
300	31	9,558	-36.9	34	284	26.8
250	31	10,795	-46.0		282	32.4
200	30	12,251	-54.4		289	37.5
175	30	13,099	-57.9		293	37.5
150	30	14,063	-61.3		293	32.4
125	30	15,186	-63.9		296	25.1
100	29	16,550	-64.2		301	13.8
80	29	17,919	-62.3		323	6.6
70	28	18,744	-60.8		354	3.7
60	28	19,709	-58.3		34	4.7
50	27	20,864	-55.1		48	5.1
40	27	22,300	-52.0		67	6.6
30	25	24,178	-49.3		93	10.5
25	25	25,377	-47.9		88	12.2
20	24	26,850	-46.3		81	14.0
15	23	28,773	-43.7		78	19.4
10	13	31,534	-39.8		[illegible]	23.3
7						

	* OAKLAND, CALIF. 1013 MB				Wind	
Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	31	6	16.4	85	288	4.7
1000	31	114	14.5	89	274	4.7
950	31	556	16.0	69	268	6.0
900	31	1,013	19.6	35	291	6.6
850	31	1,503	18.0	29	264	5.4
800	31	2,019	15.0	29	234	7.0
750	31	2,556	11.7	29	229	8.9
700	31	3,135	7.8	34	228	10.7
650	31	3,736	3.9	34	229	12.4
600	31	4,388	- .3	31	232	15.0
550	31	5,070	- 4.6	30	239	18.1
500	31	5,824	- 9.8	31	240	19.6
450	31	6,624	-15.7	26	239	[illegible]
400	31	7,510	-21.8	29	[illegible]	27.2
350	31	8,479	-29.1	27	242	29.7
300	31	9,564	-36.8	24	243	37.1
250	31	10,805	-44.9		244	44.5
200	30	12,269	-52.9		243	52.6
175	30	13,123	-56.9		242	49.3
150	29	14,091	-61.3		242	42.0
125	29	15,213	-64.2		239	31.7
100	28	16,575	-64.8		242	15.5
80	28	17,940	-62.7		214	[illegible]
70	28	18,766	-61.2		133	3.5
60	28	19,727	-58.7		101	7.4
50	28	20,877	-56.5		90	9.1
40	28	22,301	-53.6		85	11.1
30	28	24,159	-51.2		89	14.0
25	28	25,347	-49.5		93	15.5
20	25	26,814	-47.7		87	17.5
15	23	28,726	-45.0		88	21.8
10	17	31,451	-41.5		[illegible]	27.2
7	8	33,900	-34.5			

	OKLAHOMA CITY, OKLA. 970 MB				Wind	
Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	31	392	21.6	80	167	5.8
1000	31	121				
950	31	569	23.1	66	191	12.8
900	31	1,041	22.0	56	218	20.0
850	31	1,536	19.2	53	225	14.6
800	31	2,055	15.5	54	241	9.7
750	31	2,595	11.7	54	262	6.6
700	31	3,173	7.7	55	276	4.5
650	31	3,775	3.9	46	271	3.9
600	31	4,427	- .2	47	279	4.5
550	31	5,113	- 4.4	43	268	4.3
500	31	5,863	- 9.0	39	261	3.9
450	31	6,668	-14.0	31	281	4.7
400	31	7,555	-19.9	33	278	6.4
350	31	8,532	-26.6	33	282	9.3
300	31	9,626	-34.9	29	300	12.2
250	31	10,873	-44.4		297	15.0
200	31	12,333	-54.7		299	14.2
175	31	13,178	-59.3		305	15.9
150	31	14,133	-63.3		318	15.0
125	31	15,243	-66.9		328	13.4
100	31	16,590	-66.9		352	7.4
80	31	17,948	-63.9		39	6.6
70	31	18,770	-61.1		65	7.6
60	31	19,734	-58.2		79	9.7
50	31	20,890	-55.5		92	12.4
40	31	22,320	-53.2		87	15.2
30	30	24,184	-50.5		85	19.2
25	28	25,378	-49.0		85	21.8
20	27	26,853	-45.4		83	23.1
15	15	28,780	-43.3		90	24.5
10	5	31,517	-38.7			
7						
5						

	OMAHA, NEBR. 967 MB				Wind	
Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	31	403	17.3	86	173	2.7
1000	31	114				
950	31	556	19.7	71	203	5.1
900	31	1,022	19.7	54	245	8.5
850	31	1,513	16.8	52	275	8.4
800	31	2,027	13.6	50	280	10.5
750	31	2,562	10.3	53	287	13.0
700	31	3,139	6.6	53	295	14.4
650	31	3,741	3.0	47	288	15.0
600	31	4,388	- 1.2	48	285	16.7
550	31	5,071	- 5.2	43	281	18.5
500	31	5,819	- 9.8	37	279	20.0
450	31	6,620	-15.0	33	281	21.0
400	31	7,507	-21.0	33	285	22.9
350	31	8,478	-28.2	33	284	26.2
300	31	9,565	-36.6	33	282	29.7
250	31	10,803	-46.0		286	35.2
200	31	12,257	-54.3		287	34.8
175	31	13,107	-57.3		289	35.4
150	31	14,075	-60.1		290	31.9
125	31	15,204	-62.9		291	24.7
100	30	16,575	-63.1		300	15.2
80	30	17,951	-61.3		310	8.9
70	30	18,782	-59.4		322	6.2
60	30	19,752	-56.6		354	4.3
50	30	20,915	-54.2		51	4.3
40	30	22,355	-51.4		77	4.5
30	30	24,235	-48.6		87	5.6
25	29	25,439	-47.4		82	7.4
20	23	26,916	-45.4		90	8.5
15	13	28,832	-43.5		87	7.6
10						
7						
5						

	* PEORIA, ILL. 991 MB				Wind	
Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	31	200	17.2	85	170	1.6
1000	31	124				
950	31	563	18.8	68	253	8.9
900	31	1,028	17.1	63	270	11.3
850	31	1,514	14.5	64	279	12.4
800	31	2,024	11.5	59	278	14.2
750	31	2,563	8.9	53	280	16.1
700	31	3,130	5.9	48	280	18.6
650	31	3,731	2.4	48	276	20.2
600	31	4,376	- 1.5	42	275	20.4
550	31	5,060	- 5.5	39	279	20.4
500	31	5,805	-10.1	37	280	23.1
450	31	6,606	-15.3	34	279	26.8
400	31	7,488	-21.5	34	282	28.2
350	31	8,459	-28.7	32	281	30.5
300	31	9,545	-36.8	31	283	33.2
250	31	10,780	-46.6		282	36.7
200	31	12,231	-54.8		278	38.5
175	31	13,079	-58.2		281	35.4
150	31	14,044	-60.1		287	30.5
125	31	15,175	-62.4		285	22.5
100	31	16,547	-63.1		291	15.2
80	31	17,928	-60.7		308	7.0
70	31	18,761	-58.9		323	4.7
60	31	19,736	-56.1		8	2.9
50	31	20,902	-53.5		83	4.7
40	31	22,345	-51.2		89	6.4
30	31	24,227	-48.7		88	9.9
25	31	25,429	-47.4		87	12.0
20	31	26,910	-45.6		87	15.0
15	30	28,841	-43.3		86	18.6
10	25	31,592	-39.0		90	24.3
7	5	34,080	-34.8			
5						

	* PITTSBURGH, PA. 975 MB				Wind	
Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	31	353	16.4	87	236	2.1
1000	31	142				
950	31	580	17.7	74	257	6.2
900	31	1,042	15.3	70	274	10.5
850	31	1,524	12.8	64	279	13.4
800	31	2,032	10.5	53	[illegible]	16.9
750	31	2,569	8.0	46	270	18.8
700	31	3,134	5.4	46	271	20.4
650	31	3,733	2.1	45	272	21.0
600	31	4,378	- 1.8	44	271	22.1
550	31	5,056	- 5.8	37	269	24.5
500	31	5,807	-10.3	31	269	26.0
450	31	6,606	-15.4	30	270	29.1
400	31	7,491	-21.5	34	274	29.1
350	31	8,461	-28.6	31	276	30.7
300	31	9,546	-37.1	28	280	33.8
250	31	10,782	-46.2		278	40.8
200	31	12,235	-55.1		277	44.5
175	30	13,079	-58.6		277	40.4
150	30	14,043	-60.6		277	34.6
125	30	15,172	-62.3		278	27.0
100	29	16,552	-61.6		279	16.1
80	29	17,937	-59.8		274	11.5
70	29	18,774	-57.6		282	4.9
60	29	19,751	-55.5		4	.6
50	29	20,918	-53.2		84	4.3
40	29	22,362	-50.9		87	6.2
30	29	24,244	-48.4		86	9.3
25	29	25,447	-46.9		87	11.5
20	29	26,929	-45.2		91	14.4
15	29	28,861	-42.4		87	19.2
10	23	31,624	-38.2		88	22.7
7	15	34,071	-35.0		94	25.4
5	6	36,422	-30.5			

	PONAPE, CAROLINE IS. + 1005 MB				Wind	
Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	31	39	28.4	79	62	2.9
1000	31	91	27.7	76	65	3.5
950	31	525	23.5	73	[illegible]	[illegible]
900	31	1,005	20.4	73	84	7.2
850	31	1,498	17.6	69	83	8.2
800	31	2,015	15.1	64	89	8.5
750	31	2,557	12.3	60	91	[illegible]
700	31	3,136	9.2	57	90	11.7
650	31	3,746	5.9	53	91	12.8
600	31	4,400	2.1	53	92	13.6
550	31	5,095	- 1.7	51	93	11.7
500	31	5,853	- 5.9	44	97	11.7
450	31	6,673	-10.6	37	99	12.0
400	31	7,570	-16.0	34	96	12.6
350	31	8,563	-22.9	28	97	13.0
300	31	9,675	-31.4	27	[illegible]	13.4
250	31	10,939	-41.7		96	13.4
200	31	12,412	-54.3		100	14.4
175	31	13,254	-61.4		97	15.3
150	31	14,194	-68.8		94	12.4
125	31	15,268	-75.2		78	8.9
100	31	16,552	-76.1		87	7.8
80	29	17,863	-69.2		92	9.7
70	29	18,663	-67.3		93	11.8
60	29	19,596	-64.9		92	19.8
50	29	20,717	-61.7		90	32.8
40	28	22,110	-58.8		83	50.5
30	20	23,936	-54.5		91	64.3
25	15	25,125	-51.7		93	68.2
20	10	26,590	-48.5			
15	7	28,501	-45.6			
10						
7						
5						

	PORTLAND, ME. 1013 MB				Wind	
Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	31	20	15.9	88	230	3.5
1000	31	129	16.7	78	243	5.8
950	31	570	16.6	68	260	13.4
900	31	1,027	14.2	66	260	13.0
850	31	1,507	11.3	64	260	14.8
800	31	2,012	8.5	61	264	16.1
750	31	2,539	6.1	51	268	18.8
700	31	3,107	3.5	46	266	22.9
650	31	3,698	.2	45	265	25.3
600	31	4,343	- 3.4	39	264	26.8
550	31	5,018	- 7.4	36	261	29.1
500	31	5,764	-11.8	35	261	32.8
450	31	6,555	-17.0	35	259	36.7
400	31	7,439	-23.2	R32	257	39.2
350	31	8,404	-29.8	R29	255	43.5
300	31	9,486	-37.6	R29	254	47.2
250	31	10,720	-46.7		257	50.1
200	30	12,173	-54.9		260	49.0
175	30	13,022	-57.0		262	44.5
150	30	13,996	-58.2		260	40.0
125	30	15,139	-59.4		262	32.4
100	30	16,536	-59.1		261	23.7
80	29	17,942	-57.1		260	15.2
70	29	18,789	-55.7		253	9.1
60	29	19,775	-54.2		237	4.1
50	29	20,950	-52.1		171	1.7
40	29	22,400	-50.2		101	3.5
30	27	24,286	-47.9		95	6.8
25	25	25,494	-46.4		90	8.2
20	19	26,969	-44.6		89	12.4
15	9	28,890	-42.2			
10						

	RAPID CITY, S. DAK. 905 MB				Wind	
Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	30	966	15.7	68	304	4.1
1000	30	106				
950	30	546				
900	30	1,012	16.5	62	288	3.9
850	30	1,502	17.3	50	296	6.2
800	30	2,017	14.5	50	280	6.2
750	30	2,555	11.1	53	272	8.4
700	30	3,132	7.1	55	279	12.4
650	30	3,729	2.7	55	284	15.3
600	30	4,379	- 1.8	52	281	17.3
550	30	5,057	- 6.4	47	283	19.6
500	30	5,805	-10.9	39	281	20.4
450	30	6,599	-16.3	32	277	24.3
400	30	7,483	-22.3	R31	276	27.2
350	30	8,450	-29.5	R25	279	31.5
300	30	9,530	-38.1	R27	277	33.8
250	30	10,761	-47.2		276	38.9
200	30	12,214	-53.7		279	44.1
175	30	13,067	-56.3		283	43.5
150	30	14,039	-59.5		280	38.9
125	30	15,174	-61.4		285	31.1
100	30	16,553	-62.3		292	20.4
80	30	17,936	-60.5		300	10.1
70	30	18,770	-59.0		318	6.4
60	30	19,741	-56.8		7	3.7
50	30	20,902	-54.8		33	4.3
40	30	22,339	-51.4		70	5.4
30	30	24,221	-48.1		76	5.6
25	29	25,425	-46.8		79	7.6
20	27	26,913	-44.7		88	11.1
15	22	28,853	-42.4		85	15.2
10	7	31,614	-37.2			

	ST. CLOUD, MINN. 977 MB				Wind	
Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	31	316	14.2	91	192	1.9
1000	31	115				
950	31	554	16.9	75	236	3.9
900	31	1,013	16.1	62	268	5.4
850	31	1,498	13.4	59	293	7.8
800	31	2,006	10.7	52	301	10.7
750	31	2,537	7.3	53	299	13.6
700	31	3,107	4.1	50	297	16.3
650	31	3,705	.7	47	298	18.3
600	31	4,346	- 3.3	47	298	19.4
550	31	5,025	- 7.7	45	297	21.6
500	31	5,766	-12.2	39	298	25.3
450	31	6,558	-17.4	33	295	27.0
400	31	7,437	-23.5	32	297	29.3
350	31	8,400	-30.7	R30	293	33.6
300	31	9,476	-38.9	R27	290	39.0
250	31	10,702	-48.2		290	43.7
200	31	12,148	-54.6		290	49.3
175	31	12,999	-56.0		290	48.4
150	31	13,976	-57.4		291	44.1
125	31	15,124	-59.0		292	34.6
100	31	16,523	-59.4		295	22.3
80	31	17,922	-58.4		306	15.2
70	31	18,764	-56.9		315	11.5
60	31	19,745	-54.9		334	6.6
50	31	20,917	-52.5		12	3.3
40	31	22,364	-50.4		46	3.5
30	29	24,253	-47.7		78	5.6
25	27	25,465	-46.0		83	8.0
20	27	26,958	-43.7		90	12.2
15	25	28,899	-41.6		93	14.0
10	12	31,656	-38.6			

	ST. PAUL IS., ALASKA 1011 MB				Wind	
Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	31	10	7.5	97	200	7.2
1000	31	97	7.4	94	205	8.0
950	31	519	6.6	88	220	13.8
900	31	963	5.4	86	223	13.2
850	31	1,430	4.3	79	224	14.2
800	31	1,922	2.2	71	221	12.4
750	31	2,443	.0	63	226	14.0
700	31	2,992	- 2.9	58	230	15.2
650	31	3,574	- 5.8	59	231	17.7
600	31	4,201	- 9.1	57	237	19.4
550	31	4,868	-13.4	51	236	19.0
500	31	5,589	-17.8	45	241	22.5
450	31	6,365	-22.9	47	239	24.3
400	31	7,224	-29.0	48	247	23.5
350	31	8,165	-36.1	46	247	28.2
300	31	9,218	-43.9		250	28.2
250	31	10,424	-50.5		247	34.0
200	31	11,867	-52.7		246	32.8
175	30	12,730	-51.0		243	29.5
150	30	13,732	-51.3		247	24.7
125	30	14,916	-51.6		246	17.7
100	30	16,364	-51.4		245	14.0
80	29	17,816	-51.1		240	8.5
70	29	18,685	-50.9		235	6.0
60	29	19,688	-50.7		220	2.9
50	28	20,875	-50.4		191	3.1
40	28	22,332	-49.8		111	1.6
30	28	24,218	-48.5		81	5.1
25	28	25,421	-47.1		89	5.4
20	28	26,905	-45.2		93	5.6
15	28	28,834	-43.1		108	4.7
10	16	31,568	-40.2		80	1.4

	SALEM, OREG. 1009 MB				Wind	
Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	31	61	13.5	86	195	.4
1000	31	137	14.4	80	308	.4
950	31	569	14.4	71	15	1.6
900	31	1,029	13.0	68	359	1.9
850	31	1,508	11.3	60	295	2.3
800	31	2,013	9.0	55	242	4.5
750	31	2,539	[illegible]	52	228	6.6
700	31	3,108	3.1	49	229	8.5
650	31	3,701	- .3	45	226	10.1
600	31	4,342	- 4.1	41	224	11.7
550	31	5,015	- 8.1	35	232	13.4
500	31	5,759	-12.7	R32	231	15.2
450	31	6,548	-18.3	35	225	17.9
400	31	7,424	-24.5	31	222	20.4
350	31	8,382	-31.8	R27	217	22.1
300	31	9,452	-40.3	R26	214	25.3
250	31	10,670	-49.0		216	28.7
200	31	12,114	-53.4		224	36.1
175	31	12,971	-54.2		226	35.2
150	31	13,956	-55.6		232	31.5
125	31	15,112	-57.4		233	22.3
100	31	16,516	-58.7		232	16.1
80	31	17,916	-58.7		232	7.0
70	31	18,755	-57.9		217	3.3
60	31	19,729	-56.7		139	1.2
50	31	20,889	-55.0		71	2.7
40	31	22,319	-52.9		84	4.1
30	31	24,186	-49.7		64	5.2
25	31	25,383	-48.0		74	7.6
20	29	26,856	-46.1		78	10.1
15	26	28,776	-43.9		87	12.6
10	8	31,515	-40.6			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

AUGUST 1965

SALT LAKE CITY, UTAH 872 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,288	15.9	68	152	5.1
1000	31	108				
950	31	557				
900	31	1,022				
850	31	1,510	19.3	49	156	6.4
800	31	2,029	17.1	42	181	3.9
750	31	2,578	13.5	43	237	3.9
700	31	3,154	9.2	47	246	8.0
650	31	3,759	4.6	50	253	10.3
600	31	4,411	- .2	53	246	13.4
550	31	5,097	- 5.4	56	247	17.3
500	31	5,843	-10.5	51	249	19.0
450	31	6,647	-15.5	40	250	19.6
400	31	7,527	-21.5	R34	251	24.5
350	31	8,498	-28.4	R31	253	27.8
300	31	9,585	-36.6	R28	253	31.5
250	31	10,823	-45.6		255	37.1
200	31	12,284	-53.1		257	40.8
175	31	13,137	-56.7		259	40.2
150	31	14,105	-61.1		262	35.0
125	31	15,226	-64.7		260	26.4
100	31	16,583	-65.6		264	13.0
80	31	17,950	-62.4		274	3.3
70	31	18,775	-60.8		23	2.1
60	31	19,740	-58.5		73	5.2
50	31	20,894	-55.8		81	6.6
40	29	22,325	-53.1		77	8.2
30	29	24,188	-51.4		83	9.9
25	28	25,384	-48.6		79	12.2
20	26	26,856	-46.7		84	15.7
15	24	28,769	-44.2		86	19.6
10	13	31,524	-34.6			
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SAN ANTONIO, TEXAS 988 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	243	23.1	88	165	1.7
1000	31	135				
950	31	585	21.7	89	187	12.4
900	31	1,053	20.0	65	181	16.7
850	31	1,546	17.8	58	171	13.2
800	31	2,062	14.5	59	161	10.7
750	31	2,599	11.4	55	159	9.9
700	31	3,180	8.1	50	158	7.6
650	31	3,787	4.5	46	153	5.4
600	31	4,436	.4	51	161	2.9
550	31	5,120	- 3.9	52	144	2.3
500	31	5,876	- 8.4	46	168	1.0
450	31	6,683	-13.4	39	314	.8
400	31	7,574	-19.4	35	4	1.0
350	31	8,553	-26.4	31	17	2.5
300	31	9,648	-34.9	27	24	5.1
250	31	10,895	-44.5		26	5.2
200	31	12,354	-54.9		358	5.6
175	31	13,197	-59.9		21	5.1
150	30	14,149	-65.0		24	6.6
125	30	15,250	-68.8		35	9.9
100	29	16,580	-69.2		52	11.3
80	29	17,923	-65.6		70	12.6
70	29	18,738	-63.3		78	15.2
60	29	19,693	-60.3		83	19.4
50	29	20,836	-57.7		86	23.1
40	29	22,254	-54.6		85	25.6
30	27	24,109	-51.2		88	32.4
25	25	25,300	-49.0		87	33.0
20	21	26,774	-46.4		86	33.8
15	15	28,693	-44.5		85	35.9
10	5	31,450	-41.9			
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SAN DIEGO, CALIF. 998 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	124	18.6	88	298	.6
1000	31	102				
950	31	546	19.9	59	5	.4
900	31	1,013	23.6	34	320	3.3
850	31	1,511	22.0	30	284	3.9
800	31	2,034	18.7	32	255	4.3
750	31	2,578	15.0	34	220	5.4
700	31	3,165	10.8	36	209	7.0
650	31	3,773	6.4	38	201	7.6
600	31	4,430	1.9	37	199	8.2
550	31	5,117	- 2.6	R36	206	7.4
500	31	5,878	- 7.4	R31	230	8.5
450	31	6,685	-12.7	R26	233	10.3
400	31	7,582	-18.9	R24	241	11.8
350	31	8,564	-25.8	R21	247	13.4
300	31	9,663	-33.8	R22	248	18.6
250	30	10,918	-42.2		251	20.4
200	30	12,394	-52.8		246	20.6
175	30	13,245	-58.6		244	20.4
150	30	14,199	-64.7		244	19.2
125	30	15,298	-69.6		246	13.0
100	30	16,623	-69.9		237	2.1
80	29	17,960	-66.3		87	8.4
70	29	18,775	-63.1		96	11.7
60	29	19,728	-60.4		94	13.0
50	29	20,871	-57.3		90	18.1
40	29	22,292	-54.2		89	20.0
30	28	24,147	-51.6		90	25.1
25	28	25,334	-49.8		90	25.6
20	28	26,799	-48.0		90	26.6
15	24	28,700	-45.5		85	29.3
10	16	31,429	-40.8		90	35.7
7	14	33,879	-36.1		98	36.3
5	11	36,240	-33.3			

* SAN JUAN, P. R. 1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	6	25.9	86	114	4.3
1000	31	138	25.2	82	99	10.5
950	31	584	22.0	79	95	15.7
900	31	1,056	19.1	71	97	16.3
850	31	1,546	16.2	67	96	15.5
800	31	2,060	13.7	56	95	15.2
750	31	2,597	11.1	45	98	13.8
700	31	3,176	8.0	39	101	11.5
650	31	3,776	4.6	40	94	10.9
600	31	4,432	1.0	39	96	10.1
550	31	5,122	- 2.5	31	96	10.9
500	31	5,878	- 6.9	28	90	7.6
450	31	6,685	-12.1	26	90	4.5
400	31	7,584	-18.5	26	121	3.5
350	31	8,566	-25.7	24	202	2.9
300	31	9,664	-34.2	23	225	5.4
250	30	10,914	-44.0		234	9.1
200	29	12,372	-55.7		242	11.5
175	29	13,210	-61.6		243	11.5
150	29	14,152	-66.6		240	8.2
125	29	15,244	-70.8		199	3.7
100	29	16,557	-72.5		89	11.7
80	28	17,879	-68.0		83	23.3
70	28	18,685	-65.9		87	29.3
60	28	19,628	-62.3		89	34.2
50	28	20,763	-58.8		90	38.3
40	28	22,173	-56.0		92	42.5
30	27	24,015	-52.9		92	48.0
25	26	25,198	-50.7		92	53.0
20	24	26,662	-48.4		89	58.1
15	22	28,570	-44.5		87	58.9
10	13	31,296	-40.0		89	58.7
7	7	33,753	-36.6			
5						

SANTA MONICA, CALIF. 1007 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	38	18.6	87	93	1.4
1000	31	101	18.4	85	96	1.7
950	31	548	19.2	63	72	3.1
900	31	1,011	22.9	37	326	2.9
850	31	1,507	21.0	35	288	4.9
800	31	2,029	18.1	34	256	6.8
750	31	2,577	14.4	34	239	7.6
700	31	3,157	10.6	35	225	6.9
650	31	3,768	6.5	34	220	8.5
600	31	4,422	1.9	37	215	8.5
550	31	5,114	- 2.9	37	220	9.5
500	31	5,867	- 7.7	34	234	11.7
450	31	6,675	-13.3	28	241	14.0
400	31	7,567	-19.5	28	244	17.3
350	31	8,545	-26.5	25	245	20.4
300	31	9,642	-34.3	25	251	24.7
250	30	10,896	-42.6		248	25.8
200	30	12,371	-52.7		248	28.4
175	30	13,222	-58.6		245	26.0
150	30	14,178	-64.1		240	23.3
125	30	15,280	-69.0		243	17.3
100	30	16,610	-68.8		243	5.6
80	30	17,954	-65.9		112	5.6
70	30	18,768	-63.2		97	9.5
60	30	19,723	-60.1		90	11.7
50	30	20,868	-57.1		92	15.7
40	29	22,289	-54.5		87	18.6
30	29	24,142	-51.8		90	21.4
25	27	25,327	-50.0		87	22.9
20	27	26,791	-47.9		87	25.3
15	23	28,694	-46.0		88	28.0
10	10	31,409	-41.9			
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* SAULT STE. MARIE, MICH. 988 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	221	12.6	93	36	1.4
1000	31	114				
950	31	546	13.2	77	282	2.9
900	31	1,001	11.4	74	289	7.2
850	31	1,477	9.1	71	294	10.5
800	31	1,978	6.9	68	286	13.4
750	31	2,506	4.7	63	282	16.9
700	31	3,067	1.7	57	286	19.0
650	31	3,656	- 1.3	52	286	21.8
600	31	4,296	- 5.1	48	287	22.7
550	31	4,971	- 9.3	41	288	24.1
500	31	5,705	-13.9	39	289	27.4
450	31	6,491	-19.2	36	287	28.6
400	31	7,364	-25.2	35	285	31.5
350	31	8,321	-31.8	31	288	36.3
300	31	9,392	-40.0	32	288	39.2
250	31	10,613	-48.5		282	48.4
200	30	12,060	-54.5		282	52.8
175	30	12,913	-54.9		283	48.2
150	30	13,897	-55.7		283	43.3
125	30	15,055	-56.6		282	35.4
100	30	16,466	-57.2		281	28.0
80	30	17,879	-56.2		286	18.8
70	29	18,729	-55.2		290	13.0
60	29	19,717	-53.7		293	9.1
50	29	20,893	-51.8		296	5.4
40	29	22,348	-49.5		25	1.2
30	28	24,241	-47.3		90	3.3
25	28	25,451	-45.8		90	5.6
20	28	26,944	-44.0		83	9.1
15	28	28,882	-42.3		88	13.6
10	25	31,650	-37.9		83	15.3
7	13	34,162	-32.0		94	21.6

SHEMYA, ALASKA 1004 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	38	8.7	96	254	4.1
1000	30	72			246	7.2
950	30	494	7.2	94	263	9.9
900	30	941	6.1	87	262	8.0
850	30	1,409	4.9	81	252	7.0
800	30	1,902	3.2	71	249	8.2
750	30	2,422	1.0	64	254	10.9
700	30	2,977	- 1.8	64	259	12.0
650	30	3,561	- 4.8	57	261	11.7
600	30	4,191	- 8.2	55	267	12.0
550	30	4,859	-12.2	53	269	14.0
500	30	5,586	-16.7	46	262	15.3
450	30	6,365	-22.1	46	269	16.5
400	30	7,228	-28.2	43	268	16.7
350	30	8,172	-35.5	41	262	18.5
300	30	9,228	-43.3	49	278	18.1
250	29	10,444	-49.2		275	22.0
200	28	11,895	-51.3		272	29.3
175	28	12,763	-51.4		277	30.1
150	28	13,763	-52.1		276	23.7
125	27	14,939	-52.8		275	19.8
100	27	16,378	-53.0		273	15.3
80	27	17,817	-52.6		265	9.5
70	27	18,679	-52.3		241	6.2
60	26	19,672	-51.8		242	4.5
50	25	20,859	-51.2		209	1.2
40	25	22,311	-50.5		178	1.6
30	24	24,190	-49.2		111	3.3
25	24	25,389	-47.7		93	3.5
20	23	26,868	-46.0		87	3.3
15	20	28,791	-43.9		97	4.9
10	12	31,497	-40.7			
7	6	33,917	-39.3			

* SHREVEPORT, LA. 1006 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	79	22.8	94	200	3.1
1000	31	135	23.0	90	202	4.1
950	31	587	22.9	69	232	10.3
900	31	1,055	20.3	65	224	7.8
850	31	1,547	17.1	66	222	4.9
800	31	2,062	13.6	65	258	3.3
750	31	2,610	10.4	56	285	1.9
700	31	3,176	6.8	54	280	2.3
650	31	3,782	3.2	50	265	2.1
600	31	4,425	- .8	53	254	2.5
550	31	5,114	- 4.9	49	255	3.3
500	31	5,859	- 9.1	44	257	4.9
450	31	6,667	-13.9	37	247	3.9
400	31	7,551	-19.9	31	245	3.3
350	31	8,528	-26.7	31	264	4.9
300	31	9,621	-35.1	32	265	6.6
250	31	10,865	-44.8		253	8.0
200	31	12,321	-55.3		244	6.2
175	31	13,162	-60.3		242	7.0
150	31	14,111	-65.0		294	4.9
125	31	15,209	-69.1		14	4.1
100	31	16,543	-68.1		49	4.9
80	31	17,892	-64.9		66	8.5
70	31	18,711	-62.0		73	11.8
60	31	19,669	-59.5		82	15.7
50	31	20,817	-56.8		89	18.6
40	31	22,237	-54.4		90	20.8
30	31	24,091	-51.3		90	23.9
25	30	25,281	-49.2		86	26.4
20	30	26,749	-47.6		89	29.3
15	30	28,659	-45.0		89	32.6
10	23	31,385	-40.6		89	33.6
7	9	33,824	-37.3			

SPOKANE, WASH. 931 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	722	14.5	70	137	3.5
1000	30	113				
950	30	552				
900	30	1,013	17.2	58	175	4.3
850	30	1,501	15.4	52	202	4.5
800	30	2,012	11.8	54	213	6.4
750	30	2,542	7.9	58	215	6.8
700	30	3,114	4.4	54	229	9.3
650	30	3,709	.4	53	233	10.9
600	30	4,352	- 3.5	50	236	11.1
550	30	5,025	- 7.8	44	239	11.7
500	30	5,770	-12.4	36	236	12.4
450	30	6,557	-18.0	38	237	13.4
400	30	7,438	-24.2	36	237	13.6
350	30	8,397	-31.3	R33	232	13.8
300	30	9,470	-39.5	R29	238	16.3
250	30	10,694	-48.2		238	21.8
200	30	12,139	-54.1		239	28.4
175	30	12,993	-55.1		244	28.2
150	30	13,976	-56.1		245	25.4
125	29	15,133	-57.8		251	19.0
100	29	16,535	-58.9		255	14.0
80	29	17,937	-57.8		258	7.6
70	29	18,781	-56.6		254	4.3
60	29	19,759	-55.6		312	1.4
50	29	20,924	-54.3		35	3.7
40	29	22,360	-52.2		66	5.2
30	29	24,234	-48.7		73	6.8
25	28	25,441	-46.6		80	7.0
20	26	26,920	-44.7		82	7.9
15	20	28,854	-42.2		89	13.0
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SWAN ISLAND, W. I. 1012 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	10	26.7	84	88	7.2
1000	31	116	25.8	84	83	10.1
950	31	567	22.6	83	93	14.6
900	31	1,037	20.0	72	97	16.9
850	31	1,529	17.3	63	96	18.3
800	31	2,045	14.6	58	97	17.5
750	31	2,588	11.7	50	97	17.1
700	31	3,163	8.5	47	100	15.3
650	31	3,768	5.1	44	100	15.3
600	31	4,421	1.5	34	103	14.4
550	31	5,109	- 2.3	28	111	12.0
500	31	5,868	- 6.9	26	108	10.5
450	31	6,675	-12.4	30	109	9.5
400	31	7,573	-18.3	29	99	6.2
350	31	8,555	-25.2	31	48	4.5
300	31	9,656	-33.5	30	327	3.5
250	31	10,909	-43.5		292	5.4
200	31	12,371	-55.7		287	10.9
175	31	13,209	-62.2		290	12.0
150	31	14,147	-68.0		308	10.3
125	31	15,232	-71.1		31	6.0
100	31	16,549	-71.9		80	15.9
80	30	17,871	-68.8		87	22.9
70	29	18,674	-66.3		88	26.8
60	29	19,615	-63.6		85	32.1
50	29	20,742	-60.5		88	38.5
40	28	22,141	-57.2		90	45.1
30	27	23,977	-53.1		92	52.3
25	27	25,157	-50.7		91	55.9
20	22	26,621	-47.6		89	60.4
15	12	28,525	-44.3			
10						
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TAMPA, FLA. 1017 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	8	23.9	93	83	3.3
1000	31	153	24.6	84	115	5.1
950	31	603	23.0	73	177	6.8
900	31	1,073	20.2	69	166	5.2
850	31	1,565	17.2	66	163	5.1
800	31	2,081	14.0	63	158	3.9
750	31	2,621	10.9	59	171	2.9
700	31	3,195	7.7	53	183	3.3
650	31	3,806	4.3	48	187	2.7
600	31	4,451	.6	45	223	1.7
550	31	5,142	- 3.4	43	165	.9
500	31	5,894	- 7.7	40	92	1.4
450	31	6,711	-12.6	37	64	2.5
400	31	7,599	-18.4	36	73	3.9
350	31	8,582	-25.2	R28	75	5.2
300	31	9,683	-33.5	R25	71	6.8
250	31	10,935	-43.5		65	9.3
200	30	12,397	-55.3		58	12.0
175	30	13,236	-61.6		59	14.0
150	29	14,178	-66.9		56	13.8
125	29	15,268	-69.9		51	12.8
100	29	16,602	-68.4		78	10.5
80	29	17,947	-65.9		83	13.4
70	29	18,762	-63.6		83	17.9
60	29	19,714	-60.8		84	23.9
50	29	20,858	-57.1		90	28.6
40	29	22,281	-54.1		94	32.1
30	29	24,143	-50.7		92	32.2
25	28	25,333	-48.9		89	33.6
20	25	26,802	-46.6		85	33.8
15	17	28,713	-44.3		83	40.8
10	13	31,459	-40.2		91	43.9
7	11	33,896	-37.5		90	52.3
5	5	36,229	-32.3			

* TATOOSH IS., WASH 1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	31	12.3	96	168	5.2
1000	30	137	13.0	88	176	4.3
950	30	567	13.0	75	254	2.1
900	30	1,024	11.9	65	272	1.7
850	30	1,502	10.0	62	234	1.7
800	30	2,004	7.9	53	217	2.1
750	30	2,528	5.0	50	238	2.9
700	30	3,094	1.7	49	243	2.7
650	30	3,681	- 1.7	48	230	3.1
600	30	4,322	- 5.3	44	217	5.4
550	30	4,990	- 9.7	45	205	5.8
500	30	5,730	-14.5	41	208	6.4
450	30	6,512	-19.7	46	214	7.6
400	30	7,386	-25.9	47	211	10.9
350	30	8,339	-33.3	44	209	12.9
300	30	9,403	-41.6	57	203	12.9
250	29	10,621	-50.9		193	16.3
200	29	12,053	-55.3		201	19.2
175	28	12,899	-54.4		220	17.3
150	28	13,886	-54.8		221	16.9
125	27	15,054	-56.0		225	15.5
100	27	16,469	-57.4		229	10.9
80	27	17,881	-56.8		219	4.7
70	27	18,727	-56.3		219	2.5
60	27	19,709	-55.5		172	1.9
50	27	21,087	-54.4		130	2.5
40	27	22,309	-52.9		106	3.3
30	26	24,177	-50.2		77	5.8
25	26	25,372	-48.3		79	6.2
20	25	26,854	-46.0		88	9.3
15	22	28,783	-43.1		77	11.7
10	19	31,529	-39.8		91	15.0
7	10	33,971	-35.2			
5						

TOPEKA, KANS. 983 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	269	18.9	85	153	1.7
1000	31	122				
950	31	565	21.1	68	217	6.6
900	31	1,034	20.0	59	246	9.7
850	31	1,526	17.5	56	261	10.3
800	31	2,042	14.3	57	276	11.1
750	31	2,581	10.6	54	281	10.5
700	31	3,156	7.1	53	280	9.7
650	31	3,756	3.3	53	273	9.9
600	31	4,407	- .6	50	271	12.2
550	31	5,091	- 4.7	44	272	12.2
500	31	5,842	- 9.4	38	277	13.6
450	31	6,647	-14.4	33	282	17.1
400	31	7,534	-20.4	32	284	19.2
350	31	8,508	-27.6	35	282	21.0
300	31	9,598	-36.1	34	285	21.2
250	31	10,839	-45.6		290	25.9
200	31	12,294	-54.7		291	27.4
175	31	13,141	-58.4		293	27.6
150	29	14,100	-61.9		294	25.6
125	29	15,220	-64.5		300	18.3
100	29	16,582	-64.6		303	11.5
80	28	17,951	-62.3		341	5.8
70	28	18,778	-60.7		3	4.3
60	27	19,745	-57.5		47	4.9
50	27	20,905	-54.5		79	5.8
40	27	22,341	-52.2		86	7.4
30	27	24,215	-49.6		87	10.3
25	26	25,409	-48.5		79	12.6
20	23	26,988	-46.1		81	15.0
15	21	28,809	-43.3		82	15.0
10						
7						
5						

+ TRUK, CAROLINE IS. 1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	2	28.4	77	4	1.9
1000	31	88	27.3	73	10	1.7
950	31	536	23.2	74	68	1.4
900	31	1,012	20.5	68	90	3.5
850	31	1,505	17.9	65	97	5.4
800	31	2,022	15.1	64	95	6.2
750	31	2,566	12.5	57	95	7.6
700	31	3,145	9.5	49	94	9.3
650	31	3,755	6.1	48	95	10.5
600	31	4,409	2.3	49	92	12.0
550	31	5,103	- 1.5	43	91	12.4
500	31	5,863	- 5.6	35	92	13.8
450	31	6,682	-10.3	29	94	13.8
400	31	7,583	-16.0	27	98	14.2
350	31	8,574	-22.9	25	100	15.0
300	31	9,687	-31.4	22	100	14.8
250	31	10,951	-41.7		97	15.7
200	31	12,423	-54.1		102	17.9
175	31	13,267	-60.9		105	17.5
150	31	14,209	-68.1		95	14.4
125	31	15,285	-74.9		85	13.2
100	31	16,572	-75.6		90	13.2
80	31	17,885	-69.1		95	13.2
70	30	18,686	-66.9		99	15.7
60	30	19,624	-64.8		96	21.2
50	30	20,746	-61.6		94	31.7
40	30	22,139	-58.9		94	49.0
30	30	23,959	-55.1		96	63.1
25	29	25,130	-52.4		97	69.3
20	26	26,587	-48.6		97	73.2
15	18	28,496	-44.9		99	77.1
10						
7						
5						

* TUCSON, ARIZ. 923 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	789	23.4	63	156	4.9
1000	31	82				
950	31	529				
900	31	1,012	25.5	46	204	2.1
850	31	1,513	23.1	43	324	4.3
800	31	2,039	19.4	45	339	5.4
750	31	2,587	15.4	48	358	4.1
700	31	3,171	10.9	53	41	.8
650	31	3,779	6.1	59	154	2.7
600	31	4,436	1.0	62	145	5.1
550	31	5,121	- 3.3	52	146	3.7
500	31	5,878	- 7.9	50	127	.8
450	31	6,685	-12.2	36	359	.2
400	31	7,582	-18.4	33	283	1.9
350	31	8,565	-25.3	31	276	4.1
300	31	9,665	-33.3	33	266	8.0
250	31	10,919	-43.0		265	11.3
200	31	12,387	-54.0		269	13.6
175	31	13,232	-59.8		279	10.5
150	31	14,181	-65.7		294	7.2
125	31	15,274	-71.0		330	5.1
100	30	16,592	-70.6		65	5.2
80	30	17,926	-67.4		69	9.7
70	30	18,737	-63.7		87	15.2
60	30	19,689	-61.1		90	15.9
50	30	20,830	-57.9		91	19.0
40	30	22,246	-55.0		88	23.1
30	28	24,095	-51.9		90	26.4
25	28	25,281	-50.4		89	27.6
20	28	26,744	-47.8		89	26.8
15	26	28,657	-45.5		87	30.7
10	25	31,380	-41.1		85	38.5
7	14	33,839	-35.8		93	41.2
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

* VANDENBERG AFB, CALIF. 1000 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	113	13.0	99	308	3.1
1000	31			99	312	3.3
950	31	551	18.7	55	351	8.2
900	31	1,014	23.0	33	356	8.0
850	31	1,510	20.6	32	318	4.7
800	31	2,030	17.4	33	271	4.1
750	31	2,573	13.8	34	242	6.4
700	31	3,155	10.2	33	230	8.5
650	31	3,761	6.0	34	229	10.3
600	31	4,417	1.6	37	227	11.1
550	31	5,102	- 3.1	35	235	11.3
500	31	5,860	- 7.9	34	235	14.7
450	31	6,665	-13.5	29	240	18.6
400	31	7,556	-20.1	30	244	21.2
350	31	8,532	-27.1	27	246	24.7
300	31	9,625	-34.9	25	249	29.1
250	31	10,875	-43.3		247	33.2
200	31	12,344	-53.1		247	36.7
175	31	13,194	-58.5		245	34.8
150	31	14,151	-63.7		243	30.7
125	31	15,257	-68.0		240	25.1
100	31	16,594	-67.9		236	13.2
80	31	17,942	-65.5		118	4.3
70	31	18,758	-62.9		103	8.7
60	31	19,713	-60.2		92	11.5
50	31	20,857	-57.1		90	14.6
40	31	22,279	-54.0		88	16.7
30	29	24,133	-51.2		89	21.0
25	28	25,319	-49.9		89	21.8
20	27	26,781	-48.2		87	23.3
15	26	28,685	-46.0		86	26.8
10	23	31,406	-41.5		88	33.4
7	9	33,834	-37.1			
5						

* WAKE IS., PACIFIC AREA 1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	5	27.8	79	86	8.7
1000	31	119	26.6	81	90	10.7
950	31	571	22.5	86	101	12.6
900	31	1,041	19.6	78	103	13.0
850	31	1,532	16.7	78	101	11.9
800	31	[illegible]	13.8	76	98	10.9
750	31	2,589	11.3	67	97	10.5
700	31	3,165	8.3	55	95	8.7
650	31	3,773	4.9	52	92	8.2
600	31	4,424	1.1	49	79	9.0
550	31	5,116	- 2.8	44	75	6.8
500	31	5,870	- 7.3	49	73	6.4
450	31	6,680	-12.1	43	69	8.2
400	31	7,577	-18.0	41	61	7.4
350	31	8,562	-24.9	33	56	7.0
300	31	9,664	-33.2	31	37	6.8
250	31	10,919	-43.4		355	6.6
200	31	12,381	-55.6		348	9.1
175	31	13,219	-62.3		339	8.0
150	31	14,155	-69.2		355	6.8
125	29	15,227	-73.7		38	9.5
100	29	16,531	-72.1		71	15.9
80	29	17,856	-68.8		85	23.7
70	29	18,658	-66.2		89	28.6
60	29	19,598	-63.2		90	31.9
50	29	20,727	-60.1		89	35.4
40	29	22,128	-57.5		89	41.6
30	29	23,961	-53.6		87	51.1
25	28	25,141	-51.1		87	55.2
20	28	26,599	-49.1		87	59.2
15	28	28,498	-46.6		88	61.8
10	22	31,199	-44.3		91	62.2
7	15	33,627	-40.2		88	68.9
5	10	35,929	-38.8			

* WALLOPS IS. VA. NASA 1017 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	3	19.6	[illegible]	231	.8
1000	28	149	21.6	74	251	2.7
950	28	595	20.3	63	278	4.7
900	28	1,060	17.5	60	278	6.6
850	28	1,547	14.6	58	286	9.5
800	28	2,058	11.9	56	[illegible]	13.0
750	28	2,592	9.3	50	272	15.3
700	28	3,166	6.6	43	271	16.9
650	28	3,765	3.4	43	273	17.7
600	28	4,416	- .3	39	273	19.8
550	28	5,101	- 3.9	31	270	18.1
500	28	5,854	- 8.4	31	268	20.4
450	28	6,656	-13.5	27	270	21.4
400	28	7,549	-19.8	29	[illegible]	[illegible]
350	28	8,526	[illegible]	26	271	21.6
300	28	9,619	-35.3	27	269	27.6
250	28	10,864	-45.0		273	30.3
200	28	12,319	-55.8		276	32.4
175	27	13,157	-60.3		277	30.1
150	27	14,111	-63.1		277	23.7
125	27	15,227	-64.6		270	17.9
100	27	16,592	-63.7		265	12.0
80	27	17,969	-60.8		264	3.3
70	27	18,802	-59.1		360	.6
60	27	19,772	-56.7		90	4.7
50	27	20,934	-54.3		86	9.5
40	27	22,371	-51.7		88	11.8
30	26	24,249	-48.7		91	14.9
25	25	25,447	-47.6		92	16.9
20	24	26,920	-46.1		91	18.8
15	21	28,847	-43.4		87	23.2
10	16	31,608	-38.5		84	25.6
7	7	34,092	-35.6			

WASHINGTON, D. C. 1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	[illegible]	84	[illegible]	89	[illegible]	1.2
1000	[illegible]	[illegible]	[illegible]	84	[illegible]	2.1
950	[illegible]	583	19.8	54	[illegible]	[illegible]
900	30	1,044	[illegible]	63	232	10.7
850	[illegible]	1,530	14.3	64	[illegible]	[illegible]
800	[illegible]	2,040	[illegible]	[illegible]	[illegible]	[illegible]
750	[illegible]	2,580	[illegible]	[illegible]	[illegible]	[illegible]
700	30	3,146	[illegible]	47	270	[illegible]
650	30	3,746	2.7	39	268	19.6
600	[illegible]	[illegible]	- 1.1	35	271	[illegible]
550	30	5,076	[illegible]	30	268	21.4
500	30	5,826	- 9.4	27	268	22.9
450	30	6,628	-14.5	24	268	24.5
400	30	7,517	-20.5	26	[illegible]	[illegible]
350	30	[illegible]	-27.7	26	269	[illegible]
300	[illegible]	[illegible]	[illegible]	26	270	31.5
250	[illegible]	10,823	-45.4		272	[illegible]
200	29	12,278	-55.6		278	34.4
175	29	13,120	-59.4		272	[illegible]
150	28	14,080	-62.1		272	[illegible]
125	28	15,203	-63.5		268	21.4
100	28	16,572	[illegible]		273	13.2
80	28	[illegible]	[illegible]		264	[illegible]
70	28	18,783	-58.9		[illegible]	2.1
60	28	19,756	-56.4		80	3.7
50	28	20,919	-54.1		91	7.4
40	28	22,358	-51.6		89	[illegible]
30	28	24,235	[illegible]		92	[illegible]
25	28	25,436	-47.4		[illegible]	14.8
20	26	26,916	-45.5		89	17.5
15	22	28,846	-42.7		87	21.8
10	14	31,634	[illegible]		91	[illegible]
7	9	34,127	[illegible]			

WINNEMUCCA, NEV. [illegible] MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,310	[illegible]	[illegible]	[illegible]	[illegible]
1000	31	120				
950	31	562				
900	31	1,025				
850	31	1,509	17.1	[illegible]	[illegible]	[illegible]
800	31	2,024	15.0	[illegible]	[illegible]	[illegible]
750	31	[illegible]	11.5	[illegible]	[illegible]	[illegible]
700	31	[illegible]	[illegible]	44	232	[illegible]
650	30	3,741	[illegible]	[illegible]	[illegible]	15.3
600	[illegible]	[illegible]	[illegible]	[illegible]	226	17.3
550	30	[illegible]	[illegible]	[illegible]	[illegible]	20.0
500	30	5,820	[illegible]	34	234	[illegible]
450	30	6,619	-16.1	R29	235	[illegible]
400	[illegible]	7,499	-22.6	[illegible]	[illegible]	23.1
350	[illegible]	8,466	[illegible]	R24	[illegible]	26.6
300	[illegible]	9,548	[illegible]	[illegible]	[illegible]	32.1
250	[illegible]	[illegible]	-45.5		[illegible]	[illegible]
200	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
175	[illegible]	13,104	[illegible]		239	[illegible]
150	[illegible]	14,078	[illegible]		[illegible]	[illegible]
125	29	15,207	[illegible]		[illegible]	[illegible]
100	[illegible]	16,580	[illegible]		[illegible]	[illegible]
80	29	[illegible]	[illegible]		233	[illegible]
70	29	[illegible]	[illegible]		182	[illegible]
60	29	19,756	[illegible]		[illegible]	[illegible]
50	29	20,911	[illegible]		[illegible]	[illegible]
40	29	22,341	[illegible]		[illegible]	[illegible]
30	29	24,210	[illegible]		[illegible]	[illegible]
25	29	25,407	-48.3		[illegible]	[illegible]
20	29	26,883	-46.2		[illegible]	[illegible]
15	23	28,801	[illegible]		[illegible]	[illegible]
10	12	31,529	[illegible]		[illegible]	[illegible]

WINSLOW, ARIZ. 852 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,492	17.4	58	198	3.1
1000	31	97				
950	31	547				
900	31	1,020				
850	31	1,516	17.9	56	201	3.1
800	31	2,039	19.9	38	285	6.4
750	31	2,589	16.1	39	281	7.4
700	31	3,174	11.5	44	251	6.4
650	31	3,782	6.7	49	234	7.9
600	31	4,441	1.6	54	206	8.0
550	31	5,125	- 3.9	56	219	8.4
500	31	5,883	- 8.3	43	242	7.8
450	31	6,689	-13.1	R33	258	10.5
400	31	7,582	-19.4	R34	264	14.4
350	31	8,560	-26.3	R31	268	16.1
300	31	9,657	-34.2	R31	265	20.8
250	31	10,915	-42.8		261	25.3
200	30	12,380	-53.3		266	26.6
175	30	13,229	-59.1		270	22.9
150	30	14,182	-65.0		272	17.9
125	30	15,279	-69.9		278	12.6
100	30	16,605	-69.6		321	3.1
80	30	17,945	-66.4		64	5.8
70	30	18,758	-63.5		77	9.1
60	30	19,713	-59.7		89	10.3
50	30	20,859	-57.5		86	13.6
40	30	22,281	-54.1		86	17.5
30	30	24,139	-51.6		92	19.6
25	30	25,326	-49.9		93	20.2
20	30	26,792	-48.0		88	22.1
15	26	28,703	-45.4		86	25.1
10	6	31,380	-44.0			

YAKUTAT, ALASKA 1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	12	7.2	100	87	2.3
1000	31	136	9.0	91	104	1.9
950	31	560	8.1	78	157	3.9
900	31	1,007	7.0	69	157	4.5
850	31	1,476	4.8	63	179	2.9
800	31	1,968	2.3	63	212	3.7
750	31	2,485	- .1	59	231	6.6
700	31	3,038	- 2.6	46	243	9.1
650	31	3,617	- 5.5	46	244	11.5
600	31	4,248	- 9.1	38	250	14.6
550	31	4,913	-13.2	34	249	17.1
500	31	5,636	-18.1	37	248	18.5
450	31	6,409	-23.4	33	246	21.8
400	31	7,268	-29.5	33	247	25.1
350	31	8,207	-36.7	39	244	27.8
300	31	9,257	-44.3		247	31.5
250	31	10,460	-51.3		256	33.6
200	31	11,897	-52.8		261	26.0
175	31	12,762	-51.5		255	20.6
150	31	13,762	-51.6		252	17.9
125	30	14,947	-51.9		252	15.2
100	30	16,393	-52.1		249	10.7
80	30	17,838	-51.8		252	6.6
70	30	18,703	-51.7		243	4.1
60	30	19,703	-51.4		251	1.7
50	30	20,888	-51.1		242	.4
40	30	22,340	-50.7		74	2.3
30	30	24,219	-49.1		80	5.4
25	30	25,419	-47.7		91	6.8
20	30	26,898	-45.9		84	6.8
15	26	28,838	-42.7		82	7.4
10	13	31,581	-40.2		84	6.6

+ YAP, CAROLINE IS. 1008 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	17	27.6	83	157	.8
1000	31	86	26.7	80	200	1.0
950	31	534	22.6	79	225	2.5
900	31	1,008	19.9	75	216	2.1
850	31	1,500	17.3	70	206	1.6
800	31	2,017	14.8	64	140	1.9
750	31	2,559	12.1	59	119	3.3
700	31	3,137	9.0	56	117	4.1
650	31	3,745	5.5	55	109	5.4
600	31	4,398	1.7	54	109	7.0
550	31	5,090	- 2.4	53	102	8.2
500	31	5,847	- 6.5	48	93	10.3
450	31	6,664	-11.5	42	92	11.1
400	31	7,558	-17.1	37	90	11.5
350	31	8,546	-23.7	33	90	11.7
300	31	9,652	-32.0	30	86	12.2
250	31	10,912	-42.2		81	14.0
200	31	12,379	-54.7		69	17.9
175	31	13,218	-61.8		66	22.1
150	31	14,156	-68.9		71	24.1
125	31	15,226	-75.7		76	24.5
100	31	16,508	-75.8		76	22.3
80	30	17,818	-70.2		85	23.7
70	30	18,615	-67.9		87	25.6
60	30	19,546	-65.0		87	28.4
50	30	20,666	-62.1		86	34.8
40	29	22,052	-59.7		86	49.1
30	27	23,866	-55.9		88	67.2
25	24	25,031	-52.9		87	73.2
20	15	26,486	-49.0		90	78.7
15	8	28,389	-45.6			

YUCCA FLAT, NEV. 881 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,196	16.3	49	358	2.1
1000	31	87				
950	31	533				
900	31	1,006				
850	31	1,497	22.2	33	296	1.6
800	31	2,021	19.2	30	204	7.6
750	31	2,567	15.3	33	209	11.1
700	31	3,152	10.8	39	202	12.8
650	31	3,759	5.9	45	197	12.4
600	31	4,414	.8	46	199	12.4
550	31	5,098	- 4.1	45	215	13.6
500	31	5,853	- 8.9	39	233	16.9
450	31	6,656	-14.3	R34	237	21.7
400	31	7,544	-20.7	R30	243	22.9
350	31	8,518	-27.7	R29	249	24.9
300	31	9,609	-35.5	R28	246	29.3
250	31	10,857	-43.5		249	35.5
200	31	12,329	-52.5		251	39.8
175	31	13,182	-57.6		254	34.8
150	31	14,143	-62.9		253	29.7
125	31	15,253	-67.0		247	25.6
100	31	16,595	-67.3		242	9.3
80	31	17,947	-64.1		127	2.7
70	31	18,769	-61.7		95	5.2
60	31	19,730	-58.7		94	7.6
50	31	20,880	-56.4		88	11.1
40	31	22,306	-53.6		85	12.8
30	30	24,167	-50.8		85	15.5
25	30	25,357	-49.3		88	17.5
20	29	26,826	-47.9		91	20.0
15	29	28,731	-45.9		88	22.0
10	23	31,439	-42.2		91	26.0

YUMA, ARIZ. 994 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	22	131	27.4	[illegible]	[illegible]	[illegible]
1000	22	75				
950	22	532	[illegible]	[illegible]	215	[illegible]
900	22	1,014	27.4	[illegible]	[illegible]	[illegible]
850	22	1,518	[illegible]	[illegible]	[illegible]	[illegible]
800	22	2,045	20.4	48	213	5.1
750	22	2,594	16.4	37	202	6.8
700	22	3,181	11.7	[illegible]	[illegible]	[illegible]
650	22	3,786	6.7	44	197	[illegible]
600	22	4,447	[illegible]	41	185	[illegible]
550	22	5,133	- 2.4	37	207	[illegible]
500	22	5,894	- 6.9	31	210	[illegible]
450	22	6,702	-11.8	[illegible]	230	[illegible]
400	22	7,601	-17.9	[illegible]	[illegible]	[illegible]
350	22	8,584	[illegible]	29	[illegible]	11.1
300	22	9,685	[illegible]	31	[illegible]	[illegible]
250	22	10,942	[illegible]		[illegible]	[illegible]
200	21	12,415	[illegible]		[illegible]	[illegible]
175	20	[illegible]	[illegible]		[illegible]	[illegible]
150	18	14,216	[illegible]		[illegible]	[illegible]
125	13	[illegible]	[illegible]		[illegible]	[illegible]
100	11	16,622	-70.3			

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Relative humidity averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Relative humidity data are not published for standard pressure surfaces for which less than 5 observations are available.

Relative humidity data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from lithium chloride hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature in degrees Celsius, relative humidity in percent, and resultant winds in degrees and knots.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. They were also equipped with carbon hygristors. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.C.T.

R More than half of the observations are from statistical values.

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun. AUGUST 1965

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°

ALBUQUERQUE, N. MEX.

	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Aug.									
3-----	0.84	0.92	1.01	1.14	1.34	1.14	----	----	----
4-----	.73	.81	.91	1.12	1.29	1.10	----	----	----
5-----	.75	.85	.99	1.14	1.35	----	0.94	0.73	----
6-----	----	----	----	----	1.32	1.12	.94	.83	0.74
7-----	----	----	----	----	1.34	----	----	----	----
8-----	----	----	----	----	1.28	----	----	----	----
9-----	----	----	.87	1.05	1.29	----	----	----	----
10----	.72	.83	.96	1.11	1.33	----	----	.63	.51
11----	.77	.89	.99	----	1.35	1.11	.94	.81	.69
12----	.75	.86	.97	1.12	1.34	1.09	.86	----	----
13----	.70	.81	.95	1.12	1.31	----	----	----	----
14----	----	----	----	----	1.30	----	----	----	----
15----	.76	.95	.93	1.14	1.34	1.14	.95	.76	.63
16----	----	----	1.04	1.16	1.35	1.12	.91	----	----
18----	.62	.71	.81	----	----	----	----	----	----
20----	----	.93	1.04	1.19	1.38	----	----	----	----
21----	----	----	----	----	1.35	----	----	----	----
22----	----	----	.75	.97	----	----	----	----	----
23----	.75	.84	.95	1.13	1.32	----	.94	.82	.73
24----	.69	.79	.90	----	1.30	1.13	1.03	.86	.70
25----	.73	.83	1.00	1.16	1.38	----	1.08	.94	.85
26----	----	----	----	----	----	1.06	.87	.70	----
27----	.75	.86	.98	1.13	1.30	----	.98	.83	.74
28----	.61	.71	.81	1.10	----	----	----	----	----
29----	.52	.67	----	1.04	1.32	----	----	----	----
31----	.81	.91	1.05	1.18	1.37	----	.98	.81	.74
Averages	0.72	0.83	0.94	1.12	1.33	1.11	0.95	0.79	0.70

BLUE HILL OBS., MASS.

	Air mass								
	4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
Aug.									
4-----	0.77	0.84	0.91	1.08	1.30	----	----	----	----
12----	----	----	.94	1.08	1.33	0.96	0.75	0.62	0.55
20----	----	.77	.84	.98	----	1.07	.91	.78	.67
21----	.70	.82	.94	1.11	1.30	----	----	----	----
24----	.70	.81	.91	1.11	1.32	1.08	.86	.67	.58
29----	.90	.99	1.08	1.22	1.37	----	----	.87	.79
30----	.89	.99	1.10	1.24	1.40	1.20	1.01	.90	.79
31----	.91	1.05	1.13	1.24	----	----	----	----	----
Averages	0.81	0.90	0.98	1.13	1.34	1.08	0.88	0.77	0.68

OMAHA, NEBR.

	Air mass								
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Aug.									
1-----	HS 0.62	HS0.72	HS0.83	HS1.02	HS1.24	----	----	----	----
3-----	----	----	----	----	HS1.19	----	----	----	----
4-----	----	----	----	HM .92	HS1.16	----	----	----	----
8-----	----	----	----	----	----	HS1.09	HS0.88	HS0.69	HS0.60
9-----	HS .70	HS .81	HS .94	HS1.09	HS1.26	----	----	----	----
10----	----	----	HS .90	HS1.06	HS1.24	----	HM .72	HM .62	HM .55
11----	HS .74	HS .82	HS .95	HS1.09	HS1.25	----	----	----	----
12----	HS .58	HS .70	HS .83	HS1.00	HS1.21	HS .94	HS .77	HS .64	HM .54
13----	HS .62	HS .72	HS .84	HS1.02	HS1.22	HS1.06	HS .87	----	----
14----	HM .46	HM .60	HM .76	HM .92	HM1.13	HM .87	HM .67	HM .54	HM .43
15----	HM .50	HM .59	HM .70	HS .92	HS1.10	----	----	----	----
17----	HS .60	HS .72	HS .82	HS1.04	----	----	----	----	----
25----	----	----	HS .90	HS1.08	----	----	----	----	----
27----	----	----	----	----	----	----	HS .98	HS .84	HS .78
28----	HS .80	HS .90	HS1.01	HS1.16	----	----	----	----	----
Averages	0.62	0.73	0.86	1.03	1.20	0.99	0.82	0.67	0.58

HS Slight haze
HM Moderate haze
( ) Clouds present
M Moderate haze - indeterminable
S Slight haze - indeterminable
* Values corresponding to true solar noon

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°

MADISON, WIS.

	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Aug.									
2-----	S 0.81	----	----	----	----	----	----	----	----
13----	----	----	----	M 0.88	M 1.14	----	----	----	----
14----	----	----	----	S 1.01	S 1.29	S 0.90	S 0.71	S 0.55	S 0.44
15----	M .44	M 0.52	M 0.68	M .85	M 1.08	----	----	----	----
Averages	0.63	0.52	0.68	0.91	1.17	0.90	0.71	0.55	0.44

TUCSON, ARIZ.

	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Aug.									
3-----	0.56	0.69	0.83	----	----	----	----	0.80	0.68
4-----	.65	----	----	----	----	----	----	----	.66
5-----	.60	.75	----	----	----	----	----	----	.74
6-----	.61	----	----	----	----	----	----	----	----
7-----	----	----	----	----	----	----	----	----	.52
8-----	----	----	----	----	----	----	----	----	.48
11----	.53	.64	----	----	----	----	----	----	----
12----	.66	.76	----	----	----	----	----	----	.70
13----	.50	.61	----	----	----	----	----	----	----
15----	.53	.62	.74	----	----	----	----	----	----
16----	.59	.69	----	----	----	----	----	----	----
19----				Pyrheliometer inoperable					
22----	.56	.67	----	----	----	----	----	----	----
24----	.57	.67	----	----	----	----	----	.79	----
25----	----	----	----	----	----	----	----	----	.42
27----	.54	.65	.78	----	----	----	----	.64	.52
30----	.60	.71	----	----	----	----	----	----	----
31----	.67	----	----	----	----	----	----	----	.58
Averages	0.58	0.68	0.78	----	----	----	----	0.74	0.59

MAUNA LOA OBS., HAWAII

	Air mass								
	3.36	2.69	2.01	1.34	*	1.34	2.01	2.69	3.36
Aug.									
1-----	1.08	1.17	1.26	1.38	----	----	----	----	----
2-----	1.10	1.17	1.27	1.39	1.54	1.36	1.26	1.16	1.08
3-----	1.09	1.19	1.28	1.39	1.55	1.39	1.27	1.18	1.10
4-----	1.10	1.18	1.28	1.40	1.54	1.37	1.26	1.18	1.10
5-----	1.08	1.17	1.28	1.41	1.56	1.37	1.26	1.16	1.08
6-----	1.15	1.24	1.33	1.44	----	----	----	----	----
7-----	1.08	1.17	1.27	1.39	1.52	1.36	1.24	1.14	----
8-----	1.05	1.15	1.24	1.39	1.51	----	----	----	----
9-----	1.08	1.17	1.26	1.38	(1.53)	----	----	----	(1.05)
10----	1.12	1.20	1.30	1.41	----	1.40	1.29	1.19	1.10
11----	1.14	1.22	1.32	1.43	1.57	1.42	1.30	1.20	1.12
12----	1.15	1.22	1.32	1.42	----	----	----	----	----
13----	1.11	1.19	1.29	1.40	----	----	----	----	----
14----	1.12	1.20	1.29	1.40	1.53	----	----	----	----
15----	1.10	1.17	1.26	1.38	----	----	----	----	----
16----	----	----	1.26	1.38	----	----	----	----	----
17----	1.10	1.19	1.29	1.41	----	----	(1.28)	(1.18)	----
18----	1.08	1.17	1.26	1.38	1.52	----	----	----	----
19----	1.08	1.16	1.26	1.39	----	----	----	----	----
20----	1.05	1.14	1.24	1.36	----	----	----	----	----
21----	----	----	----	----	----	(1.35)	----	----	----
22----	1.07	1.17	1.27	1.40	1.55	1.38	1.27	1.19	1.11
23----	1.12	1.20	1.29	1.40	1.53	----	----	----	(1.08)
24----	1.14	1.20	1.30	1.42	----	1.39	1.28	1.17	1.10
25----	1.14	1.23	1.31	1.36	----	----	----	----	----
26----	1.13	1.20	1.31	1.36	1.52	----	1.24	1.14	(1.05)
27----	1.12	1.19	1.28	1.40	1.52	1.33	1.21	1.12	1.05
28----	1.12	1.20	1.29	1.40	----	----	----	----	----
29----	1.12	1.20	----	1.40	(1.51)	----	----	----	----
30----	1.08	1.17	1.26	1.38	----	(1.35)	(1.24)	1.15	1.06
31----	1.07	1.16	1.27	1.38	(1.52)	----	----	----	----
Averages	1.10	1.19	1.28	1.39	1.54	1.38	1.26	1.17	1.09

Langley is the unit used to denote one gram calorie per square centimeter An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No 2, page 63, of this publication.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys. AUGUST 1965

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	396	569	691	663	647	613	622	611	504	544	660	670	479	343	659	647	561	---	---	643	621	517	608	614	639	614	617	555	503	509	608	584
AMES IOWA	634	432	436	597	457	449	419	619	623	560	605	588	584	563	518	441	527	383	544	368	73	479	512	232	551	415	300	594	133	130	397	457
APALACHICOLA FLORIDA	57	536	389	642	517	366	527	656	635	291	174	161	594	410	320	433	604	503	539	621	632	613	622	616	618	620	627	568	555	593	186	491
ARGONNE NAT. LAB.	242	604	325	505	594	500	451	207	325	691	616	591	565	568	551	336	436	117	494	458	281	426	555	536	357	503	431	557	428	105	108	434
ASTORIA OREGON	351	112	279	388	512	630	316	219	579	529	345	296	600	610	533	595	578	137	71	303	531	326	240	475	286	402	545	396	573	567	562	416
ATLANTA GEORGIA	490	700	626	542	285	577	394	366	537	570	494	425	400	604	368	469	557	604	582	328	524	557	447	550	477	512	454	479	635	529	512	503
BARROW ALASKA	196	174	429	437	516	525	256	180	195	235	187	111	214	438	249	197	97	229	278	382	293	176	295	169	262	229	132	161	383	188	154	257
BETHEL ALASKA	277	156	219	87	130	180	210	178	145	199	261	83	61	119	122	523	108	140	99	154	342	122	170	221	211	97	386	428	379	---	53	195
BISMARCK N.DAK.	609	581	574	596	199	63	555	598	574	571	583	580	573	572	533	595	494	543	573	538	531	472	552	450	407	218	235	301	487	463	375	484
BLUE HILL MASS.	569	121	489	670	551	610	576	560	373	365	382	638	402	528	596	565	432	387	244	544	606	95	487	627	508	112	489	432	523	637	377	468
BOISE IDAHO	584	393	532	681	696	686	657	657	522	412	532	176	676	582	631	566	582	464	548	473	448	495	529	597	528	598	566	622	615	615	607	557
BOSTON MASSACHUSETTS	526	90	472	602	565	577	546	552	431	406	300	610	359	531	546	533	353	298	223	538	560	101	413	575	473	106	---	---	---	---	---	434
BROWNSVILLE TEXAS	247	545	227	317	345	399	442	670	691	685	315	712	659	556	439	600	680	588	483	648	685	724	577	635	673	671	659	382	468	684	693	552
BURLINGTON VERMONT	314	131	98	526	815	600	441	173	325	268	639	471	483	553	545	504	521	465	116	531	505	211	514	556	171	67	250	250	342	445	215	388
CAPE HATTERAS N.C.	550	557	609	364	472	526	605	650	481	406	478	497	556	586	439	509	449	380	533	412	562	498	481	398	---	407	573	529	581	617	605	510
CARIBOU MAINE	637	497	185	365	632	533	271	210	101	268	659	305	519	550	564	469	205	318	81	373	499	567	251	291	618	147	174	238	388	332	564	381
CHARLESTON S.C.	521	640	545	221	499	460	306	632	360	505	538	365	497	641	575	553	533	246	607	617	414	493	623	587	468	560	425	523	287	464	306	484
CLEVELAND OHIO	296	39	631	106	604	499	487	285	481	141	644	639	496	581	595	576	376	442	385	564	352	345	559	531	281	549	391	281	613	382	111	428
COLUMBIA MISSOURI	635	606	638	559	585	113	453	270	652	630	604	617	606	545	561	427	539	250	516	572	346	271	160	147	556	533	436	587	265	473	149	461
DAVIS CALIFORNIA	664	676	660	657	659	669	681	675	675	333	121	666	658	554	531	575	609	598	641	620	608	618	625	611	617	556	595	522	596	589	571	595
DODGE CITY KANSAS	640	607	622	511	600	586	561	565	629	605	597	589	453	564	421	616	587	395	203	378	502	126	317	532	531	508	202	407	535	435	196	485
E. LANSING MICHIGAN	251	232	377	479	540	611	293	300	175	450	638	618	461	564	543	437	233	212	356	464	221	531	563	553	56	511	378	433	559	144	54	395
EL CENTRO CALIF. NPF	423	501	469	517	394	550	488*	488*	488*	525	374	547	510	407	530	505	568	533	550	535	565	570	560	499	403	315*	315*	315*	315*	508	300	470*
EL PASO TEXAS	585	682	718	681	730	657	638	711	701	742	756	740	717	561	608	685	698	597	612	675	580	649	591	605	698	681	690	693	674	489	673	662
ELY NEVADA	487	686	652	714	572	641	700	662	433	537	559	513	533	591	572	266	349	332	509	566	313	604	657	655	659	611	658	574	595	574	612	561
FORT WORTH TEXAS	400	670	722	713	627	681	520	683	631	573*	693*	698*	579	612	304	502	673	688	623	660	673	593	478	242	662	666	647	426	637	627	649	598*
FRESNO CALIFORNIA	655	669	683	694	663	658	653	644	621	610	297	---	540	497	570	622	585	608	625	636	640	621	619	615	522	616	601	560	581	571	583	583
GAINESVILLE FLORIDA	---	418	268	702	412	475	497	562	421	428	530	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	410	487	---
GLASGOW MONTANA	678	668	657	564	177	---	633	663	658	605	644	581	657	647	631	549	473	589	615	479	556	595	579	420	550	223	368	340	479	248	575	537
GRAND JUNCTION COLO.	477	595	701	679	655	643	719	689	685	652	662	583	679	554	616	540	324	330	444	672	351	495	598	663	666	561	660	413	189	567	653	571
GREAT FALLS MONTANA	609	592	459	419	374	454	561	552	520	462	551	372	584	570	567	457	476	530	454	149	339	255	296	262	453	284	502	415	433	277	507	443
GREENSBORO N.C.	391	635	609	475	550	600	439	467	337	598	627	601	566	460	546	536	516	457	524	516	196	387	460	242	347	560	582	535	658	601	578	503
INDIANAPOLIS INDIANA	213	710	666	549	653	577	335	296	248	659	683	700	625	594	577	581	567	330	541	633	516	421	460	554	546	505	440	549	589	435	144	513
ITHACA NEW YORK	207	405	291	360	605	533	505	279	399	181	588	556	224	431	513	547	433	279	157	520	321	158	490	555	392	263	278	164	285	545	234	377
LAKE CHARLES LA.	602	662	585	438	211	298	387	521	597	189	468	309	235	352	268	619	344	574	607	520	148	225	368	172	440	520	554	335	556	497	506	423
LAKELAND FLORIDA	413	484	460	657	281	630	497	671	429*	---	533*	611*	632	502	421	465	546	525	406	442	563	568	628	534	615	504	514	440	374	522	408	509*
LANDER WYOMING	714	696	608	558	703	694	690	486	650	640	535	598	524	511	451	572	470	578	208	521	441	522	475	627	591	646	633	278	637	640	633	566
LARAMIE WYOMING	644	637	384	585	617	595	622	614	568	507	505	420	350	405	394	466	187	494	185	393	492	483	351	470	571	602	557	418	360	532	592*	484*
LAS VEGAS NEVADA	697	704	721	716	720	715	653	609	612	522	460	526	667	559	409	528	527	593	626	639	688	681	670	664	671	657	662	638	640	642	629	627
LITTLE ROCK ARKANSAS	668	630	474	610	614	594	324	558	649	690	590	552	578	532	549	510	500	489	588	599	498	499	360	482	573	---	384	569	631	498	542	544
LOS ANGELES CALIF.U	666	628	617	562	609	627	618	583	620	570	592	480	611	619	590	348	567	494	514	524	515	518	558	584	600	626	576	552	538	536	542	567
LOS ANGELES CALIF.	599	630	528	489	557	558	570	629	634	607	605	478	630	616	619	476	575	329	275	425	388	530	477	561	632	623	568	551	495	563	551	541
MADISON WISCONSIN	567	620	542	580	592	438	213	133	506	663	612	600	585	611	576	303	492	256	495	497	283	393	470	481	207	556	396	641	226	64	376	451
MANHATTAN KANSAS	560	523	541	473	340	484	418	546	546	549	538	520	528	489	466	314	489	108	503	119	448	176	318	477	487	477	491	507	386	383	122	430
MATANUSKA ALASKA	356	134	120	300	410	302	522	359	65	133	246	314	70	133	113	231	455	432	496	319	270	274	87	291	494	232	456	351	400	462	286	294
MAUNA LOA OB.HAWAII	838	845	848	849	850	598	856	848	710	848	852	735	604	637	430	573	811	659	493	673	776	831	830	819	544	728	810	716	691	763	650	733
MEDFORD OREGON	---	663	688	699	679	667	669	681	657	667	121	548	664	650	641	651	495	174	448	522	570	594	503	285	357	579	291	614	614	594	567	534
MIAMI FLORIDA	439*	473	736	633	707	729	444	651	495	554	231	600	600	615	605	561	392	657	409	569	623	470	548	695	574	651	456	410	578	480	630	555*
MIDLAND TEXAS	350	507	658	706	624	700	704	669	634	680	631	605	495	400	259	648	673	630	689	640	419	284	457	564	634	657	656	501	654	624	592	579
NASHVILLE TENNESSEE	610	603	641	628	461	588*	287	304	575	651	609	564	585	555	583	428	542*	483	491	570	409	588	426	309	539	460	398	452	656	623	485	519*
NEW YORK N.Y.U	285	359	540	556	387	433	464	469	316	542	580	615	267	546	538	481	353	415	346	605	426	74	400	521	521	91	534	338	593	623	330	437
NORTH OMAHA NEBRASKA	717	636	718	667	372	653	343	742	700	686	687	667	676	650	643	607	603	498	520	202	155	470	645	410	619	---	580	630	372	155	233	524
OAK RIDGE TENNESSEE	396	464	537	474	476	383	322	278	398	499	513	427	---	441	408	---	---	---	---	450	204	318	330	206	266	368	414	300	510	449	248	388
OKLAHOMA CITY OKLA.	616	583	606	595	580	172	568	607	594	557	596	583	505	500	349	323	564	566	523	539	543	523	366	442	549	546	468	429	515	533	292	507
PHOENIX ARIZONA	588	598	604	590	611	601	581	549	572	574	566	580	566	539	538	537	452	476	567	568	510	568	569	581	561	499	533	486	404	511	534	549

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
PORTLAND MAINE	580	151	342	664	655	603	276	519	210	378	264	596	436	571	555	544	167	278	241	534	558	206	487	603	430	132	409	470	445	453	373	423
PROSSER WASHINGTON	599	371	554	637	651	659	639	631	638	637	308	615	647	631	621	620	619	553	171	600	337	364	273	511	471	549	510	615	611	587	600	543
RAPID CITY S.DAK.	616	608	554	341	313	456	500	588	576	563	555	580	547	196	340	539	486	423	370	86	250	354	458	435	498	507	537	472	421	308	495	451
RICHLAND 25 NW WASH.	625	310	532	563	629	636	620	611	628	610	293	580	616	601	587	592	586	534	172	560	388	224	204	532	244	547	440	553	571	563	550	507
RIVERSIDE CALIFORNIA	737	723	737	726	700	700	671	577	731	644	577	683	676	596	653	577	626	601	624	594	629	674	539	661	678	697	655	636	655	668	657	655
SAINT CLOUD MINN.	591	570	625	676	555	305	194	417	607	617	628	626	617	615	524	306	530	549	570	494	382	539	601	268	327	294	501	622	49	173	464	479
SALT LAKE CITY UTAH	371	636	586	693	716	727	717	631	534	650	657	608	633	633	674	597	310	257	364	465	459	440	593	679	657	649	673	620	653	670	667	588
SAN ANTONIO TEXAS	537	454	610	635	517	365	648	599	664	468	644	615	660	538	374	665	590	652	565	591	642	646	646	646	593	578	633	606	517	566	633	584
SANTA MARIA CALIF.	595	584	612	628	617	648	631	639	602	557	546	586	582	574	521	565	497	510	594	629	631	614	570	590	599	618	583	574	536	537	524	584
SAULT STE MARIE MICH	65	741	689	689	600	309	---	158	234	680	593	148	571	597	624	454	105	313	536	---	359	---	609	---	283	245	240	417	581	257	50	413
SEATTLE TACOMA WASH.	469	112	259*	176*	415	631	614	547	338	444	378	221	594	603	630	619	611	554	76	360	479	329	75	370	470	355	444	488	537	---	558	425*
SPOKANE WASHINGTON	658	377	502	563	430	670	686	680	693	570	380	260	596	677	666	659	658	641	409	524	603	105	---	---	---	---	---	523	478	643	619	549
STATE COLLEGE PENN.	107	288	555	485	637	586	578	399	379	333	523	663	319	418	600	520	555	510	236	680	453	162	618	649	334	342	488	503	618	640	279	466
STERLING VIRGINA	307	578	634	519	559	561	597	496	285	472	454	633	515	513	526	549	458	337	352	630	396	377	439	363	207	398	458	378	622	558	457	472
STILLWATER OKLAHOMA	676	582	640	643	566	284	587	644	573	621	635	616	444	536	433	468	575	568	---	461	536	566	584	554	587	551	497	582	595	576	179	545
SWAN ISLAND W.I.	506	675	613	560	663	622	527	266	633	474	372*	468	561	595	555	673	560	658	671	692	664	294	660	598	635	181	464	626	---	659	510	554*
TAMPA FLORIDA	415	601	567	680	428	706	421	645	546	673	547	508	592	465	500	236	619	690	633	490	571	511	540	527	513	652	279	445	600	537	345	532
TUCSON ARIZONA	580	613	670	666	671	668	636	626	577	554	565	665	623	525	547	610	364	591	598	618	609	598	622	621	612	448	577	542	433	560	600	587
WAKE ISLAND,PACIFIC	487	334	539	552	591	465	586	568	565	521	543	574	551	574	576	85	523	532	585	546	510	452	335	486	436	380	523	574	557	558	482	503

Note. --Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (midnight to midnight) at Huntley, Mont. AUGUST 1965

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	402	397	290	212	303	256	394	386	406	397	392	358	*	325	331	*	*	*	*	*	39	355	250	224	227	335	*	268	254	279	300	---

The measurement is made with a Beckman and Whitley net exchange radiometer over a plot of sod. **The value represents the total incoming minus the total outgoing radiation of all wave lengths.**

* recorder malfunction

These data are of an experimental nature and are published as received from the Huntley Exp. Station. **The instrument with which they were measured has not been checked by the Weather Bureau.**

TOTAL OZONE DATA

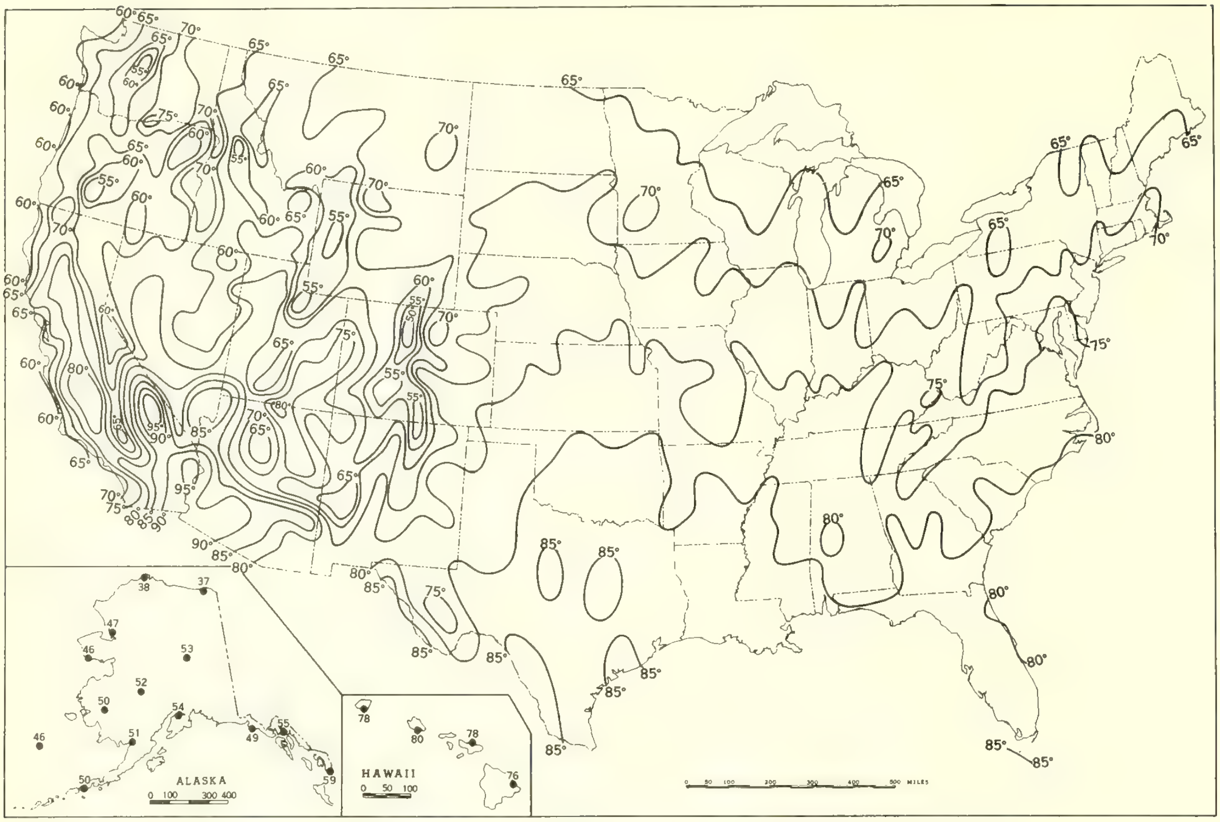
These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λ s Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

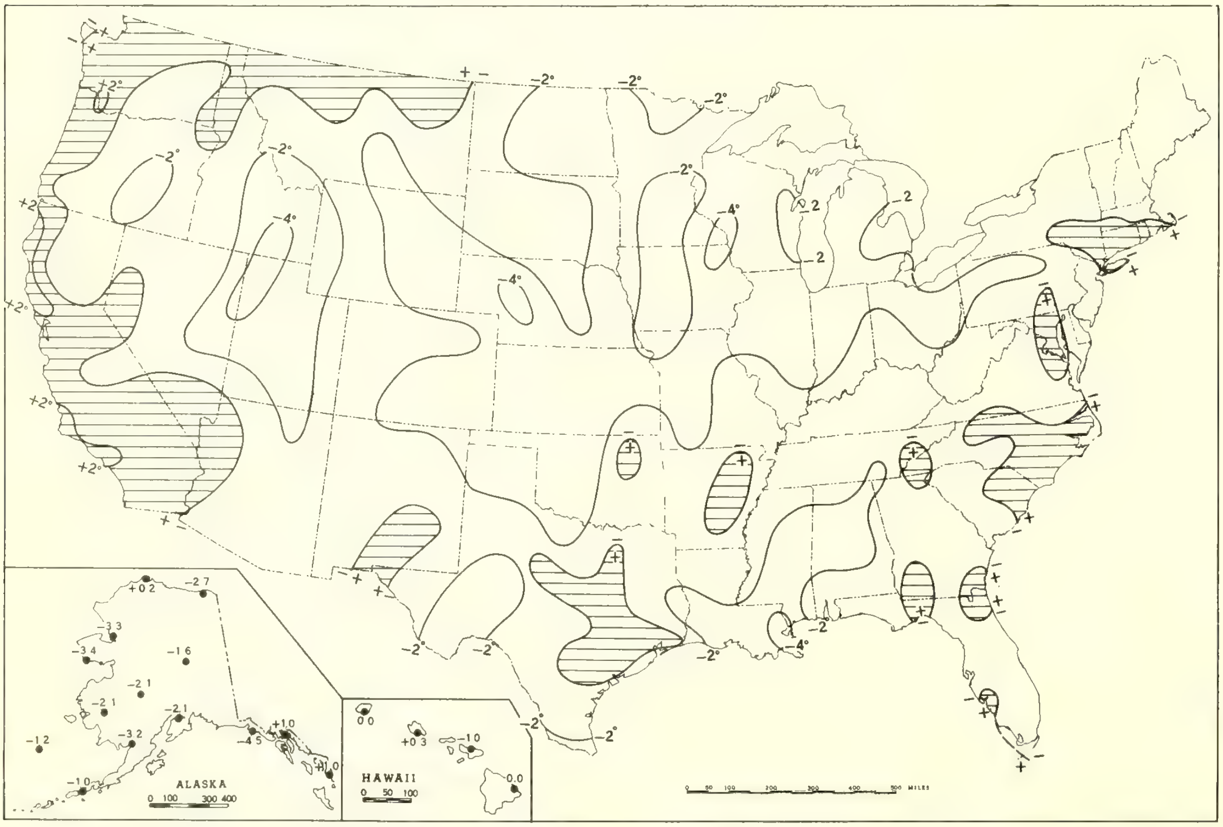
Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3
															Data will be delayed																	

The spectrophotometer measures the total amount of ozone in the atmosphere, i e , the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e. g , 350 milli-atmo-cm ozone implies an ozone layer 0 350 centimeter thick The code λ s designates the type of measurement made.

Chart I. A. Average Temperature (°F.) at Surface, August 1965.



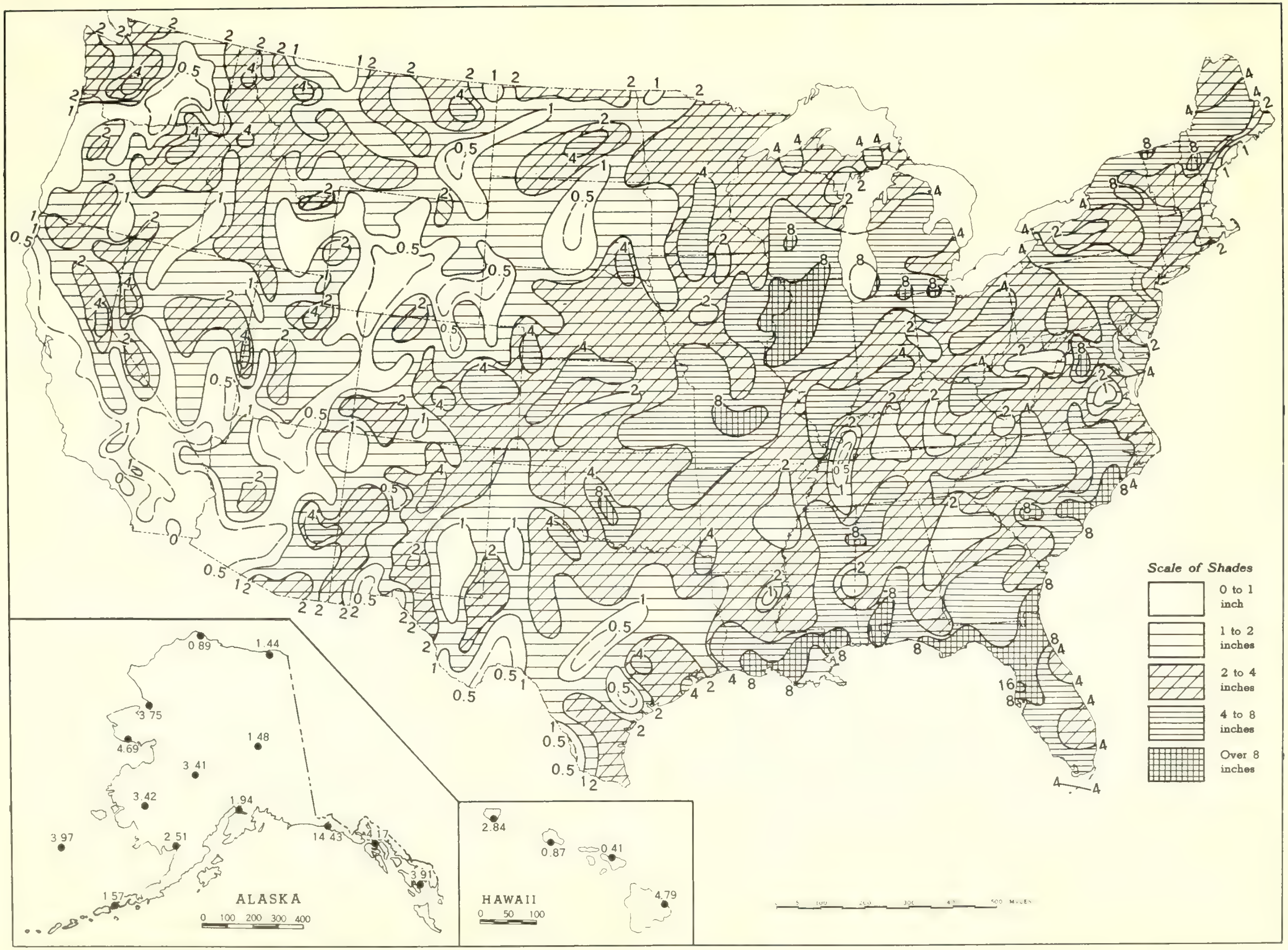
B. Departure of Average Temperature from Normal (°F.), August 1965.



A. Based on reports from over 870 Weather Bureau and cooperative stations. The monthly average is half the sum of the monthly average maximum and monthly average minimum, which are the average of the daily maxima and daily minima, respectively.

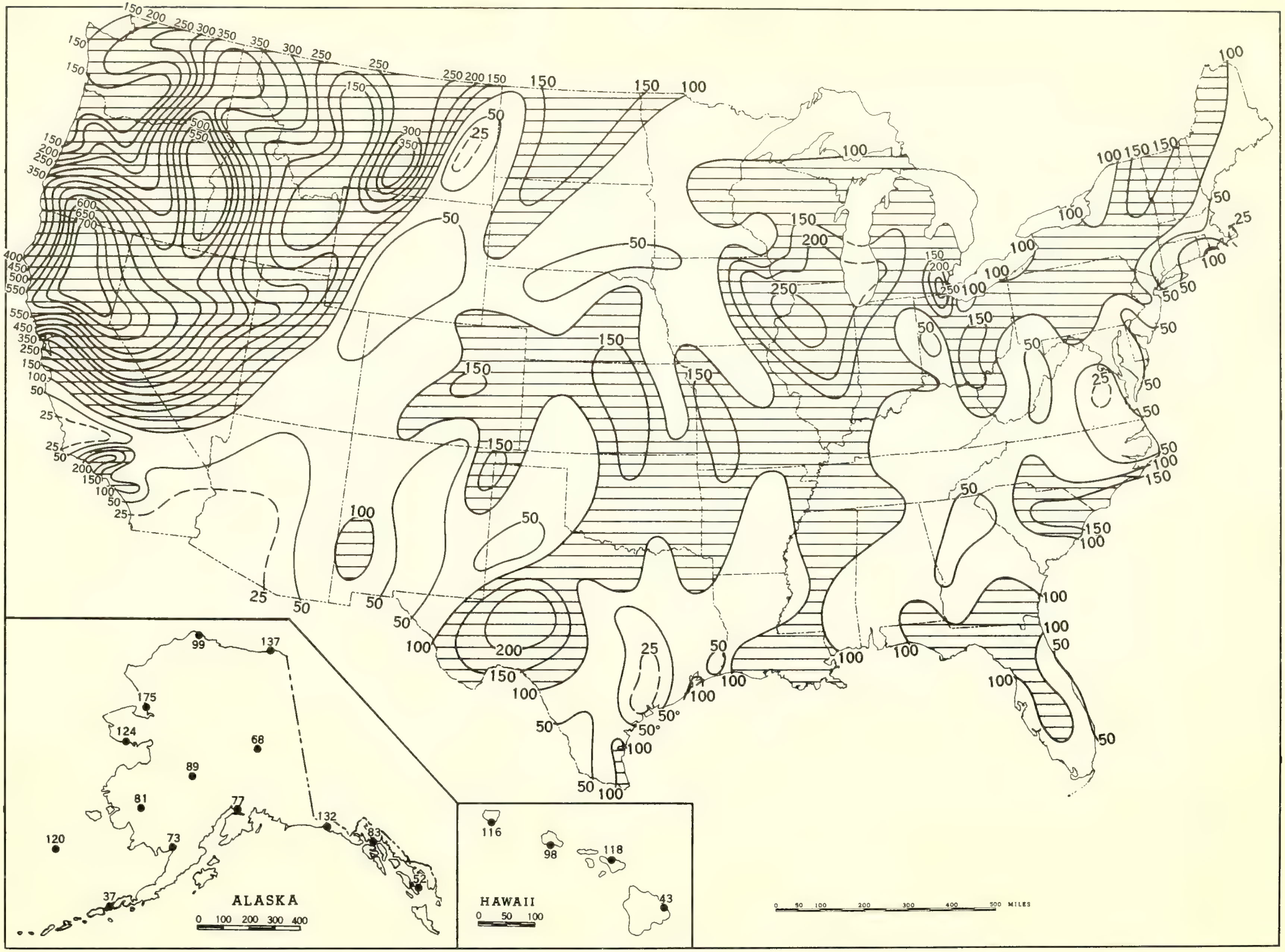
B. Departures from normal are based on the 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart II. Total Precipitation (Inches), August 1965.



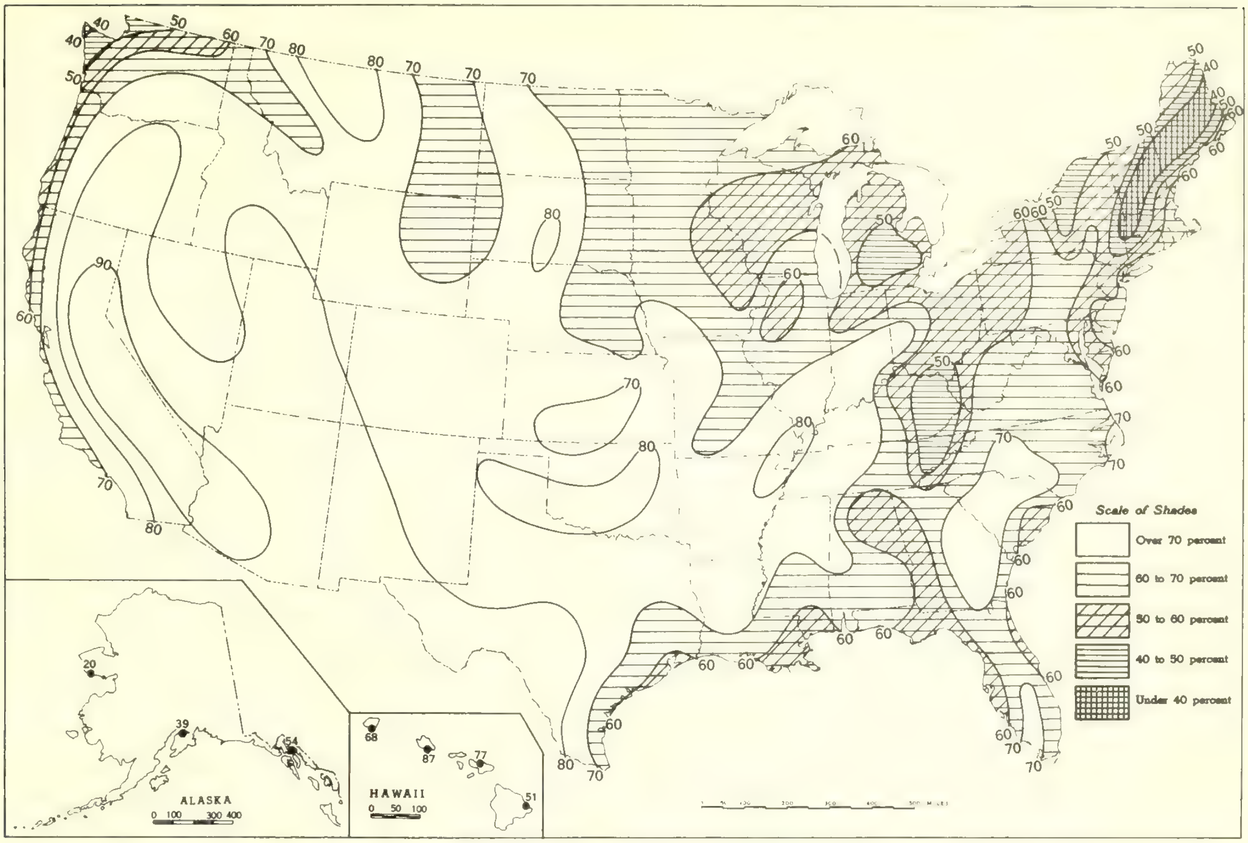
Based on daily precipitation records at about 870 Weather Bureau and cooperative stations.

Chart III. Percentage of Normal Precipitation, August 1965.

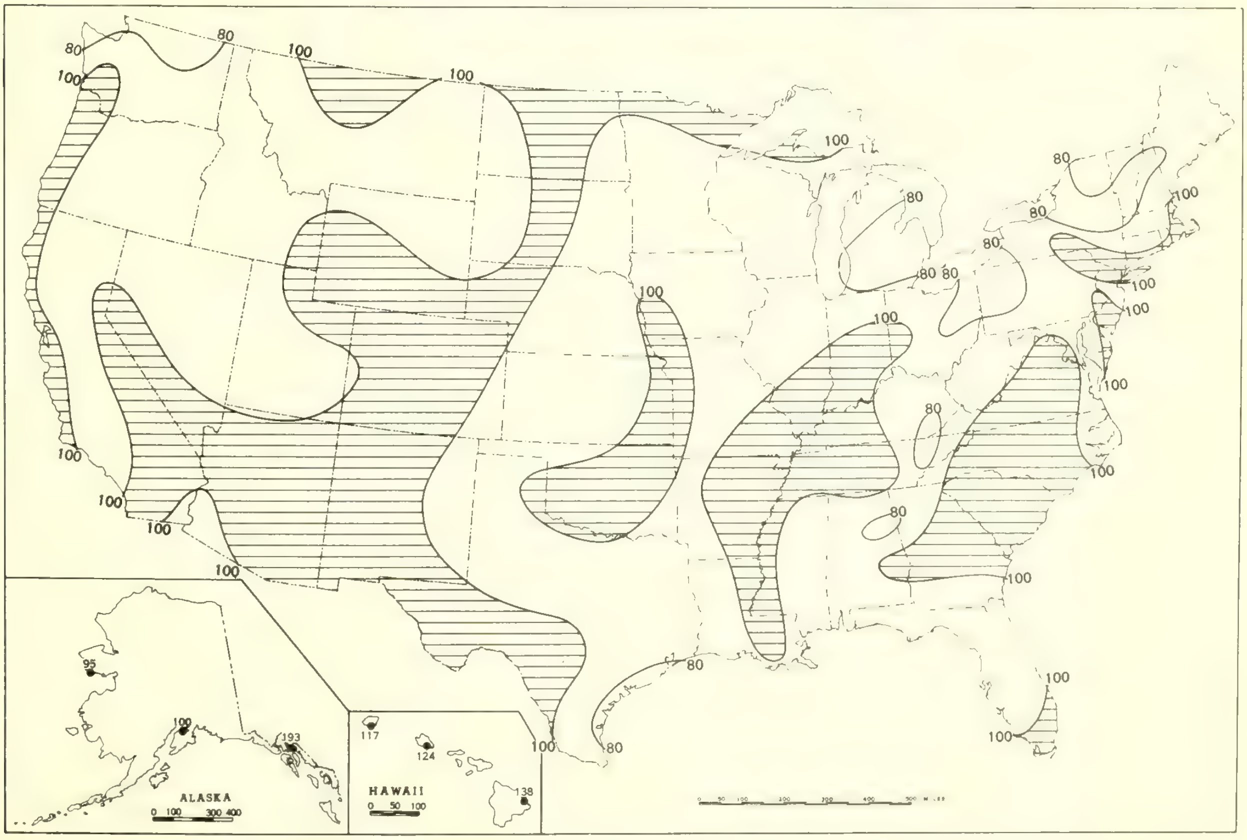


Normal monthly precipitation amounts are computed from 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart VI. A. Percentage of Possible Sunshine, August 1965.

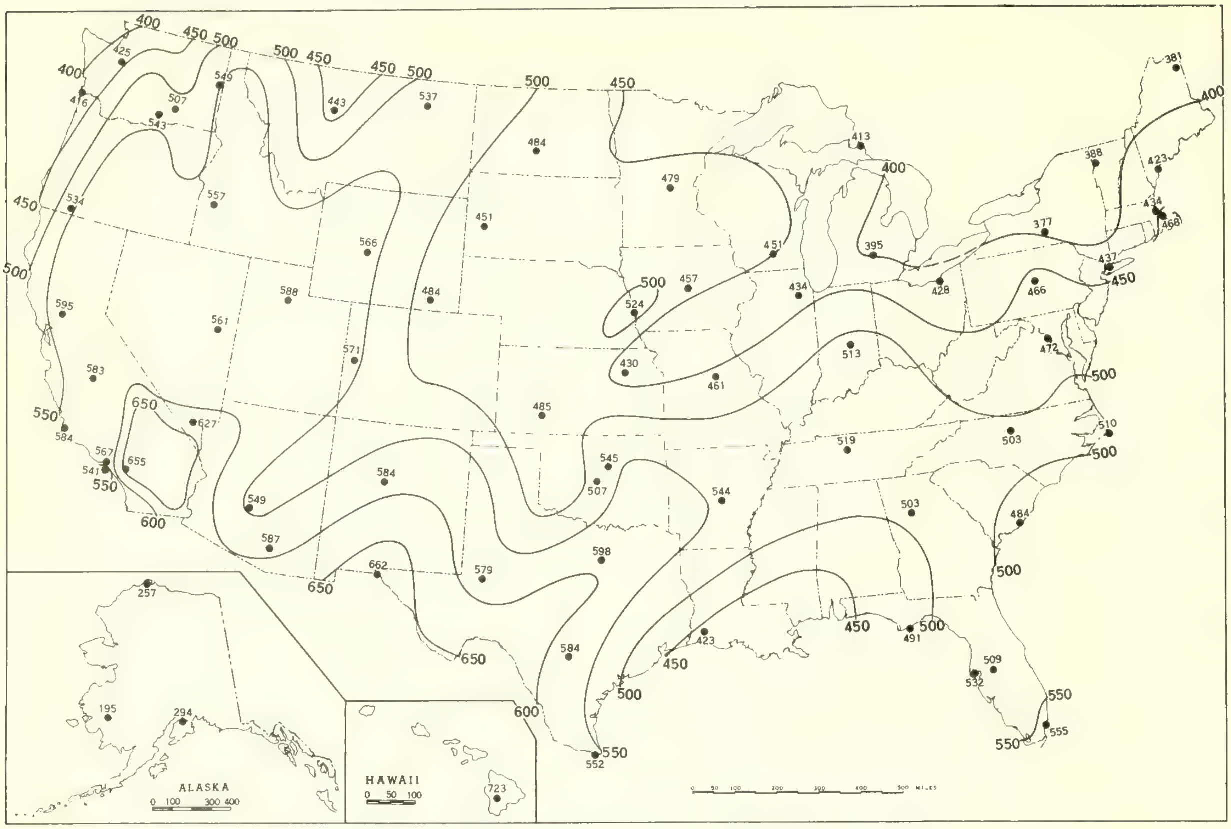


B. Percentage of Mean Monthly Sunshine, August 1965.

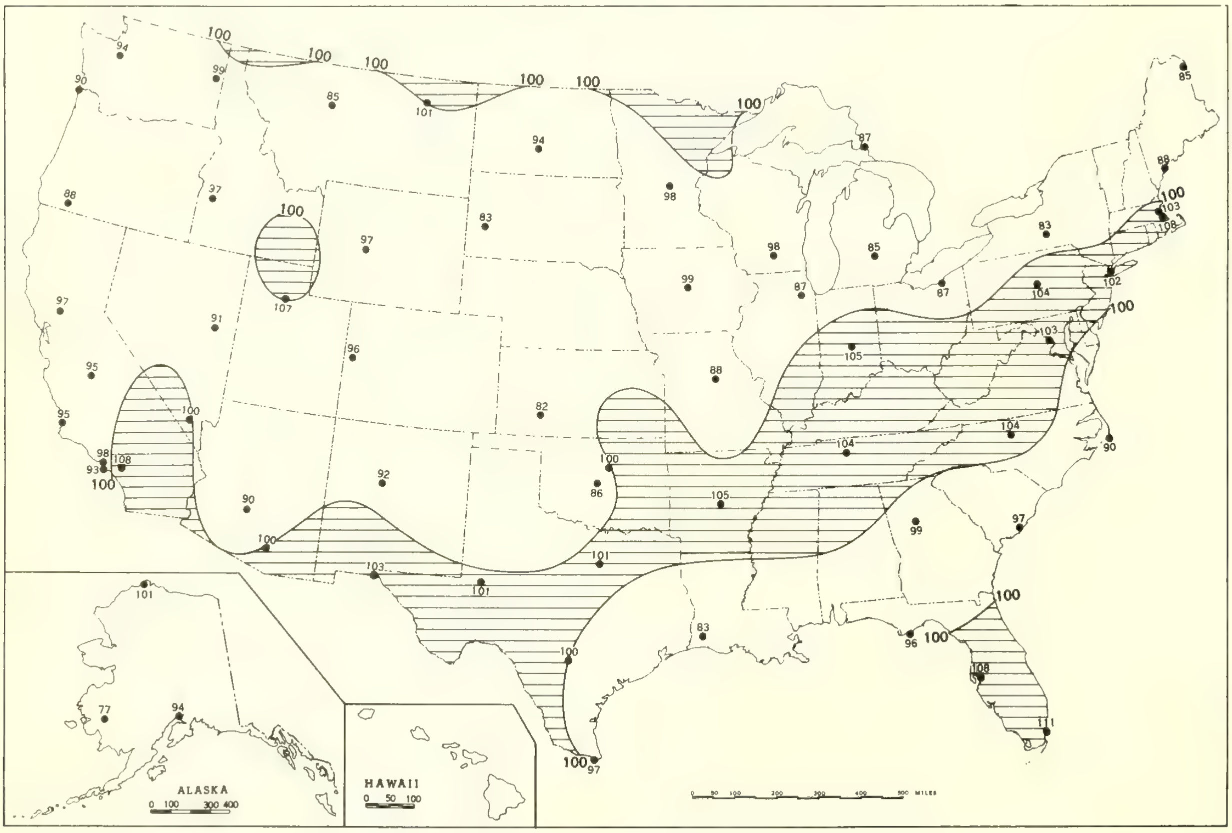


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, August 1965.

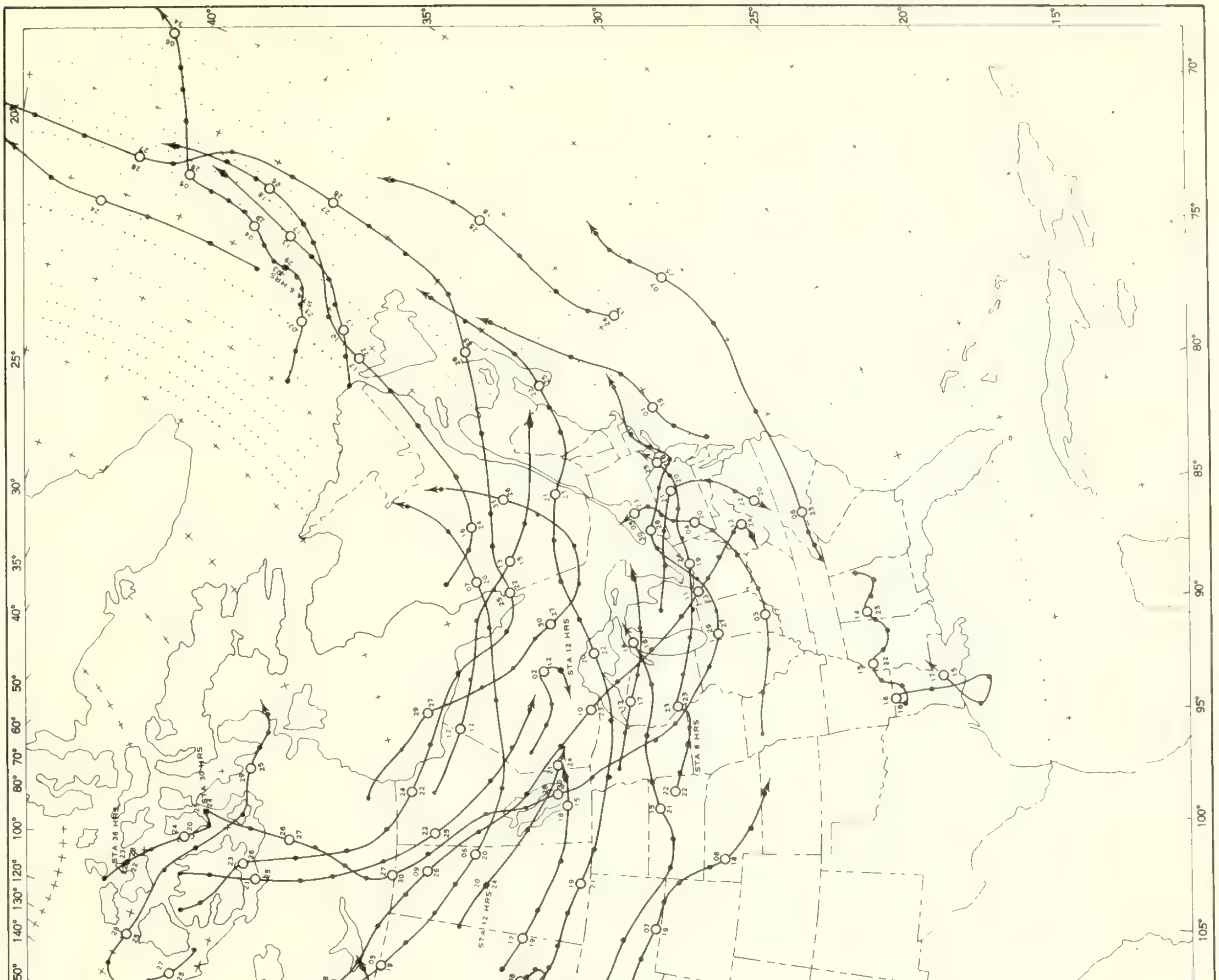


B. Percentage of Mean Daily Solar Radiation, August 1965.



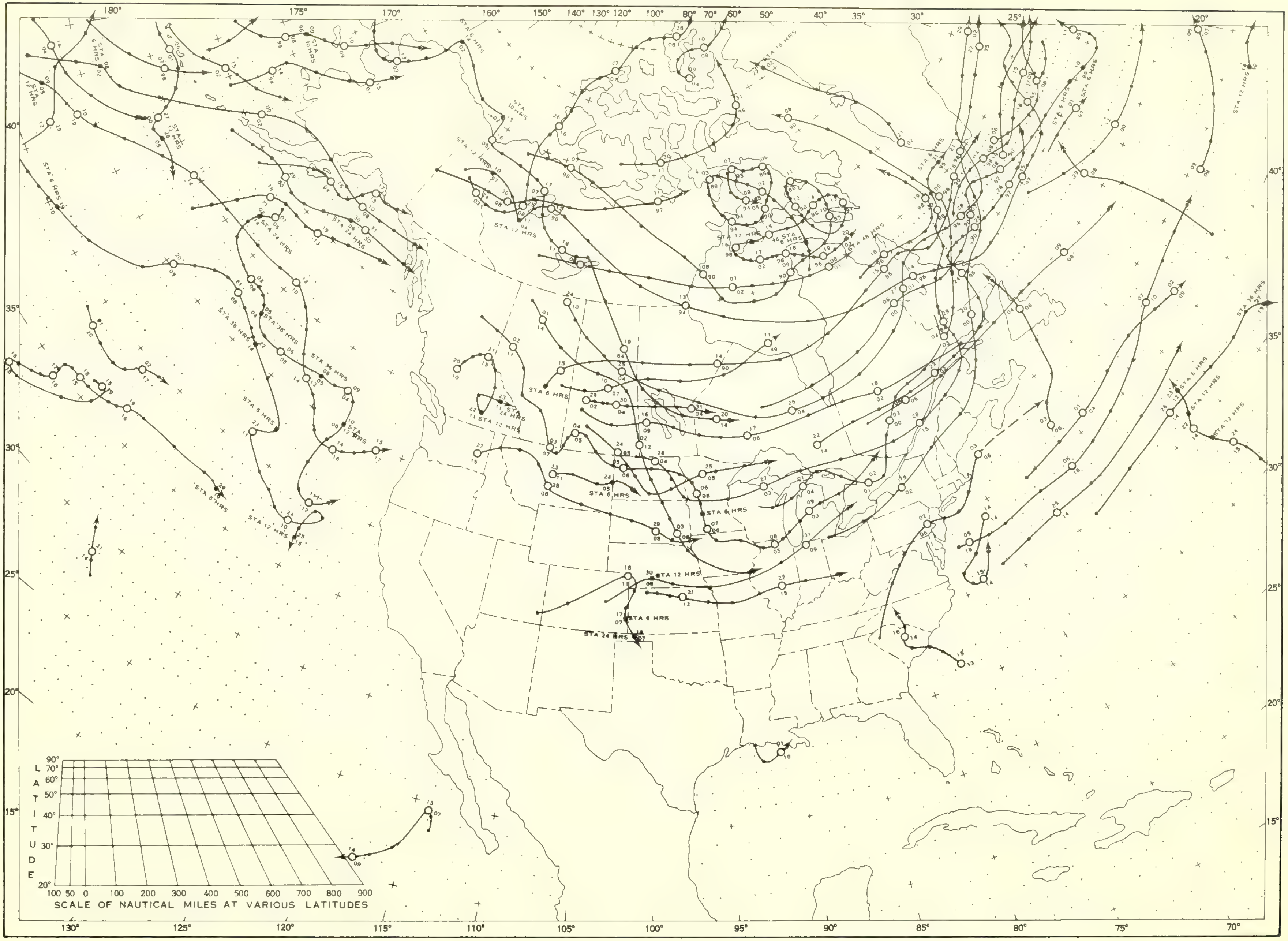
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm. $^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, August 1965.



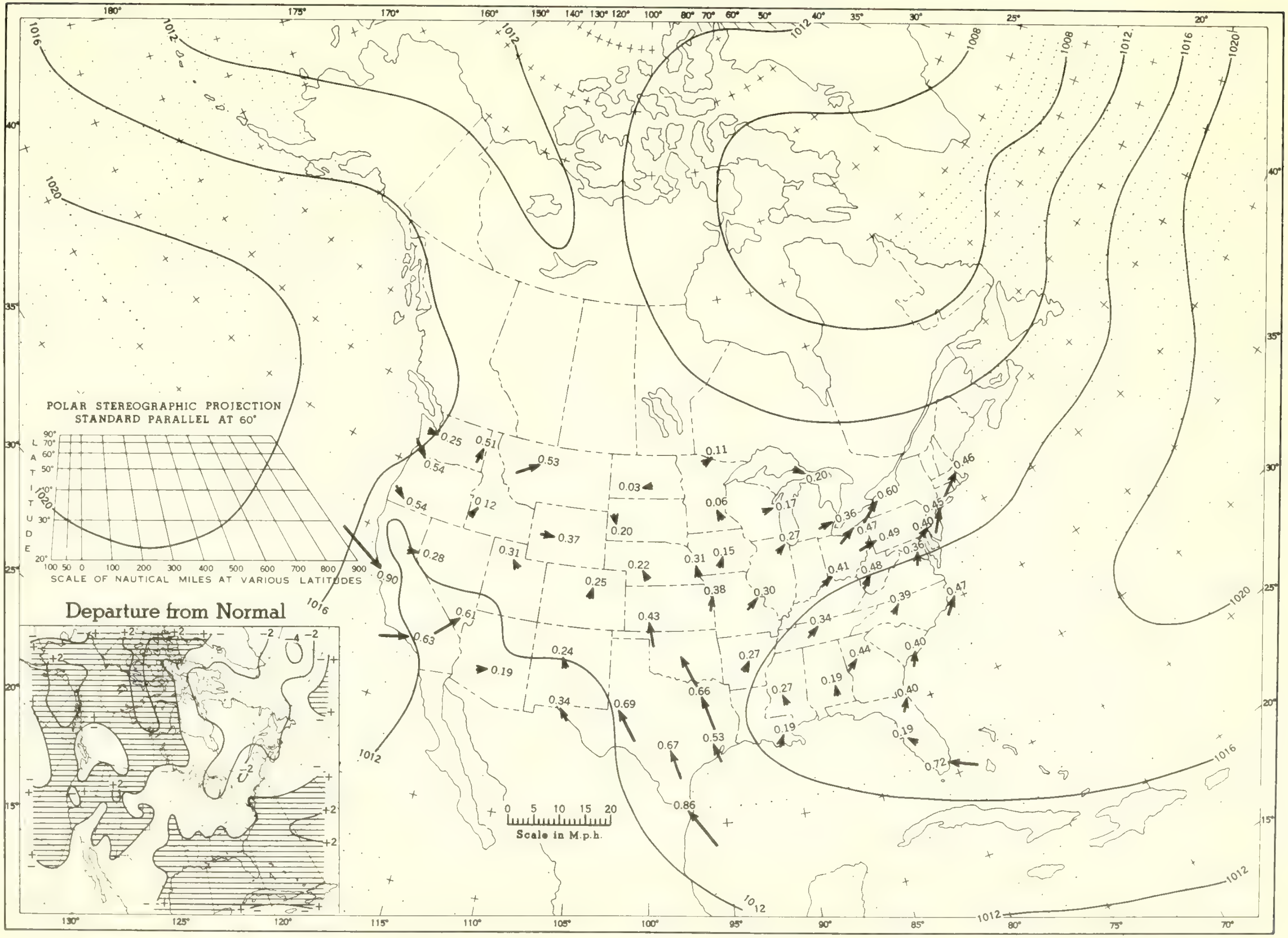
Circle indicates position of center at 7:00 a.m. E. S. T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, August 1965.



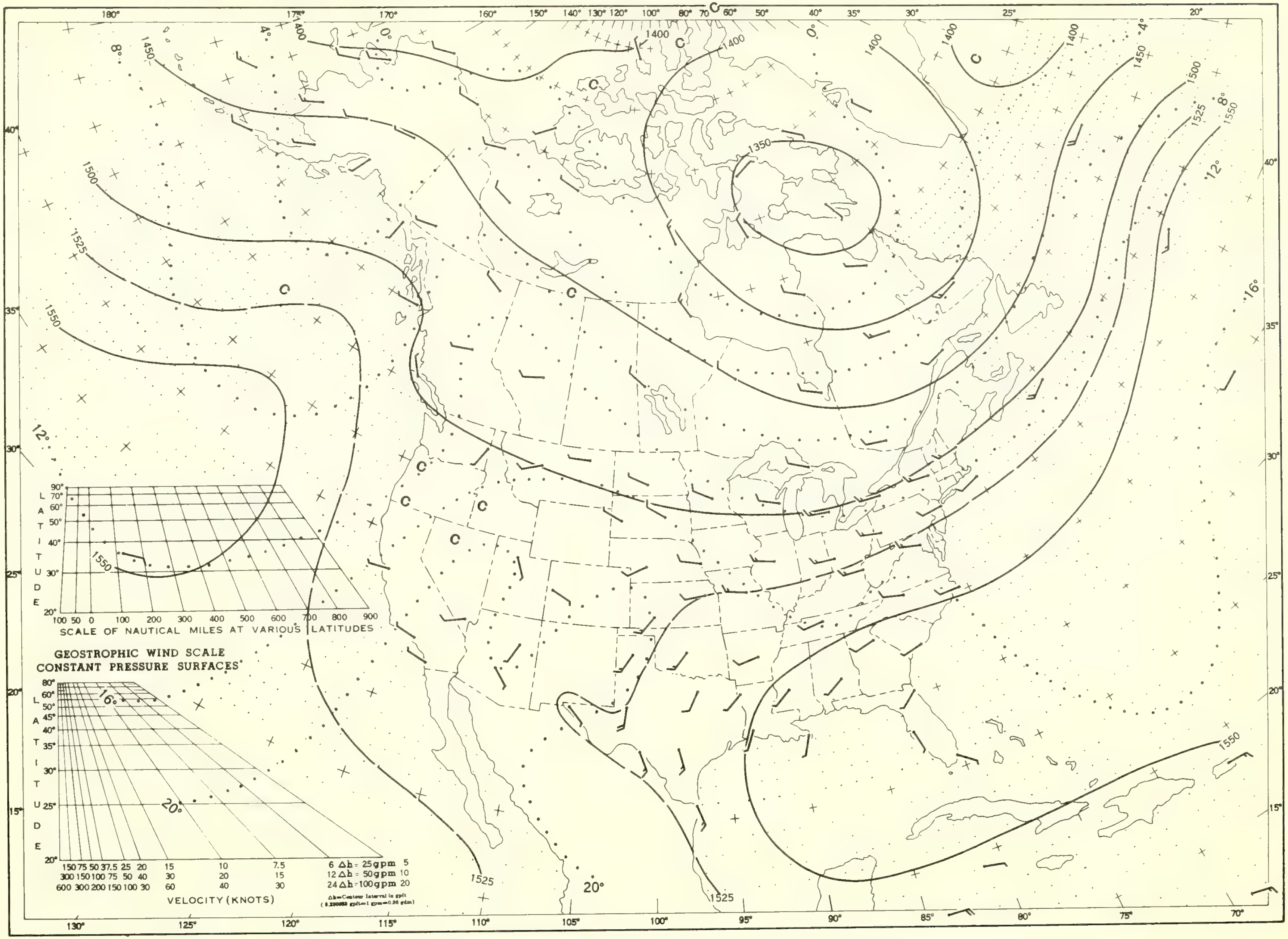
Circle indicates position of center at 7:00 a. m. E. S. T. See Chart VIII for explanation of symbols.

Chart X. Average Sea Level Pressure (mb.) and Resultant Surface Wind, August 1965. Inset: Departure of Average Pressure (mb.) from Normal, July 1965.



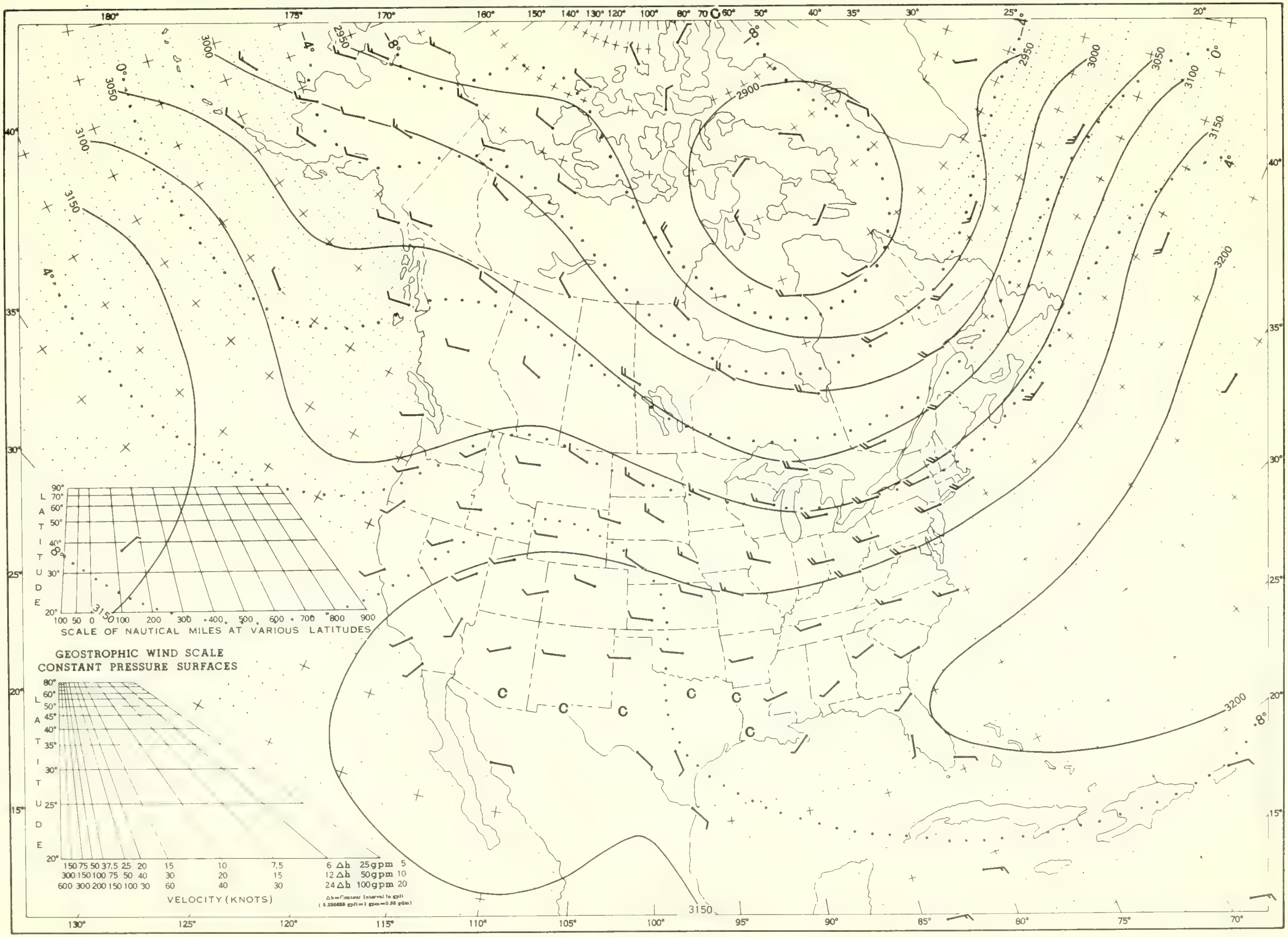
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed ÷ average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb. Surface, 1200 GMT, August 1965. Average Height and Temperature, and Resultant Winds.



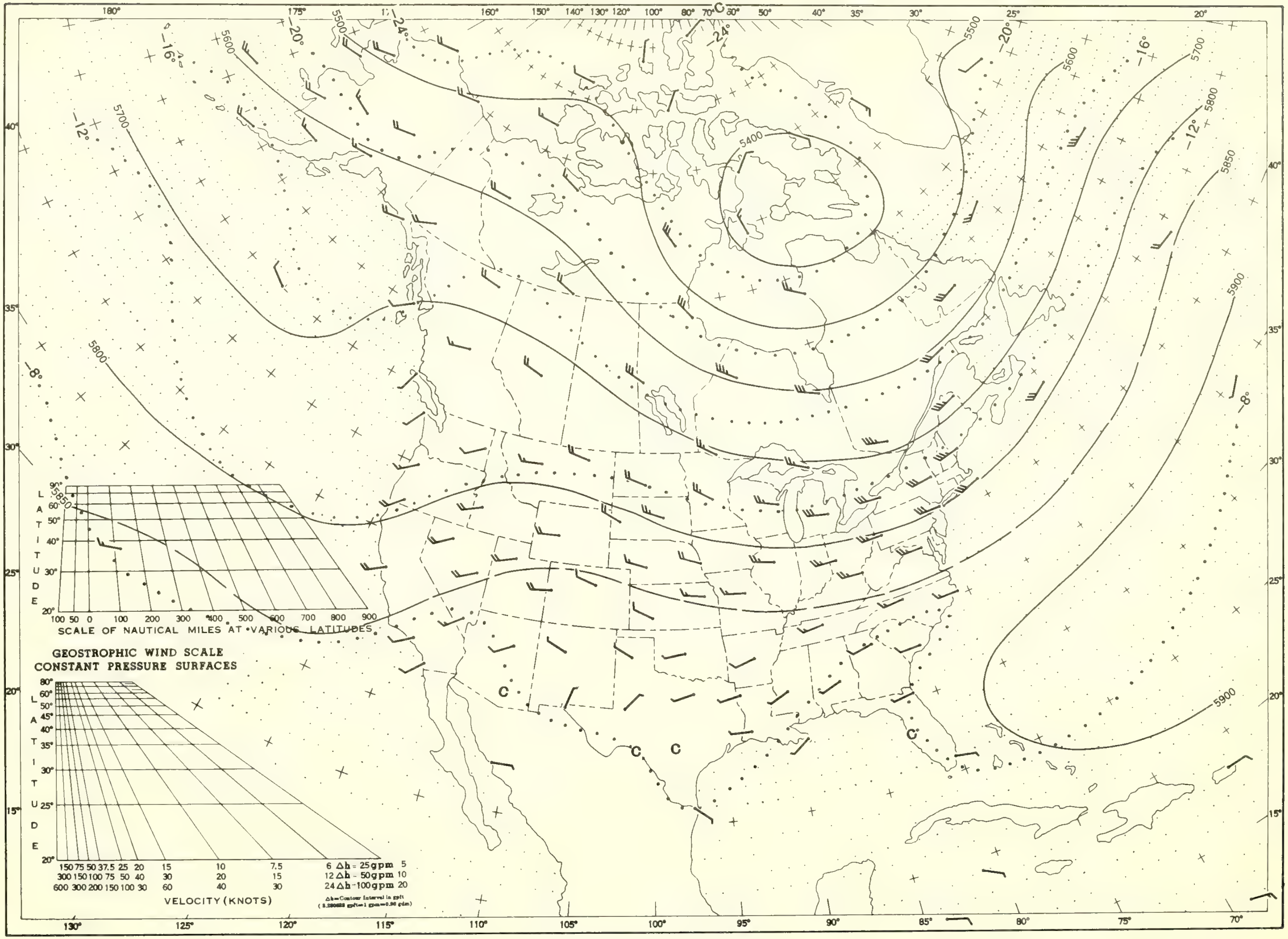
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in knots; flag represents 50 knots, full feather 10 knots, and half feather 5 knots. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, August 1965. Average Height and Temperature, and Resultant Winds.



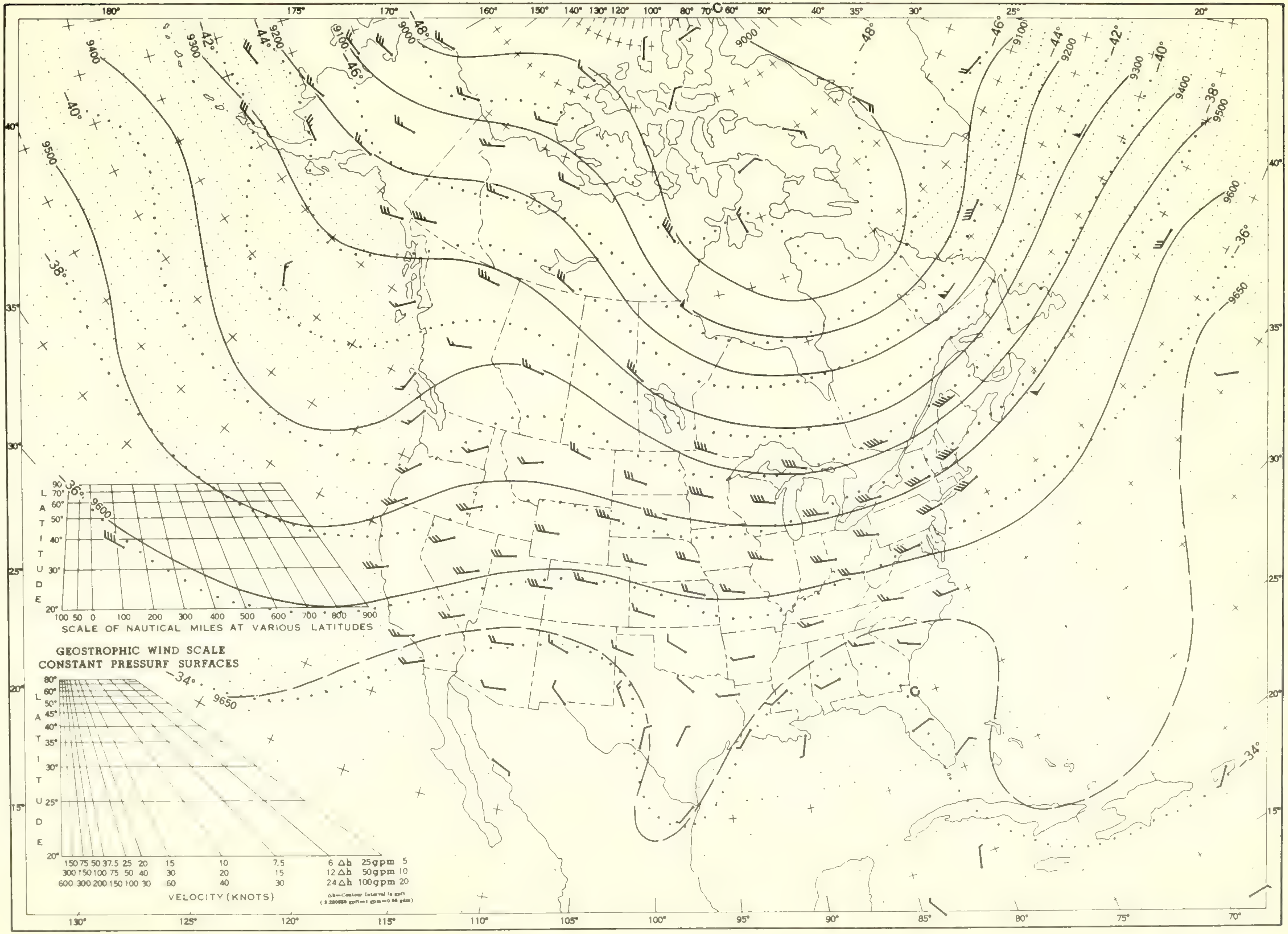
See Chart XI for explanation of map.

Chart XIII. 500-mb. Surface, 1200 GMT, August 1965. Average Height and Temperature, and Resultant Winds.



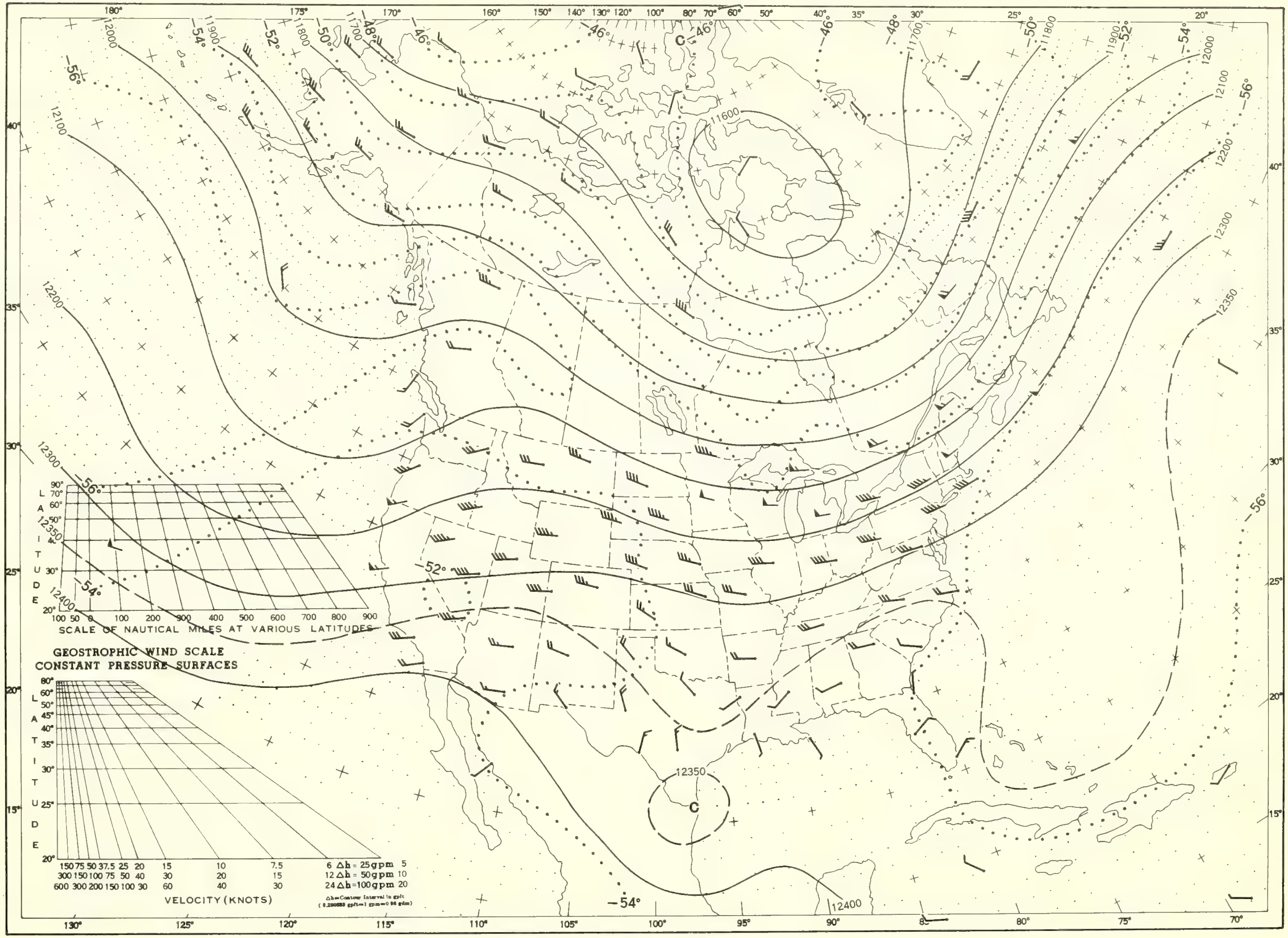
See Chart XI for explanation of map.

Chart XIV. 300-mb. Surface, 1200 GMT, August 1965. Average Height and Temperature, and Resultant Winds.



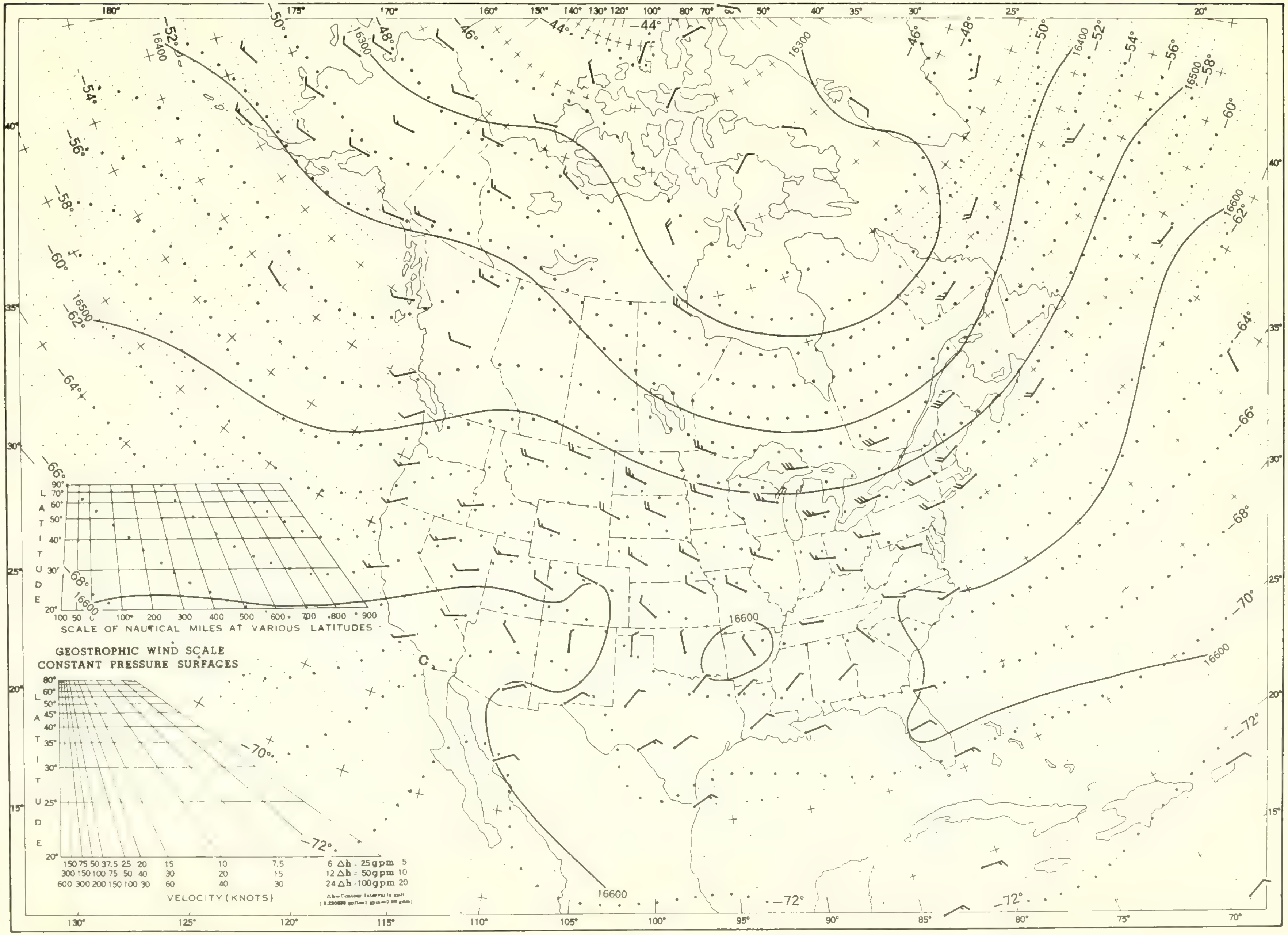
See Chart XI for explanation of map.

Chart XV. 200-mb. Surface, 1200 GMT, August 1965. Average Height and Temperature, and Resultant Winds.



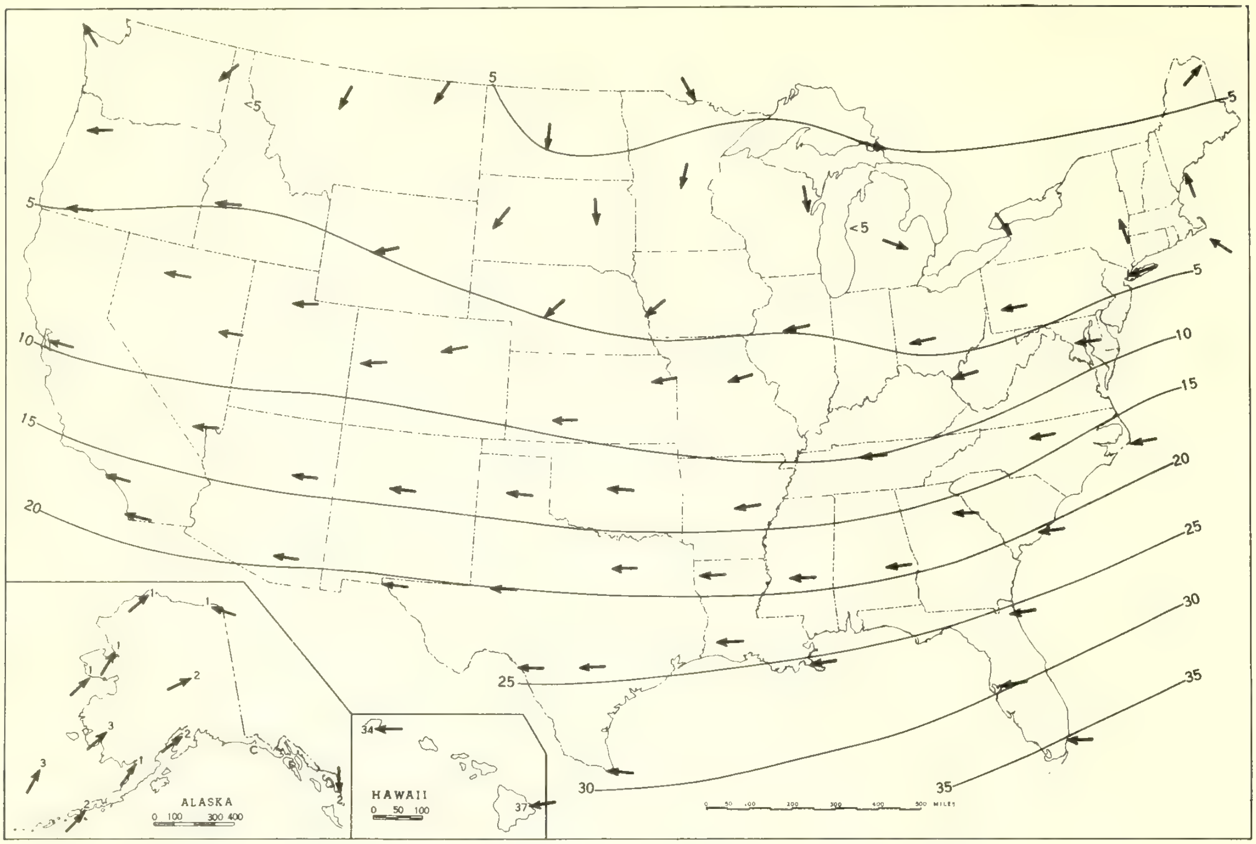
See Chart XI for explanation of map.

Chart XVI. 100-mb. Surface, 1200 GMT, August 1965. Average Height and Temperature, and Resultant Winds.

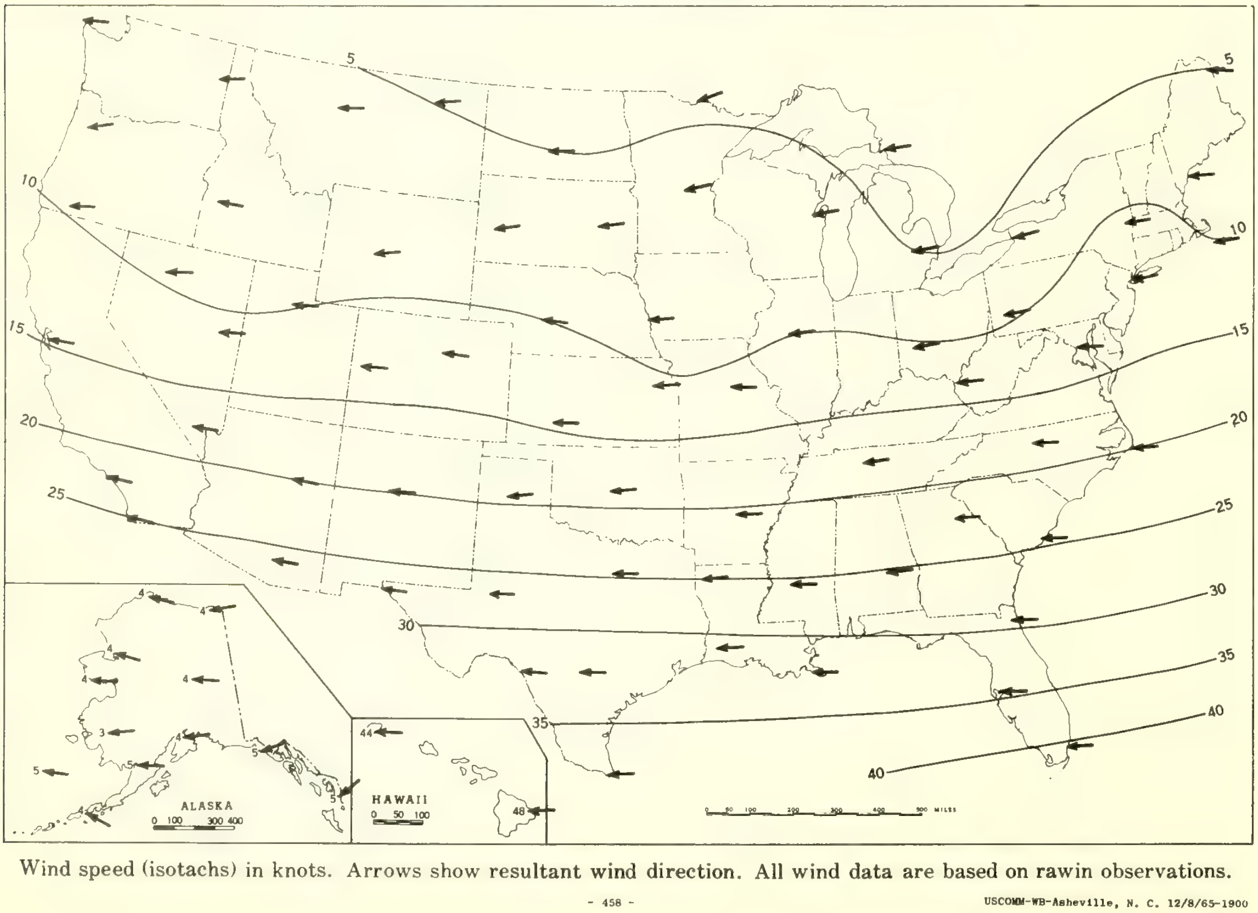


See Chart XI for explanation of map.

Chart XVII. A. 50-mb. Surface, 1200 GMT, August 1965. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, August 1965. Resultant Winds.



Wind speed (isotachs) in knots. Arrows show resultant wind direction. All wind data are based on rawin observations.

. 51: 16/9

U. S. DEPARTMENT OF COMMERCE
JOHN T. CONNOR, Secretary
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
WEATHER BUREAU

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

SEPTEMBER 1965

Volume 16 No. 9

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NOTE: Delayed data and corrections will be carried in the June and December issues of this publication.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 16 No. 9 SEPTEMBER 1965

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. Record cold from Idaho to the Mississippi River and in parts of central Great Plains.

2. Record precipitation eastern Nebraska, parts of Iowa, and Wisconsin.

3. Record snowfall west-central Great Plains and north Rockies.

4. Drought persisted Northeast.

5. Major Hurricane strikes south Florida and Louisiana.

TEMPERATURE.--Temperatures for the month averaged above normal in the East, below in the West, with the dividing line running from southeast New Mexico to lower Lake Michigan. The cool weather in the West was unusually persistent. Not a single day was warmer than normal at Fresno, Calif. The month was coldest, relative to normal, in the northern Great Plains and northern Rockies where 10° to 12° was colder than usual. Among many stations reporting their coldest September were Sioux City, Iowa; Minneapolis, Minn.; Bismarck, N. Dak.; Rapid City, S. Dak.; Helena, Mont.; and Pocatello, Idaho. Numerous other stations in the central Great Plains and Far West had their coldest September in many years. It was the coldest since 1902 at Concordia, Kans.; 1912 at Phoenix, Ariz.; 1925 at Red Bluff, Calif.; 1893 at Fresno, Calif.; and since 1873 at Omaha, Nebr. The lowest temperature recorded in the 48 States was -2° at Sunshine, Wyo., within 7° of the lowest ever recorded in September.

In addition, temperatures for so early in the season were the lowest of record for many stations and freezing was earlier than usual in most northern areas. During the month freezing in the Appalachians extended southward to West Virginia, and occurred over interior sections of New England and New York. Freezing also occurred in the Great Lakes region, the upper Great Plains, and most of the western Interior east of the Cascades and Sierra Nevada Mountains.

Temperatures were generally above normal in the South and East after the first week. From about the 10th to 23d highs in the 90's reached Michigan and Maine. Highs exceeded 100° at some stations in Texas, Oklahoma, Kansas, and Arkansas. A high of 107° was reported in Oklahoma.

Honolulu, Hawaii, recorded its highest September temperature, 93° on the 12th, and Nome, Alaska, had a late season high of 63° on the 14th. The highest temperature recorded in the 48 States was 112° at 3 stations in California around midmonth.

PRECIPITATION.--September precipitation was above normal in nearly all sections from the Rocky Mountain States to the Appalachians. And in most of this area, particularly in more northern portions and the Mississippi Valley, monthly totals ranged from 150 to 300 percent of normal. Amounts were normal or less in the Pacific States, parts of New Mexico and Arizona, and along the Atlantic coast. Actual totals ranged up to more than 3 inches in the Rockies and from 4 to over 6 inches in the Mississippi and Ohio Valleys, the Great Lakes region, and along the east Gulf coast. Precipitation was fairly well distributed through the month.

Many of the rains in north-central areas were associated with frontal passages and were frequently excessive. Rainfall was unusually heavy in Iowa and some adjacent areas of surrounding States where monthly totals set new September records at many stations, including 15.46 inches at Dubuque, Iowa; 13.75 at Omaha, Nebr.; 9.69 at Sioux City, Iowa; 9.00 at Grand Island, Nebr.; and 7.80 inches at Green Bay, Wis.

Much of the rainfall in the Southeast and in the Ohio and lower Mississippi Valleys was associated with tropical storms. Hurricane Betsy crossed extreme southern Florida during the night of the 7th and 8th and produced mostly 4 to 6 inches of rain south of a line joining Ft. Lauderdale and Everglades City and tapering off to little or none north of Orlando. Betsy brought the first big rains of the month to the Everglades. The storm, moved up the Mississippi and Ohio Rivers to southwest Pennsylvania from the 9th through the 12th. A 100- to 200-mile wide belt of heavy rainfall straddling the lower Mississippi and Ohio Rivers to southwest Pennsylvania, ranged mostly from 2 to over 6 inches. Tropical storm Debbie on the 29th and 30th moved into the northeast Gulf coastal area producing heavy rain in Florida, Georgia, Alabama, and the lower Appalachians. Amounts generally ranged from 2 to over 4 inches, but Mobile, Ala., recorded 16.85 inches in 24 hours, a new record there.

In the northeast drought area precipitation was above normal except below in coastal sections. Excesses, however, were small, while amounts in coastal areas were generally between 50 to 75 percent of normal. In general, the drought situation remained about the same. Precipitation in the area of serious drought was barely sufficient to maintain water storage reserves in reservoirs and soil moisture, and much more is needed to end the drought.

SNOWFALL.--Much of the precipitation in the Rockies and northwestern Great Plains fell as snow during the third week. Falls ranged up to 6 or 8 inches in western South Dakota, 18 inches in western Nebraska, 2 feet in Wyoming, and several inches as far south as northern Arizona. Snowfall records for September and so early in the season were broken over a large area. Some of the records for September included Lander Wyo., 23.6 inches; and Salt Lake City, Utah, 2.2 inches which was also the earliest measurable snowfall of record there. Grand Junction, Colo., recorded 3.1 inches during the month, the first time of record measurable snow has fallen there in September.

SEVERE STORMS.--Hurricane Betsy was by far the month's most extensive and severe storm. She was blamed for the death of 4 persons and over $140 million damages in southern Florida; $80 million damage in Mississippi and Alabama; and 58 deaths and over

$1.2 billion damage in Louisiana. This was the most destructive hurricane on record.

Frequent outbreaks of severe thunderstorms and tornadoes occurred in the upper midcontinent area. Tornadoes on the 3d injured 24 persons and damaged or destroyed 30 to 50 homes in Kansas City, Mo., and caused property damage of a few million dollars in Wichita, Kans. A tornado injured 2 persons and caused heavy damage in Peoria, Ill., on the 14th when tornadoes were reported in Missouri, Illinois, Indiana, and Michigan. On the 18th a tornado injured one person and caused extensive property damage in Moline, Ill., and 81 m.p.h. winds were reported in the Chicago area.

CONDENSED CLIMATOLOGICAL SUMMARY

SEPTEMBER 1965

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	Highland Home	98	16	Double Springs	33	25	Gulf Shores PO	15.75	Tuscaloosa Oliver Dam	0.87
Alaska	Rampart No 2	82	10	Snowshoe Lake	8	28	Whittier	21.63	Wainwright	.01
Arizona	Dateland	109	16	Greer	20	29	Junipine	6.48	8 Stations	.00
Arkansas	Booneville	103	14	Evening Shade 1NE	32	25	Mountain View 2ESE	15.71	Harrison	1.86
California	3 Stations	112	16+	White Mountain 2	7	19	Santa Anita Fern FC432	3.00	188 Stations	.00
Colorado	Eversoll Ranch	96	14	Antero Reservoir	3	21	Wolf Creek Pass 1E	8.57	Springfield	.36
Connecticut	Hartford WBAP	93	10	Falls Village	25	28	Cream Hill	4.71	Bridgeport WBAP	.82
Delaware	Middletown 1WSW	95	10	2 Stations	39	28+	Milford 3WNW	3.90	Middletown 1WSW	1.24
Florida	Wewahitchka	99	15	DeFuniak Springs	49	8	Kendall 2E	13.42	Lisbon	1.78
Georgia	2 Stations	98	13+	LaFayette	41	25	Sapelo Island	11.16	Waynesboro 2NE	.70
Hawaii	3 Stations	93	21+	Kamuela Airport	29	27	Lanihau 68C	13.67	Twin Gates 261.3	.00
Idaho	2 Stations	92	2+	Warren	5	17	Powell	2.93	Weiser 2SE	.05
Illinois	Ottawa	99	18	Rochelle 1W	33	25	Galena	14.40	Alton Dam 26	2.80
Indiana	Edwardsport Power Pl	94	18	Greensburg 3SW	30	25	Charlestown Ord Plant	10.18	La Grange Sewage Plant	2.00
Iowa	Shenandoah	92	9	2 Stations	26	26+	Dubuque WBAP	15.46	Norwich Exp Farm	5.99
Kansas	7 Stations	100	15+	3 Stations	30	24+	El Dorado	12.92	Greensburg	1.17
Kentucky	Ashland	98	19	do	31	25	Lockport Lock 2	12.25	Burdine 2NE	1.33
Louisiana	Logansport	102	14	6 Stations	45	26+	Old River Lock	11.99	Old Town Bay	2.47
Maine	Woodland	96	23	Haynesville	17	28	Telos Dam	5.14	Eastport	1.40
Maryland	4 Stations	98	19+	Oakland 1SE	30	26	Salisbury FAA AP	6.82	Dalecarlia Resvr DC	.36
Massachusetts	2 Stations	94	23+	West Granville	22	28	Adams	4.80	Salem CG Air Station	1.56
Michigan	Dearborn	91	18	2 Stations	18	27	Wellston Tippy Dam	9.52	Detroit WBAP M Wayne C	1.91
Minnesota	Beardsley	88	2	3 Stations	13	26	Harmony	13.43	Fosston Power Plant	3.64
Mississippi	Hattiesburg	97	24	Moorhead	35	25	Louisville	11.39	Shuqualak	1.48
Missouri	Ozark Beach	96	15	Berryman 6NW	31	25	Fisk	17.52	St Louis WBAP	3.00
Montana	Crow Agency	90	1	Jackson	2	17	Shonkin 7S	7.33	Twin Bridges	.52
Nebraska	Pawnee City	95	9	Rose	19	24	Waterloo	14.85	Big Springs	1.98
Nevada	Sunrise Manor Las Vegas	103	15+	Wilkins	3	19+	Lehman Caves Nat Mon	2.29	8 Stations	.00
New Hampshire	Berlin	95	23	Fabyan	16	28	Pinkham Notch	8.63	Greenville	1.78
New Jersey	Hammonton 2NNE	96	11	Newton	29	28	Mahwah	6.03	Long Branch	1.26
New Mexico	Jal	102	14	3 Stations	19	30+	Carrizozo	6.26	Newcomb	.09
New York	2 Stations	94	10	Elizabethtown	19	28	Highmarket	7.81	Mineola	.70
North Carolina	4 Stations	97	12+	Transou	32	26	Highlands 2S	8.79	Norwood 6SW	.30
North Dakota	Watford City 14S	86	1	3 Stations	11	26	Adams 7S	6.59	Sentinel Butte 20S	.65
Ohio	Toledo Blade	96	19	2 Stations	31	25	Sedalia	11.76	Willoughby 4N	1.31
Oklahoma	Frederick	107	15	Boise City 2E	33	21	Guthrie	11.65	Goodwell	.68
Oregon	Grants Pass	97	1	Fremont	3	18	Government Camp	2.11	32 Stations	.00
Pennsylvania	3 Stations	97	23+	3 Stations	25	29+	Putneyville 2SE Dam	6.21	Breezewood	.64
Puerto Rico	Manati	97	1	Cayey 1E	59	4	Maricao	19.22	Mona Island	.85
Rhode Island	2 Stations	88	22+	2 Stations	32	28	Kingston	2.99	Providence WBAP	1.64
South Carolina	Bamberg	97	11	Caesars Head	44	25	Beaufort 7SW	6.59	Gaston Shoals	.31
South Dakota	Academy	94	2	Ralph	14	26	Canton	7.59	Camp Crook	.82
Tennessee	Lawrenceburg Filt Pl	99	17	Portland 5NE	32	25	Ripley	9.81	New Tazewell	.66
Texas	4 Stations	107	16+	Vega	35	21	Ripley Ben Ranch	10.42	Loop	.14
Utah	Antelope Island	100	15	2 Stations	6	18	Silver Lake Brighton	4.94	Williams Ranch	.08
Vermont	3 Stations	91	23+	3 Stations	20	29+	Salisbury	7.22	2 Stations	3.19
Virginia	do	98	11+	2 Stations	31	26	Woolwine 4S	9.81	Diamond Springs	.64
Washington	McNary Dam	95	2	St. John	18	17	Tolt South Fork Resvr	4.92	4 Stations	.00
West Virginia	Martinsburg FAA AP	99	10	Canaan Valley	23	26	Summersville	6.44	Matoaka	1.23
Wisconsin	West Allis	95	19	Foxboro	18	26	Dalton	15.87	Bloomer	3.85
Wyoming	Lagrange	90	1	Sunshine 2ENE	-5	18	Parkman 5WNW	4.20	Arminto	.67

+ And also on an earlier date or dates

NOTE Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation In some cases the actual occurrence is on the calendar date preceding [illegible] (See [illegible] Climatological Data for times of observations)

CLIMATOLOGICAL DATA

ENGLISH UNITS

SEPTEMBER 1965

State and Station	Elevation (ground)	Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	F.	F.	°F.	°F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	995.6	1017.9	83	64	73.7	- 2.6	89	20+	43	25	0	0	66	80	2.60	- 0.73	1.30	7	5	0.0	0	3.7	11	35	S	11	6	12	12	6.0	53
HUNTSVILLE	600	995.3	1018.0	84	66	75.0	0.5	93	10	44	25	3	0	63	69	3.60	0.51	1.94	8	3	0.0	0	4.0	13	26	17	30	9	7	14	5.8	
MOBILE	211	1007.8	1015.8	87	71	79.1	1.2	93	13	57	26+	10	0	70	78	10.45	4.20	5.56	12	6	0.0	0	5.4	11	32	14	9	5	13	12	6.8	
MONTGOMERY	194	1010.2	1017.3	86	67	76.4	- 0.7	92	15+	52	25	10	0	69	82	6.47	2.50	3.44	8	4	0.0	0	4.7	9	32	S	30	7	11	12	6.2	61
ALASKA																																
ANCHORAGE PRK STRIP	85			56	47	51.4	3.6	67	10+	30	28	B 0	1			4.28	1.78	0.84	22		4.0	T										
ANCHORAGE	141	1010.5	1015.4	59	48	53.7		70	10	29	28	1	2	45	72	4.60		0.79	22	0	4.6	1	3.2	21	28	18	23+	0	4	26	9.3	18
ANNETTE	110	1016.9	1020.8	64	48	55.7	1.6	73	10	38	27	5	0	47	77	2.52	- 7.36	2.05	7	0	0.0	0	3.7	33	21	12	29	5	10	15	6.6	
BARROW	22	1016.6	1017.3	33	26	29.3	- 1.2	51	10	16	30	0	29	27	90	0.43	- 0.21	0.23	13	0	3.9	1	9.4	8	32	7	6	3	6	21	8.1	
BARTER ISLAND	39	1014.6	1016.3	34	28	30.8	- 1.3	59	15	20	30	0	25	29	95	0.51	- 0.43	0.16	12	0	3.3	2	3.5	9	33	8	6	6	3	21	7.5	
BETHEL	125	1004.1	1009.7	54	42	48.1	3.5	66	9	22	30	0	4	44	89	3.41	0.82	1.00	19	0	T	T	3.9	14	36	12	10+	0	4	26	9.2	
COLD BAY	94	1005.1	1008.8	53	45	48.9	1.4	63	5	30	30	0	1	45	88	9.79	5.47	3.43	28	0	0.1	T	8.1	17	56	15	22	0	4	26	9.1	
FAIRBANKS	436	997.6	1014.6	58	39	48.2	4.6	76	12	20	29	7	4	37	68	2.11	1.01	0.87	13	0	T	0	1.0	35	17	3	30	5	3	22	7.6	
JUNEAU	12	1019.3	1020.2	59	42	50.3	1.4	67	14	32	14	0	1	47	90	2.34	- 4.33	0.58	14	0	0.0	0	3.4	9	25	12	16	2	9	19	7.9	39
KING SALMON	43	1009.1	1011.1	56	45	50.3	2.4	69	4	24	30	0	4	46	86	3.92	0.84	0.85	21	0	0.3	T	6.1	14	30	15	23+	0	3	27	9.4	
KOTZEBUE	10	1010.5	1010.8	48	39	43.5	2.6	67	10	24	30	0	7	38	82	2.65	1.43	0.35	19	0	5.1	1	2.9	11	37	28	28	2	1	27	9.0	
MC GRATH	334	1000.0	1012.7	54	42	48.1	4.2	75	9	23	29	2	4	42	80	3.57	0.96	0.59	21	0	4.1	2	1.7	19	25	21	5	0	2	28	9.6	
NOME	13	1008.5	1009.4	48	39	43.2	1.3	63	14	23	30+	0	8	39	83	4.08	1.41	0.61	20	0	0.2	T	3.6	7	35	9	10	2	5	23	8.5	11
ST. PAUL ISLAND	22	1005.8	1006.8	48	40	43.9	- 0.7	54	4	25	30	0	4	42	93	2.87	- 0.20	0.57	24	0	1.0	T	1.2	32	44	1	21	0	3	27	9.3	
SHEMYA	122	1003.7	1011.4	49	44	46.1	- 2.2	51	28+	39	22	0	0	42	87	2.30	0.05	0.56	19	0	T	0	7.0	35	40	1	2	0	6	24	8.9	
YAKUTAT	28	1018.3	1019.4	54	41	47.5	- 1.7	60	13	34	26+	0	0	46	94	13.60	- 2.95	3.94	16	0	0.0	0	1.9	14	30	14	16	0	7	23	8.9	
ARIZONA																																
FLAGSTAFF	6993	788.4	1014.3	68	40	53.8	- 4.7	78	14+	26	21	0	5	37	59	4.85	3.27	3.43	11	8	2.0	T	4.6	19	40	1	30	17	6	7	3.7	
PHOENIX	1117	970.9	1008.9	95	64	79.2	- 3.6	103	15+	47	21+	23	0	52	44	0.60	- 0.13	0.42	5	5	0.0	0	1.4	18	53Y	W	19	23	4	3	1.9	91
TUCSON	2584	923.1	1009.2	90	64	76.8	- 3.6	97	24+	44	30	18	0	47	41	0.82	- 0.18	0.35	5	8	0.0	0	3.6	19	30	S	18+	20	5	5	2.6	83
WINSLOW	4895	851.0	1012.6	81	50	65.7	- 5.0	91	15+	37	21	3	0	41	47	0.91	0.00	0.50	4	5	0.0	0	4.8	21	35	18	18	17	10	3	3.4	
YUMA	194	1001.4	1008.6	96	69	82.4	- 5.7	107	15	53	20	24	0	50	37	0.00	- 0.38	0.00	0	0	0.0	0	1.9	25	25	N	29+	28	1	1	1.0	95
ARKANSAS																																
FORT SMITH	449	999.0	1015.2	87	62	74.8	- 0.1	100	14	41	25	16	0	63	71	2.14	- 1.50	2.01	4	2	0.0	0	3.5	10	29	W	21	11	13	6	4.7	70
LITTLE ROCK	257	1006.8	1016.0	84	65	74.3	0.0	95	14	43	25	11	0	65	77	7.67	4.44	3.35	9	2	0.0	0	2.4	11	32	SW	20	13	11	6	4.6	62
TEXARKANA	372	1002.4	1015.2	86	66	76.0	- 0.5	98	14	47	25	16	0	66	75	3.27	0.54	1.96	6	5	0.0	0	2.7	13				15	8	7	4.4	
CALIFORNIA																																
BAKERSFIELD	494	994.9	1012.2	85	60	72.2	- 4.3	93	3	54	30+	6	0	47	44	0.10	0.02	0.10	2	0	0.0	0	3.8	33	20	7	18+	22	7	1	1.8	
BISHOP	4108			83	44	63.2	- 5.0	93	15+	36	30	8	0			0.02	- 0.17	0.02	1		0.0	0						25	4	1	1.6	
BLUE CANYON	5280			68	48	57.7	- 5.2	80	24	34	17	0	0			0.32	- 0.31	0.27	2		0.0	0			27	6	17	25	2	3	1.9	
BURBANK	724	986.8	1012.2	80	56	68.2	- 4.4	93	14	51	29	3	0	53	66	0.75	0.48	0.46	7	1	0.0	0	3.7	15	17	12	18	18	6	6	3.3	
EUREKA U	43			58	49	53.9	- 2.5	65	30+	44	18+	0	0			T	- 0.64	T	0		0.0	0			35	N	16	10	7	13	5.9	53
FRESNO	328	1000.7	1012.2	85	52	68.6	- 5.6	92	24+	45	29	9	0	47	51	0.00	- 0.10	0.00	0	0	0.0	0	3.1	30	21	NW	16	25	2	3	1.5	94
LONG BEACH	34	1011.5	1012.9	78	58	68.3	- 3.0	93	30	50	30	1	0	54	67	0.20	0.14	0.11	4	0	0.0	0	2.1	26	16	28	29+	16	10	4	3.8	
LOS ANGELES	97	1008.8	1012.5	75	61	68.0	- 0.5	87	30+	55	30	0	0	57	72	0.11	- 0.06	0.07	3	0	0.0	0	4.2	25	23Y	W	28+	17	7	6	3.6	
LOS ANGELES U	270			79	60	69.6	- 2.3	90	30+	55	29	2	0			1.80	1.57	1.45	5		0.0	0			17	SW	28+	21	3	6	3.0	69
MT SHASTA R	3544			76	40	57.9	- 3.6	86	24	25	17	0	3			T	- 0.87	T	0		0.0	0										
OAKLAND	6	1013.9	1013.9	71	57	63.7	- 1.4	86	16	49	18	0	0	52	72	T	- 0.20	T	0	0	0.0	0	6.1	29	31	36	17	15	10	5	4.4	
RED BLUFF	341	1000.0	1012.6	84	54	68.8	- 7.2	96	15	43	20	2	0	42	44	T	- 0.37	T	0	0	0.0	0	0.7	31	50	NE	16	24	5	1	1.8	95
SACRAMENTO	17	1011.9	1012.5	84	52	67.6	- 4.0	93	15+	43	18	4	0	45	53	T	- 0.19	T	0	0	0.0	0	3.7	23	42	NW	16	27	1	2	1.5	91
SANDBERG R	4517			71	52	61.3	- 8.0	85	24	39	19	0	0			0.48	0.27	0.40	3		0.0	0			39	33	28	18	6	6	3.0	
SAN DIEGO	13	1011.5	1012.6	75	62	68.5	- 1.4	88	30	56	29	0	0	57	70	0.29	0.14	0.21	4	0	0.0	0	3.5	29	22	NW	21	17	7	6	3.7	73
SAN FRANCISCO	8	1013.5	1014.4	70	52	61.1	- 2.8	83	30	47	29+	0	0	48	70	T	- 0.19	T	0	0	0.0	0	7.1	29	32	N	16	17	8	5	3.5	
SAN FRANCISCO U	52			67	55	61.2	- 0.8	84	30	52	21+	0	0			T	- 0.22	T	0		0.0	0			29	NE	17					58
SANTA CATALINA	1568			71	57	64.1	- 6.1	86	30	53	11	0	0			0.11	- 0.09	0.09	3	0	0.0	0						19	7	4	3.1	
SANTA MARIA	236			74	50	62.3	- 0.5	90	30	43	20	1	0			T	- 0.16	T	0		0.0	0						16	10	4	3.7	
COLORADO																																
ALAMOSA	7536			69	37	53.2	- 2.5	77	14	25	30	0	8			1.59	0.82	0.57	11		0.0	0						10	15	5	4.6	
COLORADO SPRINGS	6145	811.4	1014.2	67	43	55.0	- 6.6	83	14+	27	17	0	4	39	63	2.24	1.17	0.88	11	7	0.1	0	1.1	9	35	36	18	9	10	11	5.9	
DENVER	5283	836.4	1013.3	68	43	55.7	- 7.3	86	6	30	17+	0	3	39	62	2.58	1.45	0.99	12	5	5.5	1	0.2	18	40	NW	14	9	9	12	6.4	61

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
COLORADO																																
GRAND JUNCTION	4855	851.0	1011.5	76	51	63.4	- 4.4	88	13	34	18	0	0	40	48	2.52	1.61	1.35	10	7	3.1	2	3.0	11	38	SW	28	9	11	10	5.6	63
PUEBLO	4684	855.4	1013.0	75	48	61.6	- 5.0	90	14+	31	21	3	1	42	57	1.12	0.28	0.58	9	4	T	T	1.1	5	42	NE	29+	10	9	11	5.8	70
CONNECTICUT																																
BRIDGEPORT	7	1021.3	1021.9	75	60	67.5	2.0	86	23+	41	28	0	0	59	75	0.82	- 3.13	0.25	7	3	0.0	0	1.1	11	38	21	1	11	8	11	5.8	
HARTFORD	169	1014.9	1021.3	75	53	64.1	0.8	93	10	31	28	3	1	56	80	3.50	- 0.15	1.08	12	3	0.0	0	1.1	24	32	SW	1	6	12	12	6.8	50
NEW HAVEN	6			73	57	64.7	0.8	84	10	36	28	0	0			1.63	- 2.30	0.41	10		0.0	0			26	S	1	9	8	13	5.9	57
DELAWARE																																
WILMINGTON	78	1018.0	1021.0	79	60	69.4	1.8	92	10	44	28	3	0	61	78	2.41	- 1.54	1.06	4	1	0.0	0	0.5	15	23	32	24+	9	11	10	5.7	
DIST.OF COLUMBIA																																
WASH NATL AP	14	1018.3	1020.7	82	63	72.6	2.9	92	21+	48	26	5	0	63	76	2.12	- 1.71	1.58	8	1	0.0	0	1.8	16	33	NW	24	11	13	6	5.0	63
FLORIDA																																
APALACHICOLA U	13			85	74	79.2	0.3	90	14	66	8	1	0			12.27	3.74	4.00	14	4	0.0	0			36	E	29	10	9	11	5.9	53
DAYTONA BEACH	31	1016.3	1017.5	86	72	79.1	- 0.1	88	19+	64	15	0	0	71	80	4.33	- 2.67	1.67	14	3	0.0	0	8.2	8	38	5	7	2	15	13	6.8	
FORT MYERS	15	1014.9	1015.1	89	74	81.3	0.0	91	22+	71	25+	13	0	73	80	4.35	- 4.15	1.62	15	11	0.0	0	7.5	7	46	6	8	5	16	9	6.2	
JACKSONVILLE	24	1016.9	1017.8	86	73	79.8	0.4	93	2+	69	28+	6	0	71	79	11.02	3.46	5.27	13	3	0.0	0	5.7	10	57	E	8	3	15	12	7.0	48
KEY WEST	4	1013.2	1013.7	88	79	83.2	0.9	90	7+	75	24+	4	0	74	75	10.59	3.86	3.90	15	7	0.0	0	8.5	9	81	SW	8	4	15	11	6.7	68
LAKELAND U	214			88	73	80.3	0.1	94	1	70	25	7	0			7.63	1.08	2.10	15		0.0	0						4	17	9	6.4	60
MIAMI	7	1014.2	1014.4	85	75	79.9	- 1.4	92	5	70	14	2	0	73	83	11.38	1.91	5.34	18	8	0.0	0	7.2	9	69	6	8	1	14	15	7.5	
ORLANDO	108	1012.5	1016.8	88	73	80.8	0.8	93	10+	70	16+	12	0	71	77	5.99	- 1.24	1.18	17	4	0.0	0	6.9	8	26	7	8+	1	18	11	6.7	
PENSACOLA	112	1012.2	1016.3	85	72	78.5	0.3	91	15+	58	25	3	0	71	81	9.30	1.61	4.58	13		0.0	0	4.7	11	47	E	9					59
TALLAHASSEE	55	1014.9	1017.2	88	72	80.1	2.0	95	14+	65	8	14	0	70	76	10.25	4.74	3.93	14	8	0.0	0	5.0	9	25	10	9	4	15	11	6.6	
TAMPA	19	1015.6	1016.0	89	72	80.5	0.0	92	5+	68	13	15	0	69	72	7.36	0.47	2.25	12	10	0.0	0	6.0	8	31	8	8	3	17	10	6.4	54
WEST PALM BEACH	15	1014.6	1015.2	88	77	82.1	0.0	92	5+	72	16	8	0	73	75	3.84	- 5.82	0.85	16	8	0.0	0	8.5	9	46	8	8+	3	12	15	7.3	
GEORGIA																																
ATHENS	802	991.2	1019.7	82	64	72.9	- 0.6	92	1	52	25	2	0	65	82	5.27	2.25	1.98	8	5	0.0	0	3.3	8	23	3	2	5	9	16	6.7	
ATLANTA	1010	983.1	1019.4	82	64	72.9	- 0.2	88	20+	49	25	0	0	63	76	3.02	- 0.24	2.98	9	3	0.0	0	4.8	9	25	E	18	5	12	13	6.5	48
AUGUSTA	143	1013.9	1019.1	87	64	75.8	0.5	94	13+	51	8	16	0	66	78	1.05	- 1.95	0.65	7	2	0.0	0	2.9	7	18	6	27	4	9	17	7.0	
COLUMBUS	385			86	66	76.1	0.1	95	1	52	25	10	0	66	77	5.81	3.04	3.16	10		0.0	0	4.1	8	25	18	10	5	10	15	6.7	
MACON	354	1006.4	1019.4	84	66	74.9	- 1.5	91	10+	54	25	6	0	67	84	3.99	1.22	0.83	11	6	0.0	0	4.5	8	28	SW	10	5	8	17	7.2	46
ROME	637			84	62	72.9	0.5	91	15	44	25	2	0			4.21	0.91	1.36	9		0.0	0										
SAVANNAH	46	1016.9	1018.9	86	68	76.7	0.0	92	12+	62	28+	4	0	68	80	4.82	- 0.43	1.32	11	4	0.0	0	4.0	7	30	NW	24	2	16	12	7.0	53
HAWAII																																
HILO	31	1013.2	1014.2	86	68	76.8	1.3	88	23+	66	28+	0	0	67	74	5.72	- 2.78	3.12	14	0	0.0	0	2.4	16	24	13	8	8	12	10	5.6	53
HONOLULU	7	1013.5	1013.9	87	73	80.0	0.8	93	12	68	7	2	0	68	69	0.52	- 0.47	0.32	7	3	0.0	0	3.8	8	22	E	27	7	17	6	5.1	84
KAHULUI	48	1011.2	1013.6	87	68	77.9	- 0.5	92	20	63	28	6	0			1.17	0.92	1.16	2	0	0.0	0	5.2	6	26	NE	15	10	12	8	5.1	81
LIHUE	103	1009.5	1014.5	84	71	77.3	- 0.8	86	19+	67	28+	0	0	69	79	3.65	1.57	2.36	11	0	0.0	0	2.9	6	17	NE	22+	13	9	8	4.7	61
IDAHO																																
BOISE	2838	915.0	1014.6	70	44	57.1	- 5.6	82	2	24	17	0	3	36	49	0.55	0.16	0.44	4	1	0.0	0	1.6	28	27	NW	28	16	7	7	3.7	79
IDAHO FALLS 42NW R	4790			66	31	48.2	- 7.9	83	1	16	30+	0	13			0.21	- 0.42	0.07	4			0	1.0	28	31	SW	3					
IDAHO FALLS 46W R	4932			64	33	48.6	- 7.9	80	1	14	18	0	13			0.20	- 0.15	0.13	3		0.5	T			44	WSW	3					
LEWISTON	1413			72	46	59.2	- 4.3	87	1	28	17	0	1			0.28	- 0.62	0.10	5		0.0	0						12	9	9	5.3	
POCATELLO	4454	862.5	1014.5	67	37	51.8	- 8.5	83	1	21	19	0	8	32	52	0.85	0.24	0.39	5	4	2.0	1	4.4	24	38	W	3	12	6	12	5.5	74
ILLINOIS																																
CAIRO U	314			80	64	72.0	- 0.5	89	18+	45	25	0	0			9.39	6.38	6.23	11		0.0	0			29	W	15	11	9	10	5.4	62
CHICAGO O HARE	658	993.2	1017.4	73	55	63.8	0.2	88	17+	40	25	0	0	56	77	5.03	2.29	1.14	14	7	0.0	0	2.7	20	38	23	20	6	7	17	7.0	
CHICAGO MIDWAY	607	995.3		73	57	65.0	- 1.1	89	17+	40	25	0	0	55	71	6.21	3.48	1.14	11	7	0.0	0	4.0	19	31	S	21	6	8	16	6.9	53
MOLINE	582	994.9	1016.2	72	55	63.5	- 1.8	88	9	41	25+	0	0	56	80	8.27	5.02	2.91	15	10	0.0	0	2.8	18	29	NW	21	6	9	15	7.0	47
PEORIA	652	993.2	1017.1	74	56	64.7	- 1.7	88	9	36	25	0	0	59	84	8.17	5.12	2.58	12	7	0.0	0	2.3	16	73	W	14	9	6	15	5.9	48
ROCKFORD	724	989.8	1016.6	71	54	62.2	- 1.6	87	9	39	25	0	0	56	80	8.23	4.72	2.57	14	11	0.0	0	3.0	19	23	28	19+	5	7	18	7.3	
SPRINGFIELD	588	994.9	1016.9	79	58	68.6	1.0	91	9	39	25	1	0	60	77	6.43	3.50	2.73	8	5	0.0	0	3.6	17	28	S	14	11	8	11	5.6	62

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CLIMATOLOGICAL DATA

ENGLISH UNITS

SEPTEMBER 1965

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90° F. or above	Min. 32° F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
INDIANA																																
EVANSVILLE	381	1004.1	1017.9	81	59	69.7	- 0.4	91	18+	38	25	4	0	61	76	5.18	2.31	3.16	14	5	0.0	0	1.8	16	33	SW	20	9	9	12	5.7	66
FORT WAYNE	791	988.8	1018.5	77	57	66.8	2.0	90	9	39	25	1	0	58	76	2.82	0.15	0.80	11	5	0.0	0	2.8	20	33	SW	14	5	11	14	6.7	50
INDIANAPOLIS	793	989.5	1018.5	77	58	67.5	1.0	88	18+	36	25	0	0	60	78	5.16	1.92	1.61	12	4	0.0	0	2.3	18	49	NW	14	8	8	14	6.2	60
SOUTH BEND	773	990.2	1017.9	73	55	63.7	- 0.1	87	9	36	27	0	0	57	78	5.55	2.48	1.70	9	4	0.0	0	4.0	20	24	19	21	5	9	16	6.8	
IOWA																																
BURLINGTON	694			74	56	64.7	- 1.3	88	9	36	24	0	0	58	80	6.12	2.93		16	12	0.0		1.3	20	23	19	21+	8	6	16	6.5	
DES MOINES	938	981.4	1015.9	70	52	61.0	- 4.4	89	9	32	24	0	1	55	85	7.23	4.35	2.05	15	12	0.0	0	1.4	16	28	NW	30	4	7	19	7.5	37
DUBUQUE	1065			68	52	60.2	- 1.5	85	9	37	26+	0	0			15.46	11.72	4.01	12		0.0	0						4	6	20	7.8	
SIOUX CITY	1095	976.0	1015.7	65	49	56.9	- 8.6	83	9+	31	24	0	1	50	80	9.69	6.95	2.94	17	10	0.0	0	1.2	36	30	SE	12	5	5	20	7.3	35
WATERLOO	868	984.1	1015.8	68	49	58.6	- 4.3	88	9	37	26	0	0	53	84	11.38	7.58	2.04	16	10	0.0	0	2.0	17	26	26	23	3	6	21	7.8	
KANSAS																																
CONCORDIA	1470	961.4	1014.0	74	52	63.1	- 6.5	90	9	34	24	1	0	55	78	4.72	1.99	1.96	10	12	0.0	0	2.4	12	28	SE	29	3	14	13	6.6	46
DODGE CITY	2582	923.8	1013.5	78	53	65.3	- 5.0	97	14	39	17	9	0	54	75	2.63	1.10	1.52	5	4	0.0	0	2.0	16	34	N	16+	9	10	11	5.6	71
GOODLAND	3645	888.3	1014.8	68	44	55.7	- 9.8	88	12+	34	26+	0	0	45	76	4.31	3.07	1.82	12	10	0.0	0	1.2	36	28	33	16	8	8	14	6.5	
TOPEKA	876	983.1	1014.7	77	57	66.9	- 2.5	90	9+	38	24	2	0	59	79	7.22	4.24	2.13	14	15	0.0	0	2.6	16	34	SW	20	7	12	11	6.2	58
WICHITA	1321	966.8	1013.9	78	59	68.5	- 2.8	94	16	42	24	5	0	60	77	8.44	5.22	2.52	11	11	0.0	0	4.3	16	42	W	5	11	7	12	5.6	61
KENTUCKY																																
COVINGTON	869	987.5	1018.9	76	59	67.1	- 0.1	87	18+	37	25	0	0	60	80	6.06	3.23	2.70	9	8	0.0	0	2.3	19	21	26	22+	8	10	12	6.0	
LEXINGTON	966	984.1	1019.2	78	60	68.8	- 0.5	89	10+	35	25	0	0	60	77	3.55	0.75	0.83	11	1	0.0	0	3.7	15	23	18	22+	9	7	14	6.1	
LOUISVILLE	474	1000.7	1018.2	81	60	70.5	1.0	95	9	37	25	3	0	62	78	8.41	5.78	3.39	8	3	0.0	0	2.3	17	31	N	15	9	9	12	6.0	58
LOUISIANA																																
ALEXANDRIA	92	1010.8	1015.1	87	67	77.1	0.1	94	13+	51	25	16	0	68	79	6.52	3.39	3.07	6	6	0.0	0	2.2	6	46	35	10	9	11	10	5.5	
BATON ROUGE	64	1011.9	1014.7	86	70	78.1	0.2	94	12	54	25	9	0	67	78	5.20	1.68	3.99	5	4	0.0	0	3.0	7	58	6	10	3	16	11	6.5	
LAKE CHARLES	14	1013.5	1014.5	87	69	78.1	- 0.6	93	1	56	25	16	0	69	80	3.43	- 0.59	2.04	8	8	0.0	0	2.7	9	26	31	10	7	13	10	6.0	
NEW ORLEANS	3	1013.5	1014.4	84	69	76.2	- 2.1	89	15	60	25	0	0	69	79	10.03	5.00	4.07	14	9	0.0	0	3.7	8	69	9	10+	6	14	10	6.1	
SHREVEPORT	252	1005.8	1014.7	87	68	77.2	- 1.6	97	14	53	25	14	0	68	78	6.55	4.27	2.83	7	5	0.0	0	2.9	13	44	19	17	14	7	9	5.0	65
MAINE																																
CARIBOU	624			65	43	53.9	0.1	86	23+	25	28	0	5			3.07	- 0.46	1.53	14		0.0	0						7	10	13	5.9	
PORTLAND	61	1019.0	1021.2	69	47	58.0	- 0.7	89	22	26	28	0	2	51	78	2.31	- 1.21	1.01	9	0	0.0	0	2.3	24	29	S	1	11	6	13	5.4	65
MARYLAND																																
BALTIMORE	148	1015.2	1020.9	[illegible]1	60	70.8	2.7	93	10	44	26	6	0	61	75	1.94	- 1.39	1.56	5	1	0.0	0	1.0	16	36	W	24	7	15	8	5.5	60
MASSACHUSETTS																																
BLUE HILL OBS R	629			71	53	62.0	- 0.4	89	22+	34	28	0	0			2.35	- 1.60	1.44	11		0.0	0			48	S	1					55
BOSTON	15	1020.3	1021.3	70	55	67.5	- 2.8	89	22	38	28	0	0	56	81	2.01	- 1.45	1.16	9	1	0.0	0	1.3	22	33	SW	1	12	6	12	5.5	60
NANTUCKET	43	1021.0	1021.3	68	51	59.5	- 3.4	80	11	36	28	0	0	55	86	3.01	- 0.50	1.97	8	1	0.0	0	1.2	10	31	SW	2	7	9	14	6.5	53
PITTSFIELD	1170			69	50	59.3	1.2	87	22	28	28	0	2			4.32	- 0.18	1.21	13		0.0	0										
WORCESTER	986	984.8	1021.9	70	52	61.1	0.3	87	22+	33	28	0	0	52	74	2.83	- 1.09	1.41	10	2	0.0	0	2.4	26	21	18	1	9	8	13	5.9	
MICHIGAN																																
ALPENA	689			67	45	56.2	0.2	86	19	26	27	0	3			4.64	1.03	0.80	20		T	T			26	SE	14	5	8	17	7.5	49
DETROIT	619	995.9	1018.6	75	57	66.2	1.1	89	19+	36	27	0	0	57	74	4.15	1.71	1.01	12	4	0.0	0	2.9	23	33	SW	22	5	12	13	6.5	59
DETROIT M WAYNE CO	633	994.6	1018.6	73	54	63.3	- 1.0	87	18	35	27	0	0	56	77	1.91	- 0.41	0.70	12	5	0.0	0	2.7	19				5	14	11	6.5	
DETROIT WILLOW RUN	711	990.9	1018.9	72	53	62.6	- 2.2	86	18	31	27	0	1	54	74	2.29	0.00	0.78	8	4	0.0	0	2.1	21	24	19	4	5	13	12	6.2	
FLINT	770	990.5	1018.4	72	53	62.5	1.8	87	19+	32	27	0	1	55	78	2.90	- 0.04	1.05	12	5	0.0	0	3.7	21	29	21	21+	4	7	19	7.3	
GRAND RAPIDS	784	988.8	1017.9	72	53	62.3	0.1	86	19+	32	27	0	1	55	80	6.62	3.64	1.45	13	7	T	T	3.0	19	32	SW	21	3	8	19	7.5	43
HOUGHTON LAKE	1150	976.3	1018.3	66	47	56.7		81	19	24	27	0	3	51	81	5.76	- 1.50	1.19	16	9	T	T	2.8	20	21	21	21	2	10	18	7.5	
LANSING	841	986.8	1018.4	72	52	62.1	0.1	87	18	29	27+	0	2	58	85	7.63	5.03	2.30	13	6	0.0	0	3.9	21	37	SW	21	2	12	16	7.3	44
MARQUETTE U	677			60	46	53.1	- 4.6	76	9+	30	27	0	2			4.25	0.97	0.82	21		T	T			26	SW	21	3	6	21	8.0	42
MUSKEGON	627	994.6	1017.4	71	54	62.9	- 0.1	83	19	33	27	0	0	54	74	7.68	4.62	3.61	11	6	0.0	0	3.6	20	32	19	21	4	5	21	7.4	
SAULT STE MARIE	721	990.5	1017.3	61	45	53.1	- 2.7	75	3	27	27	0	2	48	85	7.12	3.31	1.48	21	5	1.8	1	1.6	17	40	22	23	2	7	21	8.5	31
MINNESOTA																																
DULUTH	1428	964.4	1016.5	57	39	48.0	- 6.2	77	2	23	26	0	5	42	81	5.56	2.70	1.59	21	1	T	T	0.6	11	35	NE	29	3	4	23	8.2	28

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station ∅	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MINNESOTA																																
INTERNATIONAL FALLS	1179	972.9	1016.5	55	38	46.5	- 6.4	77	2	20	26	0	5	41	81	6.14	3.24	1.39	17	3	T	T	0.8	27	27	27	4	1	6	23	8.4	
MINNEAPOLIS	834	985.4	1016.0	60	45	52.8	- 7.6	84	9	27	26	0	1	45	78	4.90	2.47	0.97	15	5	0.0	0	0.7	4	31	W	23	3	6	21	8.1	27
ROCHESTER	1297	968.5	1016.3	62	48	54.9	- 5.8	80	9	33	26	0	0	48	80	6.26	3.16	1.50	20	8	T	0	1.8	21	28	27	23	3	5	22	8.1	
ST CLOUD	1034	978.0	1016.1	58	42	50.3	- 8.5	81	2	22	26	0	2		81	4.94	2.53	2.13	19		T	T						3	5	22	8.1	
MISSISSIPPI																																
JACKSON	310	1004.4	1016.0	86	66	76.3	- 0.2	93	13	46	25	15	0	68	82	9.61	7.08	5.86	8	5	0.0	0	4.3	11	43	SE	10	8	13	9	5.8	54
MERIDIAN	290	1006.1	1017.0	86	65	75.9	0.0	94	15	45	25	12	0	68	82	2.24	- 1.09	0.52	10	4	0.0	0	3.1	10	23	14	10	6	9	15	6.5	
VICKSBURG U	234			85	68	76.4	- 0.2	93	5	49	25	11	0			4.26	1.76	2.23	10		0.0	0			35	SE	10					56
MISSOURI																																
COLUMBIA	778	987.8	1015.7	79	60	69.4	0.1	91	14+	40	25+	2	0	60	75	8.92	5.04	3.05	11	8	0.0	0	4.1	16	39	NW	15	7	11	12	6.0	65
KANSAS CITY	742	988.2	1014.7	80	60	69.9	- 1.4	93	9+	41	24	5	0	59	70	7.75	4.50	2.94	12	7	0.0	0	2.6	16	35	SW	20	7	9	14	6.2	64
SAINT JOSEPH	811			79	56	67.8	- 0.8	91	9+	34	24	3	0	57	75	10.53	7.09	2.22	15	16	0.0	0	1.6	15	25	18	20	7	12	11	5.9	
ST LOUIS	535	997.0	1017.0	78	60	69.1	- 0.4	90	17+	40	25	2	0	61	77	3.00	0.24	1.15	8	5	0.0	0	3.1	17	24	NW	30+	9	11	10	5.8	53
SPRINGFIELD	1268	971.2	1016.0	80	59	69.7	- 0.7	94	14	37	25	3	0	61	80	6.13	2.28	2.94	13	10	0.0	0	5.4	17	24	S	16+	11	10	9	5.0	58
MONTANA																																
BILLINGS	3567	892.3	1017.4	56	38	47.1	-13.3	84	1	26	17	0	9	36	73	2.17	0.98	0.68	13	1	5.6	1	2.6	32	31	NW	3	6	7	17	7.4	40
GLASGOW	2284			58	38	48.1	- 8.6	83	1	27	26+	0	8			0.79	- 0.17	0.32	9		1.1	T						4	4	22	7.8	
GREAT FALLS	3662	889.9	1019.2	54	37	45.0	-12.4	83	1	23	18	0	10	36	74	1.90	0.70	0.67	18	0	4.2	2	3.9	27	29	NW	15+	4	4	22	7.8	43
HAVRE	2582			56	36	46.2	- 9.4	82	1	23	23	0	11			2.45	1.44	1.22	11		2.8	T			30	N	3+	4	3	23	8.0	58
HELENA	3828	882.5	1019.0	56	35	45.6	-10.4	82	1	19	28+	0	11	34	70	3.37	2.42	0.82	15	0	13.7	11	4.6	29	31	NW	3	5	6	19	7.3	41
KALISPELL	2965	912.6	1018.3	56	35	45.1	- 9.6	74	1	26	16	0	12	35	71	1.17	0.13	0.51	11	2	0.4	T	3.4	2	35	36	26+	6	6	18	7.1	
MILES CITY	2629	923.5	1017.3	59	37	48.0	-13.0	89	1	25	17	0	11	36	67	1.77	0.81		14	2	T		2.8	31								
MISSOULA	3190	905.9	1018.6	58	37	47.8	- 7.6	79	1	24	17	0	9	37	72	2.11	1.09	0.95	10	0	0.2	T	1.4	1	29	27	1	6	4	20	7.2	46
NEBRASKA																																
GRAND ISLAND	1841	949.2	1015.5	66	47	56.8	- 8.4	86	3	28	24	0	1	49	82	9.00	6.85	2.89	17	14	0.0	0	2.1	1	29	25	8	7	7	16	7.1	
LINCOLN U	1150			69	51	60.1	- 8.1	87	9	32	24	0	1			6.76	3.89	1.56	18		0.0	0			34	SW	7	6	4	20	7.4	33
NORFOLK	1544			63	46	54.6	-10.4	83	2	28	24	0	2			6.88	4.63	2.16	16		0.0	0						6	5	19	7.3	
NORTH PLATTE	2775	917.0	1014.7	64	43	53.8	- 9.9	83	9	26	24	0	3	44	75	5.69	4.02	1.99	15	8	T	0	2.4	2	30	NW	30	7	6	17	7.1	45
OMAHA	978	980.0	1015.2	71	51	61.0	- 5.9	89	9	31	24	0	1	54	80	13.75	11.12	6.47	16	9	0.0	0	0.6	6	32	N	7	6	2	22	7.5	39
SCOTTSBLUFF	3957	879.4	1015.3	65	41	53.1	- 9.2	87	2	27	24	0	5	40	70	3.15	1.94	0.99	15	8	0.8	T	2.0	6	30	7	25	10	7	13	5.9	
VALENTINE	2587			63	40	51.5	-10.3	87	2	24	24	0	4			3.70	2.45	0.95	12		0.0	0			42	SW	14	8	5	17	6.4	49
NEVADA																																
ELKO	5050	844.6	1014.9	72	32	52.3	- 5.6	85	2+	12	18	0	15	27	44	0.20	- 0.14	0.20	2	0	T	T	2.7	25	29	26	7	15	7	8	4.0	
ELY	6253	808.7	1013.4	68	33	50.5	- 7.0	80	3	16	18	0	14	26	46	1.56	1.00	1.24	4	2	T	0	2.4	21	30	SW	5	15	7	8	4.2	82
LAS VEGAS	2162	934.6	1009.8	89	60	74.8	- 5.2	99	15+	46	20	19	0	27	19	T	- 0.34	T	0	0	0.0	0	4.3	23	51	N	17	23	6	1	1.6	96
RENO	4404	865.9	1014.8	75	35	54.9	- 3.9	87	1	20	19+	0	9	34	52	0.50	0.27	0.44	2	3	0.0	0	1.1	31	31	NW	27	20	5	5	2.7	97
WINNEMUCCA	4299	867.6	1014.8	73	35	54.0	- 4.6	86	2	17	18	0	11	25	34	0.10	- 0.24	0.10	2	1	0.0	0	2.3	31	39	S	7	18	6	6	3.4	76
NEW HAMPSHIRE																																
CONCORD	342	1008.8	1021.6	72	46	58.8	- 0.5	91	22	22	28	1	3	52	79	1.87	- 1.88	0.64	9	0	0.0	0	1.1	19	26	S	1	11	7	12	5.7	52
MT WASHINGTON OBS	6262			49	37	43.1	2.1	63	22	13	27	0	8			10.01	3.01	3.59	15	1	0.1	T			78Y	SW	16	4	9	17	7.4	40
NEW JERSEY																																
ATLANTIC CITY	64	1019.0	1021.6	78	58	68.0	0.8	92	11+	35	28	3	0	59	76	1.60	- 1.71	0.62	5	1	0.0	0	2.2	16	30	20	1	9	12	9	5.5	70
ATLANTIC CITY U	11			75	64	69.0	0.6	86	18	52	26	0	0			1.57	- 1.83	0.71	5						40	S	1					
NEWARK	11	1020.3	1021.3	77	60	68.4	0.1	94	10	42	28	1	0	58	71	2.20	- 1.56	1.33	6	2	0.0	0	0.6	6	29	19	1	9	10	11	6.0	
TRENTON U	56			77	59	68.1	1.0	91	10	43	28	3	0			2.65	- 0.85	1.16	6		0.0	0			33	S	1	8	10	12	5.7	54
NEW MEXICO																																
ALBUQUERQUE	5310	838.1	1012.1	80	54	66.6	- 3.4	88	15	37	30	0	0	46	54	1.18	0.23	0.44	11	8	0.0	0	2.6	21	42	NW	1	15	11	4	3.8	77
CLAYTON	4969			73	49	61.2	- 4.8	87	14+	34	17	0	0			2.97	1.32	1.02	12		0.0	0						11	7	12	5.4	
RATON	6379			73	44	58.8	- 3.1	85	14	28	21	0	2			1.02	- 0.66	0.40	12		0.0	0						7	13	10	6.0	
ROSWELL	3617			85	56	70.7	1.0	97	15+	40	30	9	0			0.76	- 1.06	0.50	7	5	0.0	0			28	SW	6	14	10	6	3.9	72
SILVER CITY	5373			79	54	66.4	- 3.6	87	6+	39	30	0	0			2.19	0.73	0.54	11		0.0	0						15	12	3	3.5	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

SEPTEMBER 1965

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW YORK																																
ALBANY	275	1010.5	1021.2	73	54	63.6	2.0	91	22	30	28	3	1	54	73	3.76	0.18	1.80	11	2	0.0	0	3.2	21	26	S	15+	6	9	15	7.2	42
BINGHAMTON	1590	962.4	1021.2	69	53	60.8	1.3	85	22+	31	28+	0	2	55	83	3.72	0.77	1.83	10	2	0.0	0	2.6	20	24	SE	30	4	9	17	7.2	55
BUFFALO	705	993.9	1019.5	72	55	63.5	2.1	89	22	33	27	0	0	56	77	2.37	- 0.76	1.29	12	3	0.0	0	4.0	22	38	SW	15	5	6	19	7.5	46
NEW YORK U	132	1018.6	1021.7	75	60	67.5	- 1.0	92	10	44	28	1	0	58	76	1.70	- 2.17	0.87	4	1	0.0	0	1.4	4	23	N	27+	10	9	11	5.6	55
J.F. KENNEDY	15	1020.7	1021.3	74	59	66.1	- 1.7	90	18	45	28	1	0	58	78	0.96	- 3.20	0.42	5	1	0.0	0	2.0	14	32	19	1	9	10	11	5.9	
NEW YORK LA GUARDIA	11	1019.6	1021.3	77	64	70.3	1.5	94	10	47	28	1	0	60	73	1.26	- 2.66	0.64	4	1	0.0	0	1.3	10	37	S	1	9	10	11	5.8	
ROCHESTER	547	1000.3	1020.5	73	54	63.8	1.4	92	22	36	28	1	0	55	76	1.98	- 0.55	0.89	16	5	0.0	0	3.2	22	34	W	1	5	8	17	7.1	47
SYRACUSE	410	1005.1	1020.0	72	53	62.8	0.4	89	21	28	28	0	2	56	80	3.60	0.76	0.82	14	3	0.0	0	2.2	20	32	S	15	6	9	15	6.7	53
NORTH CAROLINA																																
ASHEVILLE	2140	945.5	1021.2	77	56	66.8	0.9	84	21+	41	26	0	0	61	87	4.69	1.07	1.64	8	5	0.0	0	2.2	16	20	30	24	7	10	13	6.3	56
CAPE HATTERAS R	7	1020.0	1020.4	82	67	74.4	0.3	89	11	56	9	0	0	67	77	2.90	- 2.99	1.99	9	2	0.0	0	1.4	10	35	SW	24	9	11	10	5.3	72
CHARLOTTE	735	992.9	1020.1	83	64	73.1	0.2	90	20+	51	29+	4	0	63	76	0.88	- 2.61	0.40	4	2	0.0	0	1.2	8	24	S	24	8	12	10	5.7	62
GREENSBORO	897	989.5	1020.8	82	61	71.6	1.5	92	10	47	26	3	0	63	79	4.31	0.65	1.95	9	3	0.0	0	0.9	14	21	NW	24	8	9	13	6.0	59
RALEIGH	434	1004.7	1020.4	83	62	72.7	1.5	92	11	51	30+	3	0	63	78	2.65	- 1.20	1.06	6	5	0.0	0	1.3	13	23	1	11	6	14	10	5.8	71
WILMINGTON	28	1018.6	1020.1	84	67	75.4	0.2	92	11	58	8	2	0	67	79	2.90	- 3.39	1.55	14	2	0.0	0	2.5	7	28	NE	4	6	11	13	6.3	53
NORTH DAKOTA																																
BISMARCK	1647	956.3	1016.8	57	35	46.3	-12.4	79	1	18	26	0	8	36	71	3.02	1.83	0.91	13	4	3.6	1	2.3	33	49	NW	22	2	8	20	7.9	38
FARGO	896	983.7	1016.9	58	40	48.9	- 9.9	78	2	19	26	0	3	42	78	3.50	2.02	0.90	12	3	T	T	1.0	32	37	NW	4	4	5	21	7.9	41
WILLISTON	1899			56	35	45.4	-11.8	81	1	21	26	0	12			2.20	1.08	0.55	12		3.0	T			45	NW	22	2	5	23	8.1	38
OHIO																																
AKRON	1208	976.0	1020.0	76	56	66.1	2.2	86	21+	38	28	0	0	58	79	3.12	0.50	1.19	12	2	T	T	3.2	20	25	25	15	7	11	12	6.3	
CINCINNATI OBS	761			78	60	69.1	0.1	92	18	41	25	2	0			7.48	4.77	3.74	10		0.0	0			23	SE	15					49
CLEVELAND	777	990.2	1019.1	77	58	67.4	4.0	89	21+	41	25	0	0	59	76	2.53	- 0.37	1.09	10	2	0.0	0	3.9	20	29	S	22	7	10	13	6.4	45
COLUMBUS	812	989.8	1019.6	78	59	68.3	2.4	90	18	41	25	1	0	61	78	6.18	3.53	2.02	10	2	0.0	0	2.6	17	27	S	22	8	9	13	5.9	53
DAYTON	1002	983.4	1019.1	77	60	68.3	1.5	88	10+	38	25	0	0	59	76	5.69	3.10	2.10	13	4	0.0	0	3.2	18	31	S	22	9	7	14	6.0	62
MANSFIELD	1295			74	54	63.9	0.6	85	10	38	25	0	0			2.11	- 0.87	0.62	12	5	0.0	0						7	12	11	6.1	
TOLEDO	676	993.9	1019.0	73	54	63.7	0.3	87	19+	39	25	0	0	57	80	4.93	2.80	1.91	14	6	0.0	0	2.5	22	27	W	15	5	13	12	6.5	59
YOUNGSTOWN	1178	977.7	1020.1	75	55	65.0	2.5	87	10	38	28+	0	0	58	80	4.02	1.13	1.59	9	1	0.0	0	2.9	19	21	31	1	6	11	13	6.5	
OKLAHOMA																																
OKLAHOMA CITY	1280	968.2	1013.6	85	63	73.9	0.1	102	14+	47	30	12	0	60	66	3.94	0.92	1.39	9	6	0.0	0	6.3	15	37	SE	20	14	10	6	4.2	73
TULSA	650	990.5	1014.5	87	64	75.3	1.5	103	14+	48	30	14	0	62	69	4.59	0.58	1.87	8	6	0.0	0	6.3	16	30	S	16	11	13	6	4.5	80
OREGON																																
ASTORIA	8	1017.6	1018.3	66	48	57.0	- 1.0	82	24+	36	17	0	0	50	80	0.51	- 2.62	0.31	4	0	0.0	0	2.0	25	20	18	14	10	5	15	6.0	
BURNS U	4151	873.4	1016.0	70	37	53.3	- 5.5	84	1	23	17	0	6	29	45	T	- 0.50	T	0		0.0	0	4.8	33				18	8	4	3.5	
EUGENE	359	1003.7	1017.1	75	46	60.8	- 0.7	89	24+	34	17	0	0	45	64	T	- 1.27	T	0	0	0.0	0	2.9	34	23	5	16	15	7	8	4.1	
MEACHAM	4050			60	40	50.0	- 5.7	73	25	25	17	0	4			1.07	- 0.39	0.86	4		0.0	0						13	9	8	4.6	
MEDFORD	1298	968.5	1015.9	82	43	62.2	- 2.0	93	1	31	18	3	1	39	51	T	- 0.60	T	0	0	0.0	0	1.4	32	18	6	16	23	5	2	2.0	
PENDLETON	1482	963.1	1016.5	73	47	60.1	- 4.1	86	1	30	17	0	1	35	43	0.23	- 0.40	0.18	3	0	0.0	0	3.1	26	32	26	2	19	3	8	3.7	
PORTLAND	21	1016.3	1017.5	73	48	60.4	- 1.8	88	24	34	17	0	0	47	64	0.01	- 1.62	0.01	1	0	0.0	0	3.1	32	29	NE	16	11	11	8	4.8	65
SALEM	196	1010.2	1017.6	75	44	59.6	- 2.9	90	24	28	17	1	2	45	64	0.13	- 1.25	0.06	3	0	0.0	0	2.6	33	21	3	23	14	9	7	4.4	
SEXTON SUMMIT R	3836	884.2	1014.6	69	47	57.7	- 2.0	81	24	32	17	0	1			0.00	- 1.25	0.00	0		0.0	0			28	33	26+	26	4	0	1.4	
PACIFIC AREA																																
CANTON ISLAND	8			89	78	83.9	0.3	91	30+	74	25	15	0			3.55	2.31	0.85	14		0.0	0						3	8	19	7.5	
ENIWETOK	13	1008.5	1009.3	88	78	82.9	- 0.4	90	20+	74	12	4	0	76	80	10.66	4.42	3.24	21	1	0.0	0	10.9	9								
TAGUAC GUAM R	361			85	72	78.7	- 0.6	89	27+	68	18	0	0			22.27	8.91	7.48	26		0.0	0			29	SW	29					43
JOHNSTON	7	1011.9	1012.3	85	77	81.2	- 0.4	87	20	73	1	0	0	72	74	1.79	- 0.56	1.41	8	1	0.0	0	10.4	11	30	SE	4	9	14	7	5.4	63
KOROR R	94	1005.8	1009.5	86	76	81.4	0.4	89	25+	73	28	0	0	76	84	12.98	- 1.35	5.30	17	4	0.0	0	7.1	26	26	SW	11	0	0	30	9.9	47
KWAJALEIN	8	1008.5	1009.4	87	78	82.2	0.3	89	16	75	30+	0	0	76	82	5.32	- 4.87	1.10	26	0	0.0	0	7.3	9	25	9	13	0	5	25	8.8	
MAJURO WB AIRPORT	10	1008.8	1009.3	86	77	81.3	0.9	89	22	73	26	0	0	75	81	15.46	3.40	3.67	24	4	0.0	0	3.3	8	24	NE	5	1	5	24	8.8	52
MARCUS ISLAND	20			88	77	82.4		90	12+	67	23	3	0			2.81		0.57	17		0.0	0			32	E	15	5	18	7	5.8	83
PONAPE R	123	1003.7	1009.1	87	73	79.9	0.4	90	28	72	28+	1	0	75	90	24.67	8.86	3.95	29	7	0.0	0	1.5	21	18	E	29	0	1	29	9.6	29
TRUK MOEN ISLAND	5	1008.5	1008.9	85	76	80.5	0.1	89	14+	72	5	0	0	75	84	16.97	4.39	3.97	23	3	0.0	0	4.6	28	29	NW	21	0	3	27	9.2	47
WAKE	11	1011.9	1012.3	87	77	82.3	- 0.2	89	25	72	15	0	0	73	76	1.44	- 3.80	0.73	14	2	0.0	0	11.3	5	28	5	15	3	16	11	6.4	
YAP R	55	1006.1	1008.1	86	76	80.8	- 0.6	89	23+	73	9	0	0	76	87	17.73	3.72	3.02	25	4	0.0	0	4.4	24	34	SW	29	0	0	30	9.9	24

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average dew point	Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below			Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PENNSYLVANIA																																
ALLENTOWN	376	1007.5	1021.3	76	56	65.8	1.1	90	18	36	28	1	0	58	78	2.29	- 1.46	1.33	5	2	0.0	0	0.7	12	25	32	24+	9	7	14	6.2	
ERIE	732	993.2	1019.7	74	58	66.3	3.0	89	22+	40	27	0	0	57	74	2.24	- 1.32	1.48	10	3	0.0	0	4.5	19	45	17	15	6	9	15	6.6	
HARRISBURG	338	1008.5	1021.1	79	60	69.8	2.9	96	10	41	28	5	0	60	72	2.12	- 0.70	0.77	5	2	0.0	0	0.7	14	28	W	1	6	10	14	6.6	55
PHILADELPHIA	5	1020.0	1021.1	78	60	69.2	2.5	91	19	45	26	3	0	60	76	3.02	- 0.44	1.58	4	1	0.0	0	0.9	9	27	W	24	7	13	10	6.0	55
PITTSBURGH	1137	976.3	1020.2	75	55	64.7	0.5	87	9	36	26	0	0	57	79	4.07	1.53	1.50	11	1	0.0	0	1.7	21	24	24	15+	8	11	11	6.1	61
READING U	266			78	60	69.1	1.6	94	10	39	28	5	0			2.99	- 0.33	1.66	5		0.0	0			34	S	1	8	9	13	6.2	52
SCRANTON	930	987.5	1021.6	73	56	64.5	2.0	88	22	37	28	0	0	58	82	3.13	0.16	1.09	10	3	0.0	0	1.5	17	24	NW	24	5	12	13	6.4	47
WILLIAMSPORT	527	1002.0	1021.3	73	54	63.4	- 0.7	89	10	32	28	0	1	57	83	4.04	0.77	1.61	8	3	0.0	0	0.2	13	25	16	15	3	16	11	6.6	
RHODE ISLAND																																
BLOCK ISLAND	110			69	57	62.9	- 1.1	78	11	43	29	0	0			1.70	- 1.50	0.78	7		0.0	0						9	7	14	6.4	
PROVIDENCE	51	1019.3	1021.5	73	55	64.1	0.9	88	10	35	28	0	0	53	71	1.64	- 1.88	0.78	8	1	0.0	0	0.9	18	29	19	1	11	7	12	5.7	54
SOUTH CAROLINA																																
CHARLESTON	41	1017.3	1019.1	84	68	75.9	0.3	91	11	62	28+	4	0	68	81	4.66	- 1.17	1.37	11	3	0.0	0	3.8	6	29Y	SW	24	2	9	19	7.6	41
CHARLESTON U	9			82	72	77.2	0.1	88	12+	64	29+	0	0			1.67	- 4.65	0.72	9		0.0	0			29	N	28+					
COLUMBIA	217	1011.5	1019.3	85	66	75.4	0.1	93	20+	52	8	11	0	66	78	5.99	1.68	5.06	8	3	0.0	0	2.8	7	21	6	2	6	14	10	5.9	67
GNVLE-SPARTANBURG	957	985.8	1020.1	82	63	72.4	- 0.8	91	20	52	26+	2	0	62	75	2.32	- 1.56	0.66	6	2	0.0	0	1.5	12	20	NE	28	7	9	14	6.3	55
SOUTH DAKOTA																																
ABERDEEN	1296	969.2	1016.2	60	39	49.7	-10.9	87	2	20	26	0	3	39	70	3.25	1.85	0.88	14	1	0.1	T	2.4	35	30	32	23+	3	7	20	7.6	
HURON	1282	969.2	1016.0	61	40	50.5	-11.4	90	2	23	26	1	2	42	74	3.57	2.04	0.89	17	2	T	T	1.9	34	33	NW	23+	7	4	19	7.4	34
RAPID CITY	3165	904.8	1016.3	61	39	49.7	-11.9	88	8	27	26	0	8	35	64	1.46	0.51	0.73	11	4	1.5	1	4.9	35	35	NW	22	8	9	13	6.1	46
SIOUX FALLS	1418	964.1	1015.8	60	43	51.5	-10.3	82	9+	26	26	0	3	46	84	4.91	2.30	1.28	15	5	0.0	0	1.1	35	29	4	25	4	7	19	7.6	
TENNESSEE																																
BRISTOL	1507	966.8	1020.3	83	59	71.3	2.2	92	10	42	26	9	0	59	72	1.78	- 0.84	1.10	5	5	0.0	0	1.4	8	18	36	24	12	9	9	5.1	
CHATTANOOGA	670	994.2	1018.8	82	62	71.9	- 1.9	88	17+	45	26+	0	0	65	83	4.47	1.37	2.02	12	4	0.0	0	1.5	15	22	S	11	6	8	16	6.5	54
KNOXVILLE	980	984.8	1019.6	84	64	73.5	1.3	92	10	47	25	6	0	63	74	2.48	- 0.06	0.84	9	4	0.0	0	0.8	33	25	W	15	9	10	11	5.9	48
MEMPHIS	263	1006.8	1016.8	82	65	73.7	- 0.2	90	18+	43	25	4	0	65	76	7.38	4.56	4.29	9	2	0.0	0	3.4	12	29	SE	11	13	5	12	5.1	73
NASHVILLE	590	996.6	1017.9	84	64	74.1	1.3	93	17+	41	25	11	0	61	68	5.02	2.15	1.95	10	2	0.0	0	3.5	16	28	S	22	11	8	11	5.4	61
OAK RIDGE	905			82	60	71.1	0.1	90	11	41	25	1	0			3.01	- 0.29	1.41	10		0.0	0			31Y		12	13	6	11	5.4	
TEXAS																																
ABILENE	1762	952.6	1012.7	91	68	79.2	3.3	104	15	52	30	19	0	57	51	1.86	- 0.21	1.35	6	5	0.0	0	6.2	17	32	W	20	16	8	6	4.1	72
AMARILLO	3604	890.6	1011.7	82	55	68.5	- 3.3	98	14	39	21	11	0	52	63	0.79	- 1.10	0.62	4	5	0.0	0	6.6	20	52	SE	9	13	10	7	4.5	77
AUSTIN	597	992.2	1013.6	90	71	80.5	1.4	99	16+	56	30	21	0	66	66	5.46	2.02	4.00	8	3	0.0	0	3.3	14	25	NW	30	11	12	7	5.1	63
BROWNSVILLE	16	1011.5	1012.1	90	73	81.8	0.6	97	10	64	27	22	0	72	75	5.40	0.41	3.15	8	1	0.0	0	6.6	13	29	SE	17	12	13	5	4.3	73
CORPUS CHRISTI	41	1011.2	1012.7	93	72	82.6	1.8	100	10	59	27	25	0	71	72	2.09	- 2.31	0.99	9	2	0.0	0	7.0	13	32	SE	16	8	19	3	5.1	67
DALLAS	481	997.0	1013.9	89	70	79.3	1.4	102	14	52	25	18	0	66	66	5.14	2.32	4.81	7	4	0.0	0	6.5	15	34	SE	17	15	7	8	4.3	77
DEL RIO	1026	976.6	1011.9	93	70	81.3	1.4	103	10	58	26+	24	0	63	58	2.61	0.00	1.04	8	6	0.0	0	7.5	12	23	15	18	11	8	11	5.1	
EL PASO	3918	881.5	1010.5	85	63	74.0	- 0.5	94	15	50	23+	6	0	51	48	2.12	0.98	1.54	4	5	0.0	0	1.2	22	32	SW	7	22	4	4	2.8	86
FORT WORTH	537	994.2	1014.3	90	69	79.4	1.0	101	14	54	30+	18	0	64	64	5.04	2.50	4.76	6	5	0.0	0	5.1	15	30	18	16	18	6	6	3.8	
GALVESTON U	7			86	76	80.7	0.6	92	10	64	27+	2	0			4.02	- 1.07	1.22	10		0.0	0			34	NE	22					63
HOUSTON U	41			89	73	81.1	1.3	96	14+	58	26	16	0			4.56	0.75	3.14	10		0.0	0										
HOUSTON	50	1011.9	1014.1	91	72	81.2	2.0	97	11+	60	26	20	0	70	74	3.56	- 0.70	0.98	11	4	0.0	0	3.3	12	28	36	22	6	15	9	5.7	66
LUBBOCK	3243	903.2	1012.1	86	60	72.9	1.5	100	16+	47	30+	13	0	54	57	5.68	3.32	2.80	8	5	0.0	0	4.5	17	28	2	30+	14	11	5	4.3	
MIDLAND	2851	915.0	1011.3	87	63	74.9	- 0.5	100	15	50	30	13	0	55	56	0.78	- 1.01	0.40	2	3	0.0	0	6.0	16	29	16	20	13	11	6	4.3	
PORT ARTHUR	16	1013.5	1014.3	91	71	80.7	2.5	97	14+	59	25	19	0	70	75	4.62	- 0.26	1.88	13	8	0.0	0	2.6	11	41	NW	22	8	9	13	6.0	70
SAN ANGELO	1903	946.8	1012.0	91	67	78.5	0.2	103	15	55	30+	20	0	61	60	1.18	- 1.48	0.72	7	4	0.0	0	5.0	16	28	19	20	14	9	7	4.6	
SAN ANTONIO	788	986.1	1013.6	92	70	80.7	2.1	99	11+	54	28	20	0	66	66	3.13	- 0.36	2.29	6	4	0.0	0	5.1	13	42	S	5	11	12	7	4.7	80
VICTORIA	104	1009.1	1013.4	92	72	81.8	2.7	99	11+	57	27+	21	0	69	72	4.34	0.11	2.79	10	6	0.0	0	4.0	12	46Y	ENE	22	6	14	10	5.9	
WACO	500	995.9	1013.7	90	70	79.9	0.9	100	14+	54	25	19	0	60	54	3.80	1.03	2.18	7	5	0.0	0	5.4	15	37	18	19	14	10	6	4.3	
WICHITA FALLS	994	977.0	1012.9	91	63	77.2	- 0.2	107	14	48	25	17	0	59	61	2.58	0.25	1.91	4	5	0.0	0	5.5	17	32	25	18	20	4	6	3.6	
UTAH																																
MILFORD	5028			74	39	56.3	- 6.8	88	1	25	18	0	7			1.69	1.26	0.50	8		8.4	5						15	10	5	3.8	
SALT LAKE CITY	4220	870.3	1013.4	71	44	57.5	- 6.9	85	3	27	18	0	4	38	54	1.93	1.40	0.84	9	6	2.2	1	2.2	16	36	NW	6	11	9	10	5.3	73
WENDOVER	4237			71	49	59.6	- 7.1	84	13+	31	18	0	2			0.55	0.23	0.35	4		0.0	0						16	6	8	3.8	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
VERMONT																																
BURLINGTON	332	1007.8	1020.4	69	49	58.7	0.3	88	22	29	28	0	3	52	79	3.19	- 0.12	1.23	12	2	0.0	0	3.6	19	28	S	15	4	12	14	6.7	61
VIRGINIA																																
LYNCHBURG	916			80	59	69.4	0.7	93	10	45	26	1	0			2.31	- 1.05	1.35	8	4	0.0	0			18	SW	1	11	12	7	4.9	67
NORFOLK	26	1019.6	1020.7	82	65	73.6	1.0	93	11	53	30	6	0	64	76	0.77	- 3.45	0.43	7	2	0.0	0	2.4	11	26	NE	27	10	10	10	5.5	70
RICHMOND	162	1014.9	1021.0	81	60	70.7	0.5	92	11+	46	26	5	0	62	79	4.81	1.16	2.45	7	2	0.0	0	1.0	15	25	W	24+	12	10	8	5.1	68
ROANOKE	1149	979.0	1020.8	81	58	69.7	0.6	94	10	39	26	4	0	59	74	1.97	- 1.29	0.55	8	2	0.0	0	1.3	16	18	4	11+	9	12	9	5.3	
WASHINGTON																																
OLYMPIA	195	1011.2	1018.4	68	41	54.8	- 3.7	80	23	31	18	0	2	47	80	0.60	- 1.49	0.33	3	0	0.0	0	1.6	21	23	26	8	8	9	13	6.1	
SEATTLE TACOMA	400	1002.0	1018.5	67	50	58.4	- 1.5	78	23+	42	18+	0	0	49	75	0.49	- 1.56	0.23	4	0	0.0	0	0.8	27	26	20	14	7	6	17	6.3	54
SPOKANE	2356	932.3	1016.0	66	41	53.8	- 7.1	80	1	25	17	0	3	37	56	0.28	- 0.47	0.09	7	0	0.0	0	1.0	14	22	NW	21	10	11	9	4.9	65
STAMPEDE PASS R	3958			56	42	49.2	- 2.7	71	24	32	16	0	1			2.24	- 2.15	1.70	6		0.0	0						6	9	15	6.5	
TATOOSH ISLAND R	101	1014.9	1018.1	57	49	52.9	- 1.9	68	6	44	19	0	0	49	90	1.18	- 2.37	0.93	6	0	0.0	0	3.5	11	31	NE	23	9	4	17	6.9	45
WALLA WALLA U	949			73	50	61.6	- 4.4	86	1	34	17	0	0			0.42	- 0.36	0.20	3		0.0	0			19	W	13	16	5	9	4.2	80
YAKIMA	1052	978.0	1016.3	74	42	57.9	- 3.4	87	1	30	17	0	2	38	53	0.04	- 0.31	0.04	1	0	0.0	0	3.7	29	26	29	14	14	9	7	4.4	
WEST INDIES																																
SAN JUAN P.R.	15	1011.9	1014.3	88	76	82.2	1.7	91	9+	74	30+	7	0	74	80	4.80	- 1.96	1.16	21	8	0.0	0	5.5	10	23	E	17+	2	21	7	6.1	58
SWAN ISLAND	28			87	78	82.4	- 0.6	90	13	73	19	1	0			14.03	8.84	5.97	15		0.0	0						4	9	17	7.3	
WEST VIRGINIA																																
BECKLEY	2504	933.3	1020.5	77	55	65.9		86	10+	37	27+	0	0	57	77	2.19	- 1.56	0.63	12	6	0.0	0	3.5	16	29	24	1	9	12	9	5.6	
CHARLESTON	939	985.8	1019.5	80	59	69.3	1.1	92	9	41	27	3	0	59	72	3.21	0.29	1.08	8	3	0.0	0	0.9	16	29	30	24	8	13	9	5.8	
ELKINS	1970	950.6	1021.3	78	51	64.9	2.3	89	19	36	28+	0	0	56	81	2.89	- 0.18	1.18	9	6	0.0	0	1.3	22	23	29	24+	6	14	10	6.0	
HUNTINGTON	827	989.5	1019.3	79	59	69.2	1.0	90	19+	38	26	3	0	62	82	3.49	0.95	1.78	7	2	0.0	0	1.5	16	21	31	1	7	12	11	6.0	
PARKERSBURG U	615			80	60	69.7	1.6	91	19+	40	26	3	0			5.06	2.35	2.60	9		0.0	0			19	NW	1					56
WISCONSIN																																
GREEN BAY	682	991.5	1017.0	67	49	57.5	- 3.0	83	19+	30	27+	0	2	52	83	7.80	4.88	2.50	14	6	T	0	1.8	22	27	SW	23+	3	8	19	7.8	40
LA CROSSE	651	992.2	1016.8	65	48	56.6	- 5.6	85	9	33	26	0	0	51	87	10.52	7.04	2.15	19	7	T	T	1.7	20	26	26	23	4	5	21	7.9	
MADISON	858	985.4	1016.7	68	49	58.3	- 2.7	85	9	30	26	0	2	53	84	9.22	5.90	2.01	15	12	T	0	2.7	19	33	SW	4	5	5	20	7.7	37
MILWAUKEE	672	992.2	1017.4	69	54	61.7	1.4	87	9	38	26	0	0	55	80	6.85	4.13	1.90	14	7	0.0	0	2.6	19	31	NW	9	6	6	18	7.3	45
WYOMING																																
CASPER	5338	837.5	1015.3	61	34	47.7	-12.0	83	1	19	18+	0	12	30	59	2.07	1.17	0.51	12	1	8.8	6	3.3	28	53	32	6	9	6	15	6.2	
CHEYENNE	6126	812.4	1015.4	61	38	49.6	- 9.0	78	6+	23	17+	0	7	34	63	1.32	0.22	0.43	16	3	2.0	T	4.9	28	35	NW	14	10	4	16	6.5	49
LANDER	5563	829.0	1015.2	61	35	48.0	-11.0	82	1	10	18	0	13	33	62	2.62	1.59	0.87	11	2	23.6	13	2.3	27	43	W	3	8	7	15	6.2	57
SHERIDAN	3964	879.8	1017.8	59	35	47.4	-11.4	87	1	15	18	0	10	34	65	1.75	0.58	0.62	13	2	6.0	4	4.0	32	40	NW	4	3	10	17	7.2	40

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

A Maximum hourly average.
B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
ALABAMA																																
BIRMINGHAM	189	995.6	1017.9	28.3	17.8	23.2	-1.4	31.7	20+	6.1	25	0	0	18.9	80	66	- 19	33	7	5	0	0	1.7	11	15.6	S	11	6	12	12	6.0	53
HUNTSVILLE	183	995.3	1018.0	28.9	18.9	23.9	0.3	33.9	10	6.7	25	3	0	17.2	69	91	13	49	8	3	0	0	1.8	13	11.6	17	30	9	7	14	5.8	
MOBILE	64	1007.8	1015.8	30.6	21.7	26.2	0.7	33.9	13	13.9	26+	10	0	21.1	78	265	107	141	12	6	0	0	2.4	11	14.3	14	9	5	13	12	6.8	
MONTGOMERY	59	1010.2	1017.3	30.0	19.4	24.7	-0.4	33.3	15+	11.1	25	10	0	20.6	82	164	64	87	8	4	0	0	2.1	9	14.3	S	30	7	11	12	6.2	61
ALASKA												B																				
ANCHORAGE PRK STRIP	26			13.3	8.3	10.8	2.0	19.4	10+	- 1.1	28	0	1			109	45	21	22		102	T										
ANCHORAGE	43	1010.5	1015.4	15.0	8.9	12.1		21.1	10	- 1.7	28	1	2	7.2	72	117		20	22	0	117	T	1.4	21	12.5	18	23+	0	4	26	9.3	18
ANNETTE	34	1016.9	1020.8	17.8	8.9	13.2	0.9	22.8	10	3.3	27	5	0	8.3	77	64	-187	52	7	0	0	0	1.7	33	9.4	12	29	5	10	15	6.6	
BARROW	7	1016.6	1017.3	0.6	- 3.3	- 1.5	-0.7	10.6	10	- 8.9	30	0	29	- 2.8	90	11	- 5	6	13	0	99	T	4.2	8	14.3	7	6	3	6	21	8.1	
BARTER ISLAND	12	1014.6	1016.3	1.1	- 2.2	- 0.7	-0.7	15.0	15	- 6.7	30	0	25	- 1.7	95	13	- 11	4	12	0	84	51	1.6	9	14.8	8	6	6	3	21	7.5	
BETHEL	38	1004.1	1009.7	12.2	5.6	8.9	1.9	18.9	9	- 5.6	30	0	4	6.7	89	87	21	25	19	0	T	T	1.7	14	16.1	12	10+	0	4	26	9.2	
COLD BAY	29	1005.1	1008.8	11.7	7.2	9.4	0.8	17.2	5	- 1.1	30	0	1	7.2	88	249	139	87	28	0	T	T	3.6	17	25.0	15	22	0	4	26	9.1	
FAIRBANKS	133	997.6	1014.6	14.4	3.9	9.0	2.6	24.4	12	- 6.7	29	7	4	2.8	68	54	26	22	13	0	T	0	0.4	35	7.6	3	30	5	3	22	7.6	
JUNEAU	4	1019.3	1020.2	15.0	5.6	10.2	0.8	19.4	14	0.0	14	0	1	8.3	90	59	-110	15	14	0	0	0	1.5	9	11.2	12	16	2	9	19	7.9	39
KING SALMON	13	1009.1	1011.1	13.3	7.2	10.2	1.3	20.6	4	- 4.4	30	0	4	7.8	86	100	21	22	21	0	8	T	2.7	14	13.4	15	23+	0	3	27	9.4	
KOTZEBUE	3	1010.5	1010.8	8.9	3.9	6.4	1.4	19.4	10	- 4.4	30	0	7	3.3	82	67	36	9	19	0	130	T	1.3	11	16.5	28	28	2	1	27	9.0	
MC GRATH	102	1000.0	1012.7	12.2	5.6	8.9	2.3	23.9	9	- 5.0	29	2	4	5.6	80	91	24	15	21	0	104	51	0.8	19	11.2	21	5	0	2	28	9.6	
NOME	4	1008.5	1009.4	8.9	3.9	6.2	0.7	17.2	14	- 5.0	30+	0	8	3.9	83	104	36	15	20	0	5	T	1.6	7	15.6	9	10	2	5	23	8.5	11
ST. PAUL ISLAND	7	1005.8	1006.8	8.9	4.4	6.6	-0.4	12.2	4	- 3.9	30	0	4	5.6	93	73	- 5	14	24	0	25	T	0.5	32	19.7	1	21	0	3	27	9.3	
SHEMYA	37	1003.7	1011.4	9.4	6.7	7.8	-1.2	10.6	28+	3.9	22	0	0	5.6	87	58	1	14	19	0	T	0	3.1	35	17.9	1	2	0	6	24	8.9	
YAKUTAT	9	1018.3	1019.4	12.2	5.0	8.6	-0.9	15.6	13	1.1	26+	0	0	7.8	94	345	- 75	100	16	0	0	0	0.8	14	13.4	14	16	0	7	23	8.9	
ARIZONA																																
FLAGSTAFF	2131	788.4	1014.3	20.0	4.4	12.1	-2.6	25.6	14+	- 3.3	21	0	5	2.8	59	123	83	87	11	8	51	T	2.1	19	17.9	1	30	17	6	7	3.7	
PHOENIX	340	970.9	1008.9	35.0	17.8	26.2	-2.0	39.4	15+	8.3	21+	23	0	11.1	44	15	- 3	11	5	5	0	0	0.6	18	23.7Y	W	19	23	4	3	1.9	91
TUCSON	788	923.1	1009.2	32.2	17.8	24.9	-2.0	36.1	24+	6.7	30	18	0	8.3	41	21	- 5	9	5	8	0	0	1.6	19	13.4	S	18+	20	5	5	2.6	83
WINSLOW	1492	851.0	1012.6	27.2	10.0	18.7	-2.8	32.8	15+	2.8	21	3	0	5.0	47	23	0	13	4	5	0	0	2.1	21	15.6	18	18	17	10	3	3.4	
YUMA	59	1001.4	1008.6	35.6	20.6	28.0	-3.2	41.7	15	11.7	20	24	0	10.0	37	0	- 10	0	0	0	0	0	0.8	25	11.2	N	29+	28	1	1	1.0	95
ARKANSAS																																
FORT SMITH	137	999.0	1015.2	30.6	16.7	23.8	-0.1	37.8	14	5.0	25	16	0	17.2	71	54	- 38	51	4	2	0	0	1.6	10	13.0	W	21	11	13	6	4.7	70
LITTLE ROCK	78	1006.8	1016.0	28.9	18.3	23.5	0.0	35.0	14	6.1	25	11	0	18.3	77	195	113	85	9	2	0	0	1.1	11	14.3	SW	20	13	11	6	4.6	62
TEXARKANA	113	1002.4	1015.2	30.0	18.9	24.4	-0.3	36.7	14	8.3	25	16	0	18.9	75	83	14	50	6	5	0	0	1.2	13				15	8	7	4.4	
CALIFORNIA																																
BAKERSFIELD	151	994.9	1012.2	29.4	15.6	22.3	-2.4	33.9	3	12.2	30+	6	0	8.3	44	3	1	3	2	0	0	0	1.7	33	8.9	7	18+	22	7	1	1.8	
BISHOP	1252			28.3	6.7	17.3	-2.8	33.9	15+	2.2	30	8	0			1	- 4	1	1		0	0						25	4	1	1.6	
BLUE CANYON	1609			20.0	8.9	14.3	-2.9	26.7	24	1.1	17	0	0			8	- 8	7	2		0	0			12.1	6	17	25	2	3	1.9	
BURBANK	221	986.8	1012.2	26.7	13.3	20.1	-2.4	33.9	14	10.6	29	3	0	11.7	66	19	12	12	7	1	0	0	1.7	15	7.6	12	18	18	6	6	3.3	
EUREKA U	13			14.4	9.4	12.2	-1.4	18.3	30+	6.7	18+	0	0			T	- 16	T	0		0	0			15.6	N	16	10	7	13	5.9	53
FRESNO	100	1000.7	1012.2	29.4	11.1	20.3	-3.1	33.3	24+	7.2	29	9	0	8.3	51	0	- 3	0	0	0	0	0	1.4	30	9.4	NW	16	25	2	3	1.5	94
LONG BEACH	10	1011.5	1012.9	25.6	14.4	20.2	-1.7	33.9	30	10.0	30	1	0	12.2	67	5	4	3	4	0	0	0	0.9	26	7.2	28	29+	16	10	4	3.8	
LOS ANGELES	30	1008.8	1012.5	23.9	16.1	20.0	-0.3	30.6	30+	12.8	30	0	0	13.9	72	3	- 2	2	3	0	0	0	1.9	25	10.3Y	W	28+	17	7	6	3.6	
LOS ANGELES U	82			26.1	15.6	20.9	-1.3	32.2	30+	12.8	29	2	0			46	40	37	5		0	0			7.6	SW	28+	21	3	6	3.0	69
MT SHASTA R	1080			24.4	4.4	14.4	-2.0	30.0	24	- 3.9	17	0	3			T	- 22	T	0		0	0										
OAKLAND	2	1013.9	1013.9	21.7	13.9	17.6	-0.8	30.0	16	9.4	18	0	0	11.1	72	T	- 5	T	0	0	0	0	2.7	29	13.9	36	17	15	10	5	4.4	
RED BLUFF	104	1000.0	1012.6	28.9	12.2	20.4	-4.0	35.6	15	6.1	20	2	0	5.6	44	T	- 9	T	0	0	0	0	0.3	31	22.4	NE	16	24	5	1	1.8	95
SACRAMENTO	5	1011.9	1012.5	28.9	11.1	19.8	-2.2	33.9	15+	6.1	18	4	0	7.2	53	T	- 5	T	0	0	0	0	1.7	23	18.8	NW	16	27	1	2	1.5	91
SANDBERG R	1377			21.7	11.1	16.3	-4.4	29.4	24	3.9	19	0	0			12	7	10	3		0	0			17.4	33	28	18	6	6	3.0	
SAN DIEGO	4	1011.5	1012.6	23.9	16.7	20.3	-0.8	31.1	30	13.3	29	0	0	13.9	70	7	4	5	4	0	0	0	1.6	29	9.8	NW	21	17	7	6	3.7	73
SAN FRANCISCO	2	1013.5	1014.4	21.1	11.1	16.2	-1.6	28.3	30	8.3	29+	0	0	8.9	70	T	- 5	T	0	0	0	0	3.2	29	14.3	N	16	17	8	5	3.5	
SAN FRANCISCO U	16			19.4	12.8	16.2	-0.4	28.9	30	11.1	21+	0	0			T	- 6	T	0		0	0			13.0	NE	17					58
SANTA CATALINA	478			21.7	13.9	17.8	-3.4	30.0	30	11.7	11	0	0			3	- 2	2	3	0	0	0						19	7	4	3.1	
SANTA MARIA	72			23.3	10.0	16.8	-0.3	32.2	30	6.1	20	1	0			T	- 4	T	0		0	0						16	10	4	3.7	
COLORADO																																
ALAMOSA	2297			20.6	2.8	11.8	-1.4	25.0	14	- 3.9	30	0	8			40	21	14	11		0	0						10	15	5	4.6	
COLORADO SPRINGS	1873	811.4	1014.2	19.4	6.1	12.8	-3.7	28.3	14+	- 2.8	17	0	4	3.9	63	57	30	22	11	7	T	0	0.5	9	15.6	36	18	9	10	11	5.9	
DENVER	1610	836.4	1013.3	20.0	6.1	13.2	-4.1	30.0	6	- 1.1	17+	0	3	3.9	62	66	37	25	12	5	140	T	0.1	18	17.9	NW	14	9	9	12	6.4	61
GRAND JUNCTION	1480	851.0	1011.5	24.4	10.6	17.4	-2.4	31.1	13	1.1	18	0	0	4.4	48	64	41	34	10	7	79	51	1.3	11	17.0	SW	28	9	11	10	5.6	63
PUEBLO	1428	855.4	1013.0	23.9	8.9	16.4	-2.8	32.2	14+	- 0.6	21	3	1	5.6	57	28	7	15	9	4	T	T	0.5	5	18.8	NE	29+	10	9	11	5.8	70

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	°C.	°C.	C.	C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
CONNECTICUT																																
BRIDGEPORT	2	1021.3	1021.9	23.9	15.6	19.7	1.1	30.0	23+	5.0	28	0	0	15.0	75	21	- 80	6	7	3	0	0	0.5	11	17.0	21	1	11	8	11	5.8	
HARTFORD	52	1014.9	1021.3	23.9	11.7	17.8	0.4	33.9	10	- 0.6	28	3	1	13.3	80	89	- 4	27	12	3	0	0	0.5	24	14.3	SW	1	6	12	12	6.8	50
NEW HAVEN	2			22.8	13.9	18.2	0.4	28.9	10	2.2	28	0	0			41	- 58	10	10		0	0			11.6	S	1	9	8	13	5.9	57
DELAWARE																																
WILMINGTON	24	1018.0	1021.0	26.1	15.6	20.8	1.0	33.3	10	6.7	28	3	0	16.1	78	61	- 39	27	4	1	0	0	0.2	15	10.3	32	24+	9	11	10	5.7	
DIST.OF COLUMBIA																																
WASH NATL AP	4	1018.3	1020.7	27.8	17.2	22.6	1.6	33.3	21+	8.9	26	5	0	17.2	76	54	- 43	40	8	1	0	0	0.8	16	14.8	NW	24	11	13	6	5.0	63
FLORIDA																																
APALACHICOLA U	4			29.4	23.3	26.2	0.2	32.2	14	18.9	8	1	0			312	95	102	14	4	0	0			16.1	E	29	10	9	11	5.9	53
DAYTONA BEACH	9	1016.3	1017.5	30.0	22.2	26.2	-0.1	31.1	19+	17.8	15	0	0	21.7	80	110	- 68	42	14	3	0	0	3.7	8	17.0	5	7	2	15	13	6.8	
FORT MYERS	5	1014.9	1015.1	31.7	23.3	27.4	0.0	32.8	22+	21.7	25+	13	0	22.8	80	110	-105	41	15	11	0	0	3.4	7	20.6	6	8	5	16	9	6.2	
JACKSONVILLE	7	1016.9	1017.8	30.0	22.8	26.6	0.2	33.9	2+	20.6	28+	6	0	21.7	79	280	88	134	13	3	0	0	2.5	10	25.5	E	8	3	15	12	7.0	48
KEY WEST	1	1013.2	1013.7	31.1	26.1	28.4	0.5	32.2	7+	23.9	24+	4	0	23.3	75	269	98	99	15	7	0	0	3.8	9	36.2	SW	8	4	15	11	6.7	68
LAKELAND U	65			31.1	22.8	26.8	0.1	34.4	1	21.1	25	7	0			194	27	53	15		0	0						4	17	9	6.4	60
MIAMI	2	1014.2	1014.4	29.4	23.9	26.6	-0.8	33.3	5	21.1	14	2	0	22.8	83	289	49	136	18	8	0	0	3.2	9	30.8	6	8	1	14	15	7.5	
ORLANDO	33	1012.5	1016.8	31.1	22.8	27.1	0.4	33.9	10+	21.1	16+	12	0	21.7	77	152	- 31	30	17	4	0	0	3.1	8	11.6	7	8+	1	18	11	6.7	
PENSACOLA	34	1012.2	1016.3	29.4	22.2	25.8	0.2	32.8	15+	14.4	25	3	0	21.7	81	236	41	116	13		0	0	2.1	11	21.0	E	9					59
TALLAHASSEE	17	1014.9	1017.2	31.1	22.2	26.7	1.1	35.0	14+	18.3	8	14	0	21.1	76	260	120	100	14	8	0	0	2.2	9	11.2	10	9	4	15	11	6.6	
TAMPA	6	1015.6	1016.0	31.7	22.2	26.9	0.0	33.3	5+	20.0	13	15	0	20.6	72	187	12	57	12	10	0	0	2.7	8	13.9	8	8	3	17	10	6.4	54
WEST PALM BEACH	5	1014.6	1015.2	31.1	25.0	27.8	0.0	33.3	5+	22.2	16	8	0	22.8	75	98	-148	22	16	8	0	0	3.8	9	20.6	8	8+	3	12	15	7.3	
GEORGIA																																
ATHENS	244	991.2	1019.7	27.8	17.8	22.7	-0.3	33.3	1	11.1	25	2	0	18.3	82	134	57	50	8	5	0	0	1.5	8	10.3	3	2	5	9	16	6.7	
ATLANTA	308	983.1	1019.4	27.8	17.8	22.7	-0.1	31.1	20+	9.4	25	0	0	17.2	76	77	- 6	76	9	3	0	0	2.1	9	11.2	E	18	5	12	13	6.5	48
AUGUSTA	44	1013.9	1019.1	30.6	17.8	24.3	0.3	34.4	13+	10.6	8	16	0	18.9	78	27	- 50	17	7	2	0	0	1.3	7	8.0	6	27	4	9	17	7.0	
COLUMBUS	117			30.0	18.9	24.5	0.1	35.0	1	11.1	25	10	0	18.9	77	148	77	80	10		0	0	1.8	8	11.2	18	10	5	10	15	6.7	
MACON	108	1006.4	1019.4	28.9	18.9	23.8	-0.8	32.8	10+	12.2	25	6	0	19.4	84	101	31	21	11	6	0	0	2.0	8	12.5	SW	10	5	8	17	7.2	46
ROME	194			28.9	16.7	22.7	0.3	32.8	15	6.7	25	2	0			107	23	35	9		0	0										
SAVANNAH	14	1016.9	1018.9	30.0	20.0	24.8	0.0	33.3	12+	16.7	28+	4	0	20.0	80	122	- 11	34	11	4	0	0	1.8	7	13.4	NW	24	2	16	12	7.0	53
HAWAII																																
HILO	9	1013.2	1014.2	30.0	20.0	24.9	0.7	31.1	23+	18.9	28+	0	0	19.4	74	145	- 71	79	14	0	0	0	1.1	16	10.7	13	8	8	12	10	5.6	53
HONOLULU	2	1013.5	1013.9	30.6	22.8	26.7	0.4	33.9	12	20.0	7	2	0	20.0	69	13	- 12	8	7	3	0	0	1.7	8	9.8	E	27	7	17	6	5.1	84
KAHULUI	15	1011.2	1013.6	30.6	20.0	25.5	-0.3	33.3	20	17.2	28	6	0			30	23	29	2	0	0	0	2.3	6	11.6	NE	15	10	12	8	5.1	81
LIHUE	31	1009.5	1014.5	28.9	21.7	25.2	-0.4	30.0	19+	19.4	28+	0	0	20.6	79	93	40	60	11	0	0	0	1.3	6	7.6	NE	22+	13	9	8	4.7	61
IDAHO																																
BOISE	865	915.0	1014.6	21.1	6.7	13.9	-3.1	27.8	2	- 4.4	17	0	3	2.2	49	14	4	11	4	1	0	0	0.7	28	12.1	NW	28	16	7	7	3.7	79
IDAHO FALLS 42NW R	1460			18.9	- 0.6	9.0	-4.4	28.3	1	- 8.9	30+	0	13			5	- 11	2	4			0	0.4	28	13.9	SW	3					
IDAHO FALLS 46W R	1503			17.8	0.6	9.2	-4.4	26.7	1	-10.0	18	0	13			5	- 4	3	3		13	T			19.7	WSW	3					
LEWISTON	431			22.2	7.8	15.1	-2.4	30.6	1	- 2.2	17	0	1			7	- 16	3	5		0	0						12	9	9	5.3	
POCATELLO	1358	862.5	1014.5	19.4	2.8	11.0	-4.7	28.3	1	- 6.1	19	0	8	0.0	52	22	6	10	5	4	51	T	2.0	24	17.0	W	3	12	6	12	5.5	74
ILLINOIS																																
CAIRO U	96			26.7	17.8	22.2	-0.3	31.7	18+	7.2	25	0	0			239	162	158	11		0	0			13.0	W	15	11	9	10	5.4	62
CHICAGO O HARE	201	993.2	1017.4	[illegible]	12.8	17.7	0.1	31.1	17+	4.4	25	0	0	13.3	77	128	58	29	14	7	0	0	1.2	20	17.0	23	20	6	7	17	7.0	
CHICAGO MIDWAY	185	995.3		22.8	13.9	18.3	-0.6	31.7	17+	4.4	25	0	0	12.8	71	158	88	29	11	7	0	0	1.8	19	13.9	S	21	6	8	16	6.9	53
MOLINE	177	994.9	1016.2	[illegible]	12.8	17.5	-1.0	31.1	9	5.0	25+	0	0	13.3	80	210	128	74	15	10	0	0	1.3	18	13.0	NW	21	6	9	15	7.0	47
PEORIA	199	993.2	1017.1	[illegible]	13.3	18.2	-0.9	31.1	9	2.2	25	0	0	15.0	84	208	130	66	12	7	0	0	1.0	16	32.6	W	14	9	6	15	5.9	48
ROCKFORD	221	989.8	1016.6	21.7	12.2	16.8	-0.9	30.6	9	3.9	25	0	0	13.3	80	209	120	65	14	11	0	0	1.3	19	10.3	28	19+	5	7	18	7.3	
SPRINGFIELD	179	994.9	1016.9	26.1	14.4	20.3	0.6	32.8	9	3.9	25	1	0	15.6	77	163	89	69	8	5	0	0	1.6	17	12.5	S	14	11	8	11	5.6	62
INDIANA																																
EVANSVILLE	116	1004.1	1017.9	[illegible]	15.0	20.9	-0.2	32.8	18+	3.3	25	4	0	16.1	76	132	59	80	14	5	0	0	0.8	16	14.8	SW	20	9	9	12	5.7	66
FORT WAYNE	241	988.8	1018.5	25.0	13.9	19.3	1.1	32.2	9	3.9	25	1	0	14.4	76	72	4	20	11	5	0	0	1.3	20	14.8	[illegible]	14	5	11	14	6.7	50
INDIANAPOLIS	[illegible]	[illegible]	1018.5	[illegible]	14.4	19.7	0.6	31.1	18+	2.2	25	0	0	15.6	78	131	49	41	12	4	0	0	1.0	18	21.9	NW	14	8	8	14	[illegible]	60
SOUTH BEND	[illegible]	[illegible]	1017.9	22.8	12.8	17.6	-0.1	30.6	9	2.2	27	0	0	13.9	78	141	63	43	9	4	0	0	1.9	20	10.7	[illegible]	21	5	9	16	6.8	
IOWA																																
BURLINGTON	212			23.3	13.3	18.2	-0.7	31.1	9	2.2	24	0	0	14.4	80	155	74		16	12	0		0.6	[illegible]	10.3	[illegible]	21+	8	6	16	6.5	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

SEPTEMBER 1965

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
IOWA																																
DES MOINES	286	981.4	1015.9	21.1	11.1	16.1	-2.4	31.7	9	0.0	24	0	1	12.8	85	184	110	52	15	12	0	0	0.6	16	12.5	NW	30	4	7	19	7.5	37
DUBUQUE	325			20.0	11.1	15.7	-0.8	29.4	9	2.8	26+	0	0			393	298	102	12		0	0						4	6	20	7.8	
SIOUX CITY	334	976.0	1015.7	18.3	9.4	13.8	-4.8	28.3	9+	- 0.6	24	0	1	10.0	80	246	177	75	17	10	0	0	0.5	36	13.4	SE	12	5	5	20	7.3	35
WATERLOO	265	984.1	1015.8	20.0	9.4	14.8	-2.4	31.1	9	2.8	26	0	0	11.7	84	289	193	52	16	10	0	0	0.9	17	11.6	26	23	3	6	21	7.8	
KANSAS																																
CONCORDIA	448	961.4	1014.0	23.3	11.1	17.3	-3.6	32.2	9	1.1	24	1	0	12.8	78	120	51	50	10	12	0	0	1.1	12	12.5	SE	29	3	14	13	6.6	46
DODGE CITY	787	923.8	1013.5	25.6	11.7	18.5	-2.8	36.1	14	3.9	17	9	0	12.2	75	67	28	39	5	4	0	0	0.9	16	15.2	N	16+	9	10	11	5.6	71
GOODLAND	1111	888.3	1014.8	20.0	6.7	13.2	-5.4	31.1	12+	1.1	26+	0	0	7.2	76	109	78	46	12	10	0	0	0.5	36	12.5	33	16	8	8	14	6.5	
TOPEKA	267	983.1	1014.7	25.0	13.9	19.4	-1.4	32.2	9+	3.3	24	2	0	15.0	79	183	108	54	14	15	0	0	1.2	16	15.2	SW	20	7	12	11	6.2	58
WICHITA	403	966.8	1013.9	25.6	15.0	20.3	-1.6	34.4	16	5.6	24	5	0	15.6	77	214	133	64	11	11	0	0	1.9	16	18.8	W	5	11	7	12	5.6	61
KENTUCKY																																
COVINGTON	265	987.5	1018.9	24.4	15.0	19.5	-0.1	30.6	18+	2.8	25	0	0	15.6	80	154	82	69	9	8	0	0	1.0	19	9.4	26	22+	8	10	12	6.0	
LEXINGTON	294	984.1	1019.2	25.6	15.6	20.4	-0.3	31.7	10+	1.7	25	0	0	15.6	77	90	19	21	11	1	0	0	1.7	15	10.3	18	22+	9	7	14	6.1	
LOUISVILLE	144	1000.7	1018.2	27.2	15.6	21.4	0.6	35.0	9	2.8	25	3	0	16.7	78	214	147	86	8	3	0	0	1.0	17	13.9	N	15	9	9	12	6.0	58
LOUISIANA																																
ALEXANDRIA	28	1010.8	1015.1	30.6	19.4	25.1	0.1	34.4	13+	10.6	25	16	0	20.0	79	166	86	78	6	6	0	0	1.0	6	20.6	35	10	9	11	10	5.5	
BATON ROUGE	20	1011.9	1014.7	30.0	21.1	25.6	0.1	34.4	12	12.2	25	9	0	19.4	78	132	43	101	5	4	0	0	1.3	7	25.9	6	10	3	16	11	6.5	
LAKE CHARLES	4	1013.5	1014.5	30.6	20.6	25.6	-0.3	33.9	1	13.3	25	16	0	20.6	80	87	- 15	52	8	8	0	0	1.2	9	11.6	31	10	7	13	10	6.0	
NEW ORLEANS	1	1013.5	1014.4	28.9	20.6	24.6	-1.2	31.7	15	15.6	25	0	0	20.6	79	255	127	103	14	9	0	0	1.7	8	30.8	9	10+	6	14	10	6.1	
SHREVEPORT	77	1005.8	1014.7	30.6	20.0	25.1	-0.9	36.1	14	11.7	25	14	0	20.0	78	166	108	72	7	5	0	0	1.3	13	19.7	19	17	14	7	9	5.0	65
MAINE																																
CARIBOU	190			18.3	6.1	12.2	0.1	30.0	23+	- 3.9	28	0	5			78	- 12	39	14		0	0						7	10	13	5.9	
PORTLAND	19	1019.0	1021.2	20.6	8.3	14.4	-0.4	31.7	22	- 3.3	28	0	2	10.6	78	59	- 31	26	9	0	0	0	1.0	24	13.0	S	1	11	6	13	5.4	65
MARYLAND																																
BALTIMORE	45	1015.2	1020.9	27.2	15.6	21.6	1.5	33.9	10	6.7	26	6	0	16.1	75	49	- 35	40	5	1	0	0	0.4	16	16.1	W	24	7	15	8	5.5	60
MASSACHUSETTS																																
BLUE HILL OBS R	192			21.7	11.7	16.7	-0.2	31.7	22+	1.1	28	0	0			60	- 41	37	11		0	0			21.5	S	1					55
BOSTON	5	1020.3	1021.3	21.1	12.8	16.9	-1.6	31.7	22	3.3	28	0	0	13.3	81	51	- 37	29	9	1	0	0	0.6	22	14.8	SW	1	12	6	12	5.5	60
NANTUCKET	13	1021.0	1021.3	20.0	10.6	15.3	-1.9	26.7	11	2.2	28	0	0	12.8	86	76	- 13	50	8	1	0	0	0.5	10	13.9	SW	2	7	9	14	6.5	53
PITTSFIELD	357			20.6	10.0	15.2	0.7	30.6	22	- 2.2	28	0	2			110	- 5	31	13		0	0										
WORCESTER	301	984.8	1021.9	21.1	11.1	16.2	0.2	30.6	22+	0.6	28	0	0	11.1	74	72	- 28	36	10	2	0	0	1.1	26	9.4	18	1	9	8	13	5.9	
MICHIGAN																																
ALPENA	210			19.4	7.2	13.4	0.1	30.0	19	- 3.3	27	0	3			118	26	20	20		T	T			11.6	SE	14	5	8	17	7.5	49
DETROIT	189	995.9	1018.6	23.9	13.9	19.0	0.6	31.7	19+	2.2	27	0	0	13.9	74	105	43	26	12	4	0	0	1.3	23	14.8	SW	22	5	12	13	6.5	59
DETROIT M WAYNE CO	193	994.6	1018.6	22.8	12.2	17.4	-0.6	30.6	18	1.7	27	0	0	13.3	77	49	- 10	18	12	5	0	0	1.2	19				5	14	11	6.5	
DETROIT WILLOW RUN	217	990.9	1018.9	22.2	11.7	17.0	-1.2	30.0	18	- 0.6	27	0	1	12.2	74	58	0	20	8	4	0	0	0.9	21	10.7	19	4	5	13	12	6.2	
FLINT	235	990.5	1018.4	22.2	11.7	16.9	1.0	30.6	19+	0.0	27	0	1	12.8	78	74	- 1	27	12	5	0	0	1.7	21	13.0	21	21+	4	7	19	7.3	
GRAND RAPIDS	239	988.8	1017.9	22.2	11.7	16.8	0.1	30.0	19+	0.0	27	0	1	12.8	80	168	92	37	13	7	T	T	1.3	19	14.3	SW	21	3	8	19	7.5	43
HOUGHTON LAKE	351	976.3	1018.3	18.9	8.3	13.7		27.2	19	- 4.4	27	0	3	10.6	81	146	- 38	30	16	9	T	T	1.3	20	9.4	21	21	2	10	18	7.5	
LANSING	256	986.8	1018.4	22.2	11.1	16.7	0.1	30.6	18	- 1.7	27+	0	2	14.4	85	194	128	58	13	6	0	0	1.7	21	16.5	SW	21	2	12	16	7.3	44
MARQUETTE U	206			15.6	7.8	11.7	-2.6	24.4	9+	- 1.1	27	0	2			108	25	21	21		T	T			11.6	SW	21	3	6	21	8.0	42
MUSKEGON	191	994.6	1017.4	21.7	12.2	17.2	-0.1	28.3	19	0.6	27	0	0	12.2	74	195	117	92	11	6	0	0	1.6	20	14.3	19	21	4	5	21	7.4	
SAULT STE MARIE	220	990.5	1017.3	16.1	7.2	11.7	-1.5	23.9	3	- 2.8	27	0	2	8.9	85	181	84	38	21	5	46	T	0.7	17	17.9	22	23	2	7	21	8.5	31
MINNESOTA																																
DULUTH	435	964.4	1016.5	13.9	3.9	8.9	-3.4	25.0	2	- 5.0	26	0	5	5.6	81	141	69	40	21	1	T	T	0.3	11	15.6	NE	29	3	4	23	8.2	28
INTERNATIONAL FALLS	359	972.9	1016.5	12.8	3.3	8.1	-3.6	25.0	2	- 6.7	26	0	5	5.0	81	156	82	35	17	3	T	T	0.4	27	12.1	27	4	1	6	23	8.4	
MINNEAPOLIS	254	985.4	1016.0	15.6	7.2	11.6	-4.2	28.9	9	- 2.8	26	0	1	7.2	78	124	63	25	15	5	0	0	0.3	4	13.9	W	23	3	6	21	8.1	27
ROCHESTER	395	968.5	1016.3	16.7	8.9	12.7	-3.2	26.7	9	0.6	26	0	0	8.9	80	159	80	40	20	8	T	0	0.8	21	12.5	27	23	3	5	22	8.1	
ST CLOUD	315	978.0	1016.1	14.4	5.6	10.2	-4.7	27.2	2	- 5.6	26	0	2		81	125	64	54	19		T	T						3	5	22	8.1	
MISSISSIPPI																																
JACKSON	94	1004.4	1016.0	30.0	18.9	24.6	-0.1	33.9	13	7.8	25	15	0	20.0	82	244	180	149	8	5	0	0	1.9	11	19.2	SE	10	8	13	9	5.8	54
MERIDIAN	88	1006.1	1017.0	30.0	18.3	24.4	0.0	34.4	15	7.2	25	12	0	20.0	82	57	- 28	13	10	4	0	0	1.4	10	10.3	14	10	6	9	15	6.5	
VICKSBURG U	71			29.4	20.0	24.7	-0.1	33.9	5	9.4	25	11	0			108	45	57	10		0	0			15.6	SE	10					56

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	°C.	C.	°C.	°C.		°C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
MISSOURI																																
COLUMBIA	237	987.8	1015.7	26.1	15.6	20.8	0.1	32.8	14+	4.4	25+	2	0	15.6	75	227	128	77	11	8	0	0	1.8	16	17.4	NW	15	7	11	12	6.0	65
KANSAS CITY	226	988.2	1014.7	26.7	15.6	21.1	-0.8	33.9	9+	5.0	24	5	0	15.0	70	197	114	75	12	7	0	0	1.2	16	15.6	SW	20	7	9	14	6.2	64
SAINT JOSEPH	247			26.1	13.3	19.9	-0.4	32.8	9+	1.1	24	3	0	13.9	75	267	180	56	15	16	0	0	0.7	15	11.2	18	20	7	12	11	5.9	
ST LOUIS	163	997.0	1017.0	25.6	15.6	20.6	-0.2	32.2	17+	4.4	25	2	0	16.1	77	76	6	29	8	5	0	0	1.4	17	10.7	NW	30+	9	11	10	5.8	53
SPRINGFIELD	386	971.2	1016.0	26.7	15.0	20.9	-0.4	34.4	14	2.8	25	3	0	16.1	80	156	58	75	13	10	0	0	2.4	17	10.7	S	16+	11	10	9	5.0	58
MONTANA																																
BILLINGS	1087	892.3	1017.4	13.3	3.3	8.4	-7.4	28.9	1	- 3.3	17	0	9	2.2	73	55	25	17	13	1	142	T	1.2	32	13.9	NW	3	6	7	17	7.4	40
GLASGOW	696			14.4	3.3	8.9	-4.8	28.3	1	- 2.8	26+	0	8			20	- 4	8	9		28	T						4	4	22	7.8	
GREAT FALLS	1116	889.9	1019.2	12.2	2.8	7.2	-6.9	28.3	1	- 5.0	18	0	10	2.2	74	48	18	17	18	0	107	51	1.7	27	13.0	NW	15+	4	4	22	7.8	43
HAVRE	787			13.3	2.2	7.9	-5.2	27.8	1	- 5.0	23	0	11			62	37	31	11		71	T			13.4	N	3+	4	3	23	8.0	58
HELENA	1167	882.5	1019.0	13.3	1.7	7.6	-5.8	27.8	1	- 7.2	28+	0	11	1.1	70	86	61	21	15	0	348	279	2.1	29	13.9	NW	3	5	6	19	7.3	41
KALISPELL	904	912.6	1018.3	13.3	1.7	7.3	-5.3	23.3	1	- 3.3	16	0	12	1.7	71	30	3	13	11	2	10	T	1.5	2	15.6	36	26+	6	6	18	7.1	
MILES CITY	801	923.5	1017.3	15.0	2.8	8.9	-7.2	31.7	1	- 3.9	17	0	11	2.2	67	45	21		14	2	T		1.3	31								
MISSOULA	972	905.9	1018.6	14.4	2.8	8.8	-4.2	26.1	1	- 4.4	17	0	9	2.8	72	54	28	24	10	0	5	T	0.6	1	13.0	27	1	6	4	20	7.2	46
NEBRASKA																																
GRAND ISLAND	561	949.2	1015.5	18.9	8.3	13.8	-4.7	30.0	3	- 2.2	24	0	1	9.4	82	229	174	73	17	14	0	0	0.9	1	13.0	25	8	7	7	16	7.1	
LINCOLN U	351			20.6	10.6	15.6	-4.5	30.6	9	0.0	24	0	1			172	99	40	18		0	0			15.2	SW	7	6	4	20	7.4	33
NORFOLK	471			17.2	7.8	12.6	-5.8	28.3	2	- 2.2	24	0	2			175	118	55	16		0	0						6	5	19	7.3	
NORTH PLATTE	846	917.0	1014.7	17.8	6.1	12.1	-5.5	28.3	9	- 3.3	24	0	3	6.7	75	145	102	51	15	8	T	0	1.1	2	13.4	NW	30	7	6	17	7.1	45
OMAHA	298	980.0	1015.2	21.7	10.6	16.1	-3.3	31.7	9	- 0.6	24	0	1	12.2	80	349	282	164	16	9	0	0	0.3	6	14.3	N	7	6	2	22	7.5	39
SCOTTSBLUFF	1206	879.4	1015.3	18.3	5.0	11.7	-5.1	30.6	2	- 2.8	24	0	5	4.4	70	80	49	25	15	8	20	T	0.9	6	13.4	7	25	10	7	13	5.9	
VALENTINE	789			17.2	4.4	10.8	-5.7	30.6	2	- 4.4	24	0	4			94	62	24	12		0	0			18.8	SW	14	8	5	17	6.4	49
NEVADA																																
ELKO	1539	844.6	1014.9	22.2	0.0	11.3	-3.1	29.4	2+	-11.1	18	0	15	- 2.8	44	5	- 4	5	2	0	T	T	1.2	25	13.0	26	7	15	7	8	4.0	
ELY	1906	808.7	1013.4	20.0	0.6	10.3	-3.9	26.7	3	- 8.9	18	0	14	- 3.3	46	40	25	31	4	2	T	0	1.1	21	13.4	SW	5	15	7	8	4.2	82
LAS VEGAS	659	934.6	1009.8	31.7	15.6	23.8	-2.9	37.2	15+	7.8	20	19	0	- 2.8	19	T	- 9	T	0	0	0	0	1.9	23	22.8	N	17	23	6	1	1.6	96
RENO	1342	865.9	1014.8	23.9	1.7	12.7	-2.2	30.6	1	- 6.7	19+	0	9	1.1	52	13	7	11	2	3	0	0	0.5	31	13.9	NW	27	20	5	5	2.7	97
WINNEMUCCA	1310	867.6	1014.8	22.8	1.7	12.2	-2.6	30.0	2	- 8.3	18	0	11	- 3.9	34	3	- 6	3	2	1	0	0	1.0	31	17.4	S	7	18	6	6	3.4	76
NEW HAMPSHIRE																																
CONCORD	104	1008.8	1021.6	22.2	7.8	14.9	-0.3	32.8	22	- 5.6	28	1	3	11.1	79	47	- 48	16	9	0	0	0	0.5	19	11.6	S	1	11	7	12	5.7	52
MT WASHINGTON OBS	1909			9.4	2.8	6.2	1.2	17.2	22	-10.6	27	0	8			254	76	91	15	1	T	T			34.9Y	SW	16	4	9	17	7.4	40
NEW JERSEY																																
ATLANTIC CITY	20	1019.0	1021.6	25.6	14.4	20.0	0.4	33.3	11+	1.7	28	3	0	15.0	76	41	- 43	16	5	1	0	0	1.0	16	13.4	20	1	9	12	9	5.5	70
ATLANTIC CITY U	3			23.9	17.8	20.6	0.3	30.0	18	11.1	26	0	0			40	- 46	18	5						17.9	S	1					
NEWARK	3	1020.3	1021.3	25.0	15.6	20.2	0.1	34.4	10	5.6	28	1	0	14.4	71	56	- 40	34	6	2	0	0	0.3	6	13.0	19	1	9	10	11	6.0	
TRENTON U	17			25.0	15.0	20.1	0.6	32.8	10	6.1	28	3	0			67	- 22	29	6		0	0			14.8	S	1	8	10	12	5.7	54
NEW MEXICO																																
ALBUQUERQUE	1618	838.1	1012.1	26.7	12.2	19.2	-1.9	31.1	15	2.8	30	0	0	7.8	54	30	6	11	11	8	0	0	1.2	21	18.8	NW	1	15	11	4	3.8	77
CLAYTON	1515			22.8	9.4	16.2	-2.7	30.6	14+	1.1	17	0	0			75	34	26	12		0	0						11	7	12	5.4	
RATON	1944			22.8	6.7	14.9	-1.7	29.4	14	- 2.2	21	0	2			26	- 17	10	12		0	0						7	13	10	6.0	
ROSWELL	1102			29.4	13.3	21.5	0.6	36.1	15+	4.4	30	9	0			19	- 27	13	7	5	0	0			12.5	SW	6	14	10	6	3.9	72
SILVER CITY	1638			26.1	12.2	19.1	-2.0	30.6	6+	3.9	30	0	0			56	19	14	11		0	0						15	12	3	3.5	
NEW YORK																																
ALBANY	84	1010.5	1021.2	22.8	12.2	17.6	1.1	32.8	22	- 1.1	28	3	1	12.2	73	96	5	46	11	2	0	0	1.4	21	11.6	S	15+	6	9	15	7.2	42
BINGHAMTON	485	962.4	1021.2	20.6	11.7	16.0	0.7	29.4	22+	- 0.6	28+	0	2	12.8	83	94	20	46	10	2	0	0	1.2	20	10.7	SE	30	4	9	17	7.2	55
BUFFALO	215	993.9	1019.5	22.2	12.8	17.5	1.2	31.7	22	0.6	27	0	0	13.3	77	60	- 19	33	12	3	0	0	1.8	22	17.0	SW	15	5	6	19	7.5	46
NEW YORK U	40	1018.6	1021.7	23.9	15.6	19.7	-0.6	33.3	10	6.7	28	1	0	14.4	76	43	- 55	22	4	1	0	0	0.6	4	10.3	N	27+	10	9	11	5.6	55
J.F. KENNEDY	[illegible]	1020.7	1021.3	23.3	15.0	18.9	-0.9	32.2	18	7.2	28	1	0	14.4	78	24	- 81	11	5	1	0	0	0.9	14	14.3	19	1	9	10	11	5.9	
NEW YORK LA GUARDIA	3	1019.6	1021.3	25.0	17.8	21.3	0.8	34.4	10	8.3	28	1	0	15.6	73	32	- 68	16	4	1	0	0	0.6	10	16.5	S	1	9	10	11	5.8	
ROCHESTER	167	1000.3	1020.5	22.8	12.2	17.7	0.8	33.3	22	2.2	28	1	0	12.8	76	50	- 14	23	16	5	0	0	1.4	22	15.2	W	1	5	8	17	7.1	47
SYRACUSE	125	1005.1	1020.[illegible]	22.2	11.7	17.1	0.2	31.7	21	- 2.2	28	0	2	13.3	80	91	19	21	14	3	0	0	1.0	20	14.3	S	15	6	9	15	6.7	53
NORTH CAROLINA																																
ASHEVILLE	652	945.5	1021.2	25.0	13.3	19.3	0.5	28.9	21+	5.0	26	0	0	16.1	87	119	27	42	8	5	0	0	1.0	16	8.9	30	24	7	10	13	6.3	56
CAPE HATTERAS	2	1020.[illegible]	1020.4	27.8	19.4	23.6	0.2	31.7	11	13.3	9	0	0	19.4	77	74	- 76	51	9	2	0	0	0.6	12	15.6	SW	24	9	11	10	5.3	72
CHARLOTTE	224	992.[illegible]	1020.1	28.3	17.8	22.8	0.1	32.2	20+	10.6	29+	4	0	17.2	76	22	- 66	10	4	2	0	0	0.5	8	10.7	[illegible]	24	8	12	10	5.7	62

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	°C.	°C.	°C.	°C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s		M.p.s.							%
NORTH CAROLINA																																
GREENSBORO	273	989.5	1020.8	27.8	16.1	22.0	0.8	33.3	10	8.3	26	3	0	17.2	79	109	17	50	9	3	0	0	0.4	14	9.4	NW	24	8	9	13	6.0	59
RALEIGH	132	1004.7	1020.4	28.3	16.7	22.6	0.8	33.3	11	10.6	30+	3	0	17.2	78	67	- 30	27	6	5	0	0	0.6	13	10.3	1	11	6	14	10	5.8	71
WILMINGTON	9	1018.6	1020.1	28.9	19.4	24.1	0.1	33.3	11	14.4	8	2	0	19.4	79	74	- 86	39	14	2	0	0	1.1	7	12.5	NE	4	6	11	13	6.3	53
NORTH DAKOTA																																
BISMARCK	502	956.3	1016.8	13.9	1.7	7.9	-6.9	26.1	1	- 7.8	26	0	8	2.2	71	77	46	23	13	4	91	T	1.0	33	21.9	NW	22	2	8	20	7.9	38
FARGO	273	983.7	1016.9	14.4	4.4	9.4	-5.5	25.6	2	- 7.2	26	0	3	5.6	78	89	51	23	12	3	T	T	0.4	32	16.5	NW	4	4	5	21	7.9	41
WILLISTON	579			13.3	1.7	7.4	-6.6	27.2	1	- 6.1	26	0	12			56	27	14	12		76	T			20.1	NW	22	2	5	23	8.1	38
OHIO																																
AKRON	368	976.0	1020.0	24.4	13.3	18.9	1.2	30.0	21+	3.3	28	0	0	14.4	79	79	13	30	12	2	T	T	1.4	20	11.2	25	15	7	11	12	6.3	
CINCINNATI OBS	232			25.6	15.6	20.6	0.1	33.3	18	5.0	25	2	0			190	121	95	10		0	0			10.3	SE	15					49
CLEVELAND	237	990.2	1019.1	25.0	14.4	19.7	2.2	31.7	21+	5.0	25	0	0	15.0	76	64	- 9	28	10	2	0	0	1.7	20	13.0	S	22	7	10	13	6.4	45
COLUMBUS	247	989.8	1019.6	25.6	15.0	20.2	1.3	32.2	18	5.0	25	1	0	16.1	78	157	90	51	10	2	0	0	1.2	17	12.1	S	22	8	9	13	5.9	53
DAYTON	305	983.4	1019.1	25.0	15.6	20.2	0.8	31.1	10+	3.3	25	0	0	15.0	76	145	79	53	13	4	0	0	1.4	18	13.9	S	22	9	7	14	6.0	62
MANSFIELD	395			23.3	12.2	17.7	0.3	29.4	10	3.3	25	0	0			54	- 22	16	12	5	0	0						7	12	11	6.1	
TOLEDO	206	993.9	1019.0	22.8	12.2	17.6	0.2	30.6	19+	3.9	25	0	0	13.9	80	125	71	49	14	6	0	0	1.1	22	12.1	W	15	5	13	12	6.5	59
YOUNGSTOWN	359	977.7	1020.1	23.9	12.8	18.3	1.4	30.6	10	3.3	28+	0	0	14.4	80	102	29	40	9	1	0	0	1.3	19	9.4	31	1	6	11	13	6.5	
OKLAHOMA																																
OKLAHOMA CITY	390	968.2	1013.6	29.4	17.2	23.3	0.1	38.9	14+	8.3	30	12	0	15.6	66	100	23	35	9	6	0	0	2.8	15	16.5	SE	20	14	10	6	4.2	73
TULSA	198	990.5	1014.5	30.6	17.8	24.1	0.8	39.4	14+	8.9	30	14	0	16.7	69	117	15	47	8	6	0	0	2.8	16	13.4	S	16	11	13	6	4.5	80
OREGON																																
ASTORIA	2	1017.6	1018.3	18.9	8.9	13.9	-0.6	27.8	24+	2.2	17	0	0	10.0	80	13	- 67	8	4	0	0	0	0.9	25	8.9	18	14	10	5	15	6.0	
BURNS U	1265	873.4	1016.0	21.1	2.8	11.8	-3.1	28.9	1	- 5.0	17	0	6	- 1.7	45	T	- 13	T	0		0	0	2.1	33				18	8	4	3.5	
EUGENE	109	1003.7	1017.1	23.9	7.8	16.0	-0.4	31.7	24+	1.1	17	0	0	7.2	64	T	- 32	T	0	0	0	0	1.3	34	10.3	5	16	15	7	8	4.1	
MEACHAM	1234			15.6	4.4	10.0	-3.2	22.8	25	- 3.9	17	0	4			27	- 10	22	4		0	0						13	9	8	4.6	
MEDFORD	396	968.5	1015.9	27.8	6.1	16.8	-1.1	33.9	1	- 0.6	18	3	1	3.9	51	T	- 15	T	0	0	0	0	0.6	32	8.0	6	16	23	5	2	2.0	
PENDLETON	452	963.1	1016.5	22.8	8.3	15.6	-2.3	30.0	1	- 1.1	17	0	1	1.7	43	6	- 10	5	3	0	0	0	1.4	26	14.3	26	2	19	3	8	3.7	
PORTLAND	6	1016.3	1017.5	22.8	8.9	15.8	-1.0	31.1	24	1.1	17	0	0	8.3	64	T	- 41	T	1	0	0	0	1.4	32	13.0	NE	16	11	11	8	4.8	65
SALEM	60	1010.2	1017.6	23.9	6.7	15.3	-1.6	32.2	24	- 2.2	17	1	2	7.2	64	3	- 32	2	3	0	0	0	1.2	33	9.4	3	23	14	9	7	4.4	
SEXTON SUMMIT R	1169	884.2	1014.6	20.6	8.3	14.3	-1.1	27.2	24	0.0	17	0	1			0	- 32	0	0		0	0			12.5	33	26+	26	4	0	1.4	
PACIFIC AREA																																
CANTON ISLAND	2			31.7	25.6	28.8	0.2	32.8	30+	23.3	25	15	0			90	59	22	14		0	0						3	8	19	7.5	
ENIWETOK	4	1008.5	1009.3	31.1	25.6	28.3	-0.2	32.2	20+	23.3	12	4	0	24.4	80	271	112	82	21	1	0	0	4.9	9								
TAGUAC GUAM R	110			29.4	22.2	25.9	-0.3	31.7	27+	20.0	18	0	0			566	226	190	26		0	0			13.0	SW	29					43
JOHNSTON	2	1011.9	1012.3	29.4	25.0	27.3	-0.2	30.6	20	22.8	1	0	0	22.2	74	45	- 14	36	8	1	0	0	4.6	11	13.4	SE	4	9	14	7	5.4	83
KOROR R	29	1005.8	1009.5	30.0	24.4	27.4	0.2	31.7	25+	22.8	28	0	0	24.4	84	330	- 34	135	17	4	0	0	3.2	26	11.6	SW	11	0	0	30	9.9	47
KWAJALEIN	2	1008.5	1009.4	30.6	25.6	27.9	0.2	31.7	16	23.9	30+	0	0	24.4	82	135	-124	28	26	0	0	0	3.3	9	11.2	9	13	0	5	25	8.8	
MAJURO WB AIRPORT	3	1008.8	1009.3	30.0	25.0	27.4	0.5	31.7	22	22.8	26	0	0	23.9	81	393	86	93	24	4	0	0	1.5	8	10.7	NE	5	1	5	24	8.8	52
MARCUS ISLAND	6			31.1	25.0	28.0		32.2	12+	19.4	23	3	0			71		14	17		0	0			14.3	E	15	5	18	7	5.8	83
PONAPE R	37	1003.7	1009.1	30.6	22.8	26.6	0.2	32.2	28	22.2	28+	1	0	23.9	90	627	225	100	29	7	0	0	0.7	21	8.0	E	29	0	1	29	9.6	29
TRUK MOEN ISLAND	2	1008.5	1008.9	29.4	24.4	26.9	0.1	31.7	14+	22.2	5	0	0	23.9	84	431	112	101	23	3	0	0	2.1	28	13.0	NW	21	0	3	27	9.2	47
WAKE	3	1011.9	1012.3	30.6	25.0	27.9	-0.1	31.7	25	22.2	15	0	0	22.8	76	37	- 97	19	14	2	0	0	5.1	5	12.5	5	15	3	16	11	6.4	
YAP R	17	1006.1	1008.1	30.0	24.4	27.1	-0.3	31.7	23+	22.8	9	0	0	24.4	87	450	94	77	25	4	0	0	2.0	24	15.2	SW	29	0	0	30	9.9	24
PENNSYLVANIA																																
ALLENTOWN	115	1007.5	1021.3	24.4	13.3	18.8	0.6	32.2	18	2.2	28	1	0	14.4	78	58	- 37	34	5	2	0	0	0.3	12	11.2	32	24+	9	7	14	6.2	
ERIE	223	993.2	1019.7	23.3	14.4	19.1	1.7	31.7	22+	4.4	27	0	0	13.9	74	57	- 34	38	10	3	0	0	2.0	19	20.1	17	15	6	9	15	6.6	
HARRISBURG	103	1008.5	1021.1	26.1	15.6	21.0	1.6	35.6	10	5.0	28	5	0	15.6	72	54	- 18	20	5	2	0	0	0.3	14	12.5	W	1	6	10	14	6.6	55
PHILADELPHIA	2	1020.0	1021.1	25.6	15.6	20.7	1.4	32.8	19	7.2	26	3	0	15.6	76	77	- 11	40	4	1	0	0	0.4	9	12.1	W	24	7	13	10	6.0	55
PITTSBURGH	347	976.3	1020.2	23.9	12.8	18.2	0.3	30.6	9	2.2	26	0	0	13.9	79	103	39	38	11	1	0	0	0.8	21	10.7	24	15+	8	11	11	6.1	61
READING U	81			25.6	15.6	20.6	0.9	34.4	10	3.9	28	5	0			76	- 8	42	5		0	0			15.2	S	1	8	9	13	6.2	52
SCRANTON	283	987.5	1021.6	22.8	13.3	18.1	1.1	31.1	22	2.8	28	0	0	14.4	82	80	4	28	10	3	0	0	0.7	17	10.7	NW	24	5	12	13	6.4	47
WILLIAMSPORT	161	1002.0	1021.3	22.8	12.2	17.4	-0.4	31.7	10	0.0	28	0	1	13.9	83	103	20	41	8	3	0	0	0.1	13	11.2	16	15	3	16	11	6.6	
RHODE ISLAND																																
BLOCK ISLAND	34			20.6	13.9	17.2	-0.6	25.6	11	6.1	29	0	0			43	- 38	20	7		0	0						9	7	14	6.4	
PROVIDENCE	16	1019.3	1021.5	22.8	12.8	17.8	0.5	31.1	10	1.7	28	0	0	11.7	71	42	- 48	20	8	1	0	0	0.4	18	13.0	19	1	11	7	12	5.7	54

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	°C.	°C.	°C.	°C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
SOUTH CAROLINA																																
CHARLESTON	12	1017.3	1019.1	28.9	20.0	24.4	0.2	32.8	11	16.7	28+	4	0	20.0	81	118	-30	35	11	3	0	0	1.7	6	13.0Y	SW	24	2	9	19	7.6	41
CHARLESTON U	3			27.8	22.2	25.1	0.1	31.1	12+	17.8	29+	0	0			42	-118	18	9		0	0			13.0	N	28+					
COLUMBIA	66	1011.5	1019.3	29.4	18.9	24.1	0.1	33.9	20+	11.1	8	11	0	18.9	78	152	43	129	8	3	0	0	1.3	7	9.4	6	2	6	14	10	5.9	67
GNVLE SPARTANBURG	292	985.8	1020.1	27.8	17.2	22.4	-0.4	32.8	20	11.1	26+	2	0	16.7	75	59	-40	17	6	2	0	0	0.7	12	8.9	NE	28	7	9	14	6.3	55
SOUTH DAKOTA																																
ABERDEEN	395	969.2	1016.2	15.6	3.9	9.8	-6.1	30.6	2	-6.7	26	0	3	3.9	70	83	47	22	14	1	T	T	1.1	35	13.4	32	23+	3	7	20	7.6	
HURON	391	969.2	1016.0	16.1	4.4	10.3	-6.3	32.2	2	-5.0	26	1	2	5.6	74	91	52	23	17	2	T	T	0.8	34	14.8	NW	23+	7	4	19	7.4	34
RAPID CITY	965	904.8	1016.3	16.1	3.9	9.8	-6.6	31.1	8	-2.8	26	0	8	1.7	64	37	13	19	11	4	38	T	2.2	35	15.6	NW	22	8	9	13	6.1	46
SIOUX FALLS	432	964.1	1015.8	15.6	6.1	10.8	-5.7	27.8	9+	-3.3	26	0	3	7.8	84	125	58	33	15	5	0	0	0.5	35	13.0	4	25	4	7	19	7.6	
TENNESSEE																																
BRISTOL	459	966.8	1020.3	28.3	15.0	21.8	1.2	33.3	10	5.6	26	9	0	15.0	72	45	-21	28	5	5	0	0	0.6	8	8.0	36	24	12	9	9	5.1	
CHATTANOOGA	204	994.2	1018.8	27.8	16.7	22.2	-1.1	31.1	17+	7.2	26+	0	0	18.3	83	114	35	51	12	4	0	0	0.7	15	9.8	S	11	6	8	16	6.5	54
KNOXVILLE	299	984.8	1019.6	28.9	17.8	23.1	0.7	33.3	10	8.3	25	6	0	17.2	74	63	-2	21	9	4	0	0	0.4	33	11.2	W	15	9	10	11	5.9	48
MEMPHIS	80	1006.8	1016.8	27.8	18.3	23.2	-0.1	32.2	18+	6.1	25	4	0	18.3	76	187	116	109	9	2	0	0	1.5	12	13.0	SE	11	13	5	12	5.1	73
NASHVILLE	180	996.6	1017.9	28.9	17.8	23.4	0.7	33.9	17+	5.0	25	11	0	16.1	68	128	55	50	10	2	0	0	1.6	16	12.5	S	22	11	8	11	5.4	61
OAK RIDGE	276			27.8	15.6	21.7	0.1	32.2	11	5.0	25	1	0			76	-7	36	10		0	0			13.9Y		12	13	6	11	5.4	
TEXAS																																
ABILENE	537	952.6	1012.7	32.8	20.0	26.2	1.8	40.0	15	11.1	30	19	0	13.9	51	47	-5	34	6	5	0	0	2.8	17	14.3	W	20	16	8	6	4.1	72
AMARILLO	1098	890.6	1011.7	27.8	12.8	20.3	-1.8	36.7	14	3.9	21	11	0	11.1	63	20	-28	16	4	5	0	0	3.0	20	23.2	SF	9	13	10	7	4.5	77
AUSTIN	182	992.2	1013.6	32.2	21.7	26.9	0.8	37.2	16+	13.3	30	21	0	18.9	66	139	51	102	8	3	0	0	1.5	14	11.2	NW	30	11	12	7	5.1	63
BROWNSVILLE	5	1011.5	1012.1	32.2	22.8	27.7	0.3	36.1	10	17.8	27	22	0	22.2	75	137	10	80	8	1	0	0	3.0	13	13.0	SE	17	12	13	5	4.3	73
CORPUS CHRISTI	12	1011.2	1012.7	33.9	22.2	28.1	1.0	37.8	10	15.0	27	25	0	21.7	72	53	-59	25	9	2	0	0	3.1	13	14.3	SE	16	8	19	3	5.1	67
DALLAS	147	997.0	1013.9	31.7	21.1	26.3	0.8	38.9	14	11.1	25	18	0	18.9	66	131	59	122	7	4	0	0	2.9	15	15.2	SE	17	15	7	8	4.3	77
DEL RIO	313	976.6	1011.9	33.9	21.1	27.4	0.8	39.4	10	14.4	26+	24	0	17.2	58	66	0	26	8	6	0	0	3.4	12	10.3	15	18	11	8	11	5.1	
EL PASO	1194	881.5	1010.5	29.4	17.2	23.3	-0.3	34.4	15	10.0	23+	6	0	10.6	48	54	25	39	4	5	0	0	0.5	22	14.3	SW	7	22	4	4	2.8	86
FORT WORTH	164	994.2	1014.3	32.2	20.6	26.3	0.6	38.3	14	12.2	30+	18	0	17.8	64	128	64	121	6	5	0	0	2.3	15	13.4	18	16	18	6	6	3.8	
GALVESTON U	2			30.0	24.4	27.1	0.3	33.3	10	17.8	27+	2	0			102	-27	31	10		0	0			15.2	NE	22					63
HOUSTON U	12			31.7	22.8	27.3	0.7	35.6	14+	14.4	26	16	0			116	19	80	10		0	0										
HOUSTON	15	1011.9	1014.1	32.8	22.2	27.3	1.1	36.1	11+	15.6	26	20	0	21.1	74	90	-18	25	11	4	0	0	1.5	12	12.5	36	22	6	15	9	5.7	66
LUBBOCK	988	903.2	1012.1	30.0	15.6	22.7	0.8	37.8	16+	8.3	30+	13	0	12.2	57	144	84	71	8	5	0	0	2.0	17	12.5	2	30+	14	11	5	4.3	
MIDLAND	869	915.0	1011.3	30.6	17.2	23.8	-0.3	37.8	15	10.0	30	13	0	12.8	56	20	-26	10	2	3	0	0	2.7	16	13.0	16	20	13	11	6	4.3	
PORT ARTHUR	5	1013.5	1014.3	32.8	21.7	27.1	1.4	36.1	14+	15.0	25	19	0	21.1	75	117	-7	48	13	8	0	0	1.2	11	18.3	NW	22	8	9	13	6.0	70
SAN ANGELO	580	946.8	1012.0	32.8	19.4	25.8	0.1	39.4	15	12.8	30+	20	0	16.1	60	30	-38	18	7	4	0	0	2.2	16	12.5	19	20	14	9	7	4.6	
SAN ANTONIO	240	986.1	1013.6	33.3	21.1	27.1	1.2	37.2	11+	12.2	28	20	0	18.9	66	80	-9	58	6	4	0	0	2.3	13	18.8	S	5	11	12	7	4.7	80
VICTORIA	32	1009.1	1013.4	33.3	22.2	27.7	1.5	37.2	11+	13.9	27+	21	0	20.6	72	110	3	71	10	6	0	0	1.8	12	20.6Y	ENE	22	6	14	10	5.9	
WACO	152	995.9	1013.7	32.2	21.1	26.6	0.5	37.8	14+	12.2	25	19	0	15.6	54	97	26	55	7	5	0	0	2.4	15	16.5	18	19	14	10	6	4.3	
WICHITA FALLS	303	977.0	1012.9	32.8	17.2	25.1	-0.1	41.7	14	8.9	25	17	0	15.0	61	66	6	49	4	5	0	0	2.5	17	14.3	25	18	20	4	6	3.6	
UTAH																																
MILFORD	1533			23.3	3.9	13.5	-3.8	31.1	1	-3.9	18	0	7			43	32	13	8		213	127						15	10	5	3.8	
SALT LAKE CITY	1286	870.3	1013.4	21.7	6.7	14.2	-3.8	29.4	3	-2.8	18	0	4	3.3	54	49	36	21	9	6	56	T	1.0	16	16.1	NW	6	11	9	10	5.3	73
WENDOVER	1291			21.7	9.4	15.3	-3.9	28.9	13+	-0.6	18	0	2			14	6	9	4		0	0						16	6	8	3.8	
VERMONT																																
BURLINGTON	101	1007.8	1020.4	20.6	9.4	14.8	0.2	31.1	22	-1.7	28	0	3	11.1	79	81	-3	31	12	2	0	0	1.6	19	12.5	S	15	4	12	14	6.7	61
VIRGINIA																																
LYNCHBURG	279			26.7	15.0	20.8	0.4	33.9	10	7.2	26	1	0			59	-27	34	8	4	0	0			8.0	SW	1	11	12	7	4.9	67
NORFOLK	8	1019.6	1020.7	27.8	18.3	23.1	0.6	33.9	11	11.7	30	6	0	17.8	76	20	-88	11	7	2	0	0	1.1	11	11.6	NE	27	10	10	10	5.5	70
RICHMOND	49	1014.9	1021.0	27.2	15.6	21.5	0.3	33.3	11+	7.8	26	5	0	16.7	79	122	29	62	7	2	0	0	0.4	15	11.2	W	24+	12	10	8	5.1	68
ROANOKE	350	979.0	1020.8	27.2	14.4	20.9	0.3	34.4	10	3.9	26	4	0	15.0	74	50	-33	14	8	2	0	0	0.6	16	8.0	4	11+	9	12	9	5.3	
WASHINGTON																																
OLYMPIA	59	1011.2	1018.4	20.0	5.0	12.7	-2.1	26.7	23	-0.6	18	0	2	8.3	80	15	-38	8	3	0	0	0	0.7	21	10.3	26	8	8	9	13	6.1	
SEATTLE TACOMA	122	1002.0	1018.5	19.4	10.0	14.7	-0.8	25.6	23+	5.6	18+	0	0	9.4	75	12	-40	6	4	0	0	0	0.4	27	11.6	20	14	7	6	17	6.3	54
SPOKANE	718	932.3	1016.0	18.9	5.0	12.1	-3.9	26.7	1	-3.9	17	0	3	2.8	56	7	-12	2	7	0	0	0	0.4	14	9.8	NW	21	10	11	9	4.9	65
STAMPEDE PASS R	1206			13.3	5.6	9.6	-1.5	21.7	24	0.0	16	0	1			57	-55	43	6		0	0						6	9	15	6.5	
TATOOSH ISLAND R	31	1014.7	1018.1	13.9	9.4	11.6	-1.1	20.0	6	6.7	19	0	0	9.4	90	30	-60	24	6	0	0	0	1.6	11	13.9	NE	23	9	4	17	6.9	45
WALLA WALLA U	289			22.8	10.0	16.4	-2.4	30.0	1	1.1	17	0	0			11	-9	5	3		0	0			8.5	W	13	16	5	9	4.2	80
YAKIMA	321	978.0	1016.3	23.3	5.6	14.4	-1.9	30.6	1	-1.1	17	0	2	3.3	53	1	-8	1	1	0	0	0	1.7	29	11.6	29	14	14	9	7	4.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
WEST INDIES																																
SAN JUAN P.R.	5	1011.9	1014.3	31.1	24.4	27.9	0.9	32.8	9+	23.3	30+	7	0	23.3	80	122	- 50	29	21	8	0	0	2.5	10	10.3	E	17+	2	21	7	6.1	58
SWAN ISLAND	9			30.6	25.6	28.0	-0.3	32.2	13	22.8	19	1	0			356	225	152	15		0	0						4	9	17	7.3	
WEST VIRGINIA																																
BECKLEY	763	933.3	1020.5	25.0	12.8	18.8		30.0	10+	2.8	27+	0	0	13.9	77	56	- 40	16	12	6	0	0	1.6	16	13.0	24	1	9	12	9	5.6	
CHARLESTON	286	985.8	1019.5	26.7	15.0	20.7	0.6	33.3	9	5.0	27	3	0	15.0	72	82	7	27	8	3	0	0	0.4	16	13.0	30	24	8	13	9	5.8	
ELKINS	600	950.6	1021.3	25.6	10.6	18.3	1.3	31.7	19	2.2	28+	0	0	13.3	81	73	- 5	30	9	6	0	0	0.6	22	10.3	29	24+	6	14	10	6.0	
HUNTINGTON	252	989.5	1019.3	26.1	15.0	20.7	0.6	32.2	19+	3.3	26	3	0	16.7	82	89	24	45	7	2	0	0	0.7	16	9.4	31	1	7	12	11	6.0	
PARKERSBURG U	187			26.7	15.6	20.9	0.9	32.8	19+	4.4	26	3	0			129	60	66	9		0	0			8.5	NW	1					56
WISCONSIN																																
GREEN BAY	208	991.5	1017.0	19.4	9.4	14.2	-1.7	28.3	19+	- 1.1	27+	0	2	11.1	83	198	124	64	14	6	T	0	0.8	22	12.1	SW	23+	3	8	19	7.8	40
LA CROSSE	198	992.2	1016.8	18.3	8.9	13.7	-3.1	29.4	9	0.6	26	0	0	10.6	87	267	179	55	19	7	T	T	0.8	20	11.6	26	23	4	5	21	7.9	
MADISON	262	985.4	1016.7	20.0	9.4	14.6	-1.5	29.4	9	- 1.1	26	0	2	11.7	84	234	150	51	15	12	T	0	1.2	19	14.8	SW	4	5	5	20	7.7	37
MILWAUKEE	205	992.2	1017.4	20.6	12.2	16.5	0.8	30.6	9	3.3	26	0	0	12.8	80	174	105	48	14	7	0	0	1.2	19	13.9	NW	9	6	6	18	7.3	45
WYOMING																																
CASPER	1627	837.5	1015.3	16.1	1.1	8.7	-6.7	28.3	1	- 7.2	18+	0	12	- 1.1	59	53	30	13	12	1	224	152	1.5	28	23.7	32	6	9	6	15	6.2	
CHEYENNE	1867	812.4	1015.4	16.1	3.3	9.8	-5.0	25.6	6+	- 5.0	17+	0	7	1.1	63	34	6	11	16	3	51	T	2.2	28	15.6	NW	14	10	4	16	6.5	49
LANDER	1696	829.0	1015.2	16.1	1.7	8.9	-6.1	27.8	1	-12.2	18	0	13	0.6	62	67	40	22	11	2	599	330	1.0	27	19.2	W	3	8	7	15	6.2	57
SHERIDAN	1208	879.8	1017.8	15.0	1.7	8.6	-6.3	30.6	1	- 9.4	18	0	10	1.1	65	44	15	16	13	2	152	102	1.8	32	17.9	NW	4	3	10	17	7.2	40

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.
A Maximum hourly average.
B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

SEPTEMBER 1965

State and station	Current season: This month	Current season: Period July through this month	Normals July through this month
ALABAMA			
BIRMINGHAM	13	13	6
HUNTSVILLE	15	15	12
MOBILE	0	0	0
MONTGOMERY	0	0	0
ALASKA			
ANCHORAGE	333	772	
ANNETTE	272	687	777
BARROW	1067	2713	2678
BARTER ISLAND	1018	2757	2497
BETHEL	500	1359	1325
COLD BAY	477	1424	1424
FAIRBANKS	496	1022	1145
JUNEAU	435	1024	1122
KING SALMON	437	1220	1148
KOTZEBUE	639	1603	1550
MC GRATH	500	1190	1179
NOME	649	1812	1670
ST. PAUL ISLAND	628	1819	1756
SHEMYA	560	1629	1553
YAKUTAT	520	1445	1159
ARIZONA			
FLAGSTAFF	326	417	315
PHOENIX	4	4	0
TUCSON	8	8	0
WINSLOW	77	77	6
YUMA	0	0	0
ARKANSAS			
FORT SMITH	16	16	12
LITTLE ROCK	19	19	9
TEXARKANA	[illegible]	8	0
CALIFORNIA			
BAKERSFIELD	0	0	0
BISHOP	85	85	42
BLUE CANYON	221	300	204
BURBANK	10	10	6
EUREKA U	324	816	785
FRESNO	12	12	0
LONG BEACH	0	0	12
LOS ANGELES	1	13	71
LOS ANGLES U	0	0	6
MT SHASTA R	207	290	182
OAKLAND	52	154	148
RED BLUFF	10	10	0
SACRAMENTO	19	19	12
SANDBERG U	157	161	30
SAN DIEGO	0	3	21
SAN FRANCISCO	113	316	219
SAN FRANCISCO U	120	473	468
SANTA CATALINA	77	121	25
SANTA MARIA	79	232	288
STOCKTON	15	15	6
COLORADO			
ALAMOSA	348	507	443
COLORADO SPRINGS	304	345	166
DENVER	296	309	132
GRAND JUNCTION	138	138	30
PUEBLO	180	183	54
CONNECTICUT			
BRIDGEPORT	50	62	66
HARTFORD	110	146	105
NEW HAVEN	92	113	99
DELAWARE			
WILMINGTON	40	52	51
DIST.OF COLUMBIA			
WASH NATL AP	18	19	33
FLORIDA			
APALACHICOLA U	0	0	0
DAYTONA BEACH	0	0	0
FORT MYERS	0	0	0
JACKSONVILLE	0	0	0
KEY WEST	0	0	0
LAKELAND U	0	0	0
MIAMI	0	0	0
ORLANDO	0	0	0
PENSACOLA	0	0	0
TALLAHASSEE	0	0	0
TAMPA	0	0	0
WEST PALM BEACH	0	0	0
GEORGIA			
ATHENS	2	2	12
ATLANTA	3	3	18
AUGUSTA	0	0	0
COLUMBUS	0	0	0
MACON	2	2	0
ROME	10	10	24
SAVANNAH	0	0	0
IDAHO			
BOISE	234	271	132
IDAHO FALLS 42NW R	502	623	338
IDAHO FALLS 46W R	486	627	320
LEWISTON	182	211	123
POCATELLO	393	469	172
ILLINOIS			
CAIRO U	25	25	36
CHICAGO O HARE	110	175	129
CHICAGO MIDWAY	99	125	81
MOLINE	115	136	108
PEORIA	100	118	93
ROCKFORD	134	165	129
SPRINGFIELD	54	67	72
INDIANA			
EVANSVILLE	39	44	66
FORT WAYNE	85	119	114
INDIANAPOLIS	66	84	90
SOUTH BEND	121	180	117
IOWA			
BURLINGTON	104	120	93
DES MOINES	154	168	108
DUBUQUE	181	219	199
SIOUX CITY	260	271	117
WATERLOO	207	271	169
KANSAS			
CONCORDIA	140	143	57
DODGE CITY	127	130	33
GOODLAND	300	311	87
TOPEKA	74	74	57
WICHITA	73	74	33
KENTUCKY			
COVINGTON	64	81	75
LEXINGTON	52	61	54
LOUISVILLE	45	47	54
LOUISIANA			
ALEXANDRIA	6	6	0
BATON ROUGE	1	1	0
LAKE CHARLES	2	2	0
NEW ORLEANS	0	0	0
SHREVEPORT	3	3	0
MAINE			
CARIBOU	351	627	529
PORTLAND	242	344	260
MARYLAND			
BALTIMORE	34	39	48
MASSACHUSETTS			
BLUE HILL OBS R	138	183	130
BOSTON	136	175	69
NANTUCKET	171	215	127
PITTSFIELD	213	350	303
WORCESTER	163	238	187
MICHIGAN			
ALPENA	285	553	446
DETROIT	85	119	87
DETROIT M WAYNE CO	128	194	96
DETROIT WILLOW RUN	142	238	90
FLINT	142	239	215
GRAND RAPIDS	145	200	170
HOUGHTON LAKE	266	498	
LANSING	148	244	166
MARQUETTE U	355	591	380
MUSKEGON	113	156	160
SAULT STE MARIE	350	692	480
MINNESOTA			
DULUTH	506	791	510
INTERNATIONAL FALLS	552	782	546
MINNEAPOLIS	368	415	242
ROCHESTER	307	381	245
ST CLOUD	435	506	300
MISSISSIPPI			
JACKSON	9	9	0
MERIDIAN	8	8	0
VICKSBURG U	13	13	0
MISSOURI			
COLUMBIA	52	55	54
KANSAS CITY	44	44	39
ST JOSEPH	45	45	66
ST LOUIS	49	56	60
SPRINGFIELD	49	49	45
MONTANA			
BILLINGS	533	569	207
GLASGOW	502	554	348
GREAT FALLS	594	665	339
HAVRE	553	627	387
HELENA	578	661	384
KALISPELL	591	768	470
MILES CITY	510	539	186
MISSOULA	509	641	411
NEBRASKA			
GRAND ISLAND	271	282	114
LINCOLN U	194	198	81
NORFOLK	318	332	120
NORTH PLATTE	345	356	129
OMAHA	169	174	96
SCOTTSBLUFF	358	370	138
VALENTINE	410	426	186
NEVADA			
ELKO	375	429	168
ELY	429	532	305
LAS VEGAS	15	15	0
RENO	298	363	334
WINNEMUCCA	321	370	244
NEW HAMPSHIRE			
CONCORD	227	355	233
MT WASHINGTON OBS	651	1833	1749
NEW JERSEY			
ATLANTIC CITY	70	97	39
ATLANTIC CITY U	23	31	29
NEWARK	50	61	30
TRENTON U	58	69	57
NEW MEXICO			
ALBUQUERQUE	56	56	12
CLAYTON	167	169	72
RATON	187	206	163
ROSWELL	34	34	18
SILVER CITY	45	45	6
NEW YORK			
ALBANY	120	180	157
BINGHAMTON	184	301	288
BUFFALO	122	191	197
NEW YORK U	54	67	30
J.F. KENNEDY	58	72	36
NEW YORK LA GUARDIA	26	31	27
ROCHESTER	122	199	166
SYRACUSE	144	221	166
NORTH CAROLINA			
ASHEVILLE	39	46	75
CAPE HATTERAS R	0	0	0
CHARLOTTE	7	7	6
GREENSBORO	15	18	33
RALEIGH	7	12	21
WILMINGTON	0	0	0
NORTH DAKOTA			
BISMARCK	556	627	284
FARGO	477	555	284
WILLISTON	580	645	335
OHIO			
AKRON	82	130	105
CINCINNATI OBS	48	56	54
CLEVELAND	67	140	139
COLUMBUS	53	85	90
DAYTON	62	81	84
MANSFIELD	115	197	145
TOLEDO	129	213	133
YOUNGSTOWN	100	190	145
OKLAHOMA			
OKLAHOMA CITY	28	28	15
TULSA	15	15	18
OREGON			
ASTORIA	235	477	486
BURNS U	345	487	259
EUGENE	132	180	197
MEACHAM	445	738	496
MEDFORD	106	117	78
PENDLETON	153	187	111
PORTLAND	139	177	167
SALEM	166	238	179
SEXTON SUMMIT R	227	460	333
PENNSYLVANIA			
ALLENTOWN	81	104	90
ERIE	76	146	127
HARRISBURG	44	51	63
PHILADELPHIA	41	59	60
PITTSBURGH	99	148	114
PITTSBURGH U	50	66	60
READING U	47	59	54
SCRANTON	99	141	151
WILLIAMSPORT	121	179	120
RHODE ISLAND			
BLOCK ISLAND	96	117	94
PROVIDENCE	99	131	112
SOUTH CAROLINA			
CHARLESTON	0	0	0
CHARLESTON U	0	0	0
COLUMBIA	2	2	0
GNVLE-SPARTANBURG	6	6	9
SOUTH DAKOTA			
ABERDEEN	456	499	239
HURON	431	460	186
RAPID CITY	461	491	199
SIOUX FALLS	405	444	212
TENNESSEE			
BRISTOL	21	24	51
CHATTANOOGA	15	15	18
KNOXVILLE	13	13	36
MEMPHIS	22	22	18
NASHVILLE	26	26	30
OAK RIDGE	22	22	39
TEXAS			
ABILENE	4	4	
AMARILLO	73	73	18
AUSTIN	2	2	0
BROWNSVILLE	0	0	0
CORPUS CHRISTI	0	0	[illegible]
DALLAS	6	6	0
DEL RIO	3	3	0
EL PASO	4	4	0
FORT WORTH	2	2	
GALVESTON U	0	0	
HOUSTON U	3	3	[illegible]
HOUSTON	2	2	0
LUBBOCK	22	22	18
MIDLAND	11	11	0
PORT ARTHUR	0	0	0
SAN ANGELO	0	0	0
SAN ANTONIO	2	2	0
VICTORIA	2	2	0
WACO	2	2	0
WICHITA FALLS	13	13	0
UTAH			
MILFORD	264	267	99
SALT LAKE CITY	239	259	81
WENDOVER	193	200	48
VERMONT			
BURLINGTON	236	359	300
VIRGINIA			
LYNCHBURG	33	42	51
NORFOLK	1	7	0
RICHMOND	25	31	36
ROANOKE	38	47	51
WASHINGTON			
OLYMPIA	298	402	337
SEATTLE TACOMA	194	262	280
SPOKANE	330	423	202
STAMPEDE PASS R	468	989	957
TATOOSH ISLAND R	355	945	880
WALLA WALLA U	119	137	87
YAKIMA	207	274	156
WEST VIRGINIA			
BECKLEY	77	124	
CHARLESTON	58	73	63
ELKINS	81	143	169
HUNTINGTON	59	69	63
PARKERSBURG U	44	56	60
WISCONSIN			
GREEN BAY	245	322	[illegible]
LA CROSSE	256	325	184
MADISON	231	327	239
MILWAUKEE	149	225	264
WYOMING			
CASPER	512	565	214
CHEYENNE	454	512	260
LANDER	507	547	229
SHERIDAN	523	574	275

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

NORTH ATLANTIC TROPICAL CYCLONES, SEPTEMBER 1965

HURRICANE BETSY, AUGUST 27-SEPTEMBER 12

Hurricane Betsy was the most destructive single tropical cyclone in United States history. The severe storm passed westward over extreme southern Florida and northward across central Louisiana. Hurricane winds and high storm tides were experienced in both the Miami and New Orleans metropolitan areas. A broad section of the Mississippi River Delta below New Orleans and some portions of the Fort Lauderdale-Miami-Miami Beach developed oceanfront were inundated by seawater, and sections of New Orleans were flooded from the Mississippi.

Damage has been estimated near $140 million in Florida, over $80 million in Mississippi and Alabama, and about $1.2 billion in Louisiana for a total of about $1,420,000,000 in all areas.

Hurricane Betsy was discovered by Navy reconnaissance aircraft and TIROS X on the morning of September 27 as a tropical depression about 350 miles east of Barbados. During its formative stages on the 27th it moved rapidly on a northwestward path. On the 28th it passed through the Lesser Antilles, accompanied by winds of 35 to 50 knots well east of the center over the open Atlantic. Maximum winds in the Islands were briefly 35 knots in gusts.

On the 29th, reports from aircraft, ships, and island stations indicated Betsy had intensified to hurricane force while located some 200 miles north-northeast of San Juan, Puerto Rico. During the next 2 days Betsy slowed down, moved rather erratically, and lost some intensity. Maximum winds decreased to about 55 knots and the central pressure rose some 10 mb. On September 1, however, the hurricane began moving westward and by the night of the 2d, winds had increased to 110 to 130 knots near the center and the central pressure was 945 mb. On the 3d, hurricane Betsy skirted the Bahamas moving northwestward. During the 4th, it again slowed down, and gradually moved on a small clockwise loop as a large high pressure area over the eastern United States effectively blocked any further northward movement. Late on the 5th, Betsy began an unusual southward to southwestward movement through the northern Bahamas. On Labor Day, the 6th, the hurricane moved slowly parallel to Great Abaco Island, where hurricane force winds were reported for 20 hours, reaching a maximum of 128 knots during the late afternoon. On the morning of the 7th the hurricane center, about 40 miles in diameter, swept westward just north of the Bahamian capital at Nassau. Lowest pressure at this time was 957 mb. Violent winds and high tides caused moderate to heavy damage throughout the northern and central Bahamas.

Betsy moved westward during the afternoon and evening of the 7th and was the second major hurricane of record to approach Florida after moving southwestward. (The other storm passed inland November 4, 1935.) Betsy reached the coast in the upper Keys and extreme lower peninsula area during the early morning hours of the 8th. The southern edge of the hurricane eye passed over Marathon and the northern edge over Flamingo Ranger Station - indicating the eye was at least 35 miles in diameter as it moved across Florida Bay.

Lowest pressure reported in Florida was 952 mb. at Tavernier on the southern end of Key Largo. Winds there reached 140 m.p.h., estimated at 3:10 a.m., e.s.t., on the 8th. Wind speeds reached 100 m.p.h. or higher in gusts from about Ft. Lauderdale to Everglades City; sustained winds of 100 m.p.h. or higher were recorded between Big Pine Key and Homestead. Gales lasted about 38 hours at Miami.

Betsy's passage across lower Florida produced strong winds and high storm tides, especially from Ft. Lauderdale southward. The northern and middle Keys experienced two tidal surges: northerly winds in advance of the storm center caused flooding from Florida Bay and southerly winds following passage of the center produced flooding from the Atlantic and the Florida Straits. Tide levels reached 5 to 7 feet above m.s.l. on western Keys; and 7 to 9 feet on the central and eastern Keys. Tides reached 6.1 feet above mean low water along the Miami Beach oceanfront. Key Biscayne was completely inundated. Wave action on top of the high tides produced considerable damage from flooding or undermining of roads and buildings in low-lying areas south of Palm Beach.

Betsy's forward speed accelerated as it moved into the Gulf of Mexico around midday on the 8th. The direction of movement of the center gradually changed from west-northwest to northwest to north-northwest by the evening of the 9th. The storm had intensified during these days and winds were estimated at 130 kt. The center crossed the southeastern Louisiana coast about 10:00 p.m., c.s.t., passing inland near Grand Isle, where the lowest pressure was 948 mb. and tides were 8.8 feet, m.s.l. About midnight the center passed 35 miles southwest of New Orleans where the extreme wind was estimated at 125 m.p.h. and 4 hours later moved just to the west of Baton Rouge, where wind gusts reached 92 m.p.h. Betsy then turned northward and winds decreased to below hurricane force by the time the center moved into north-central Louisiana. The tropical storm passed west of Monroe about 2:30 p.m. on the 10th, then veered northeastward into eastern Arkansas.

It passed through eastern Arkansas on the 10th and 11th, then through northern Kentucky on the 12th as it continued to weaken and acquire extratropical charcteristics. Peak winds in Arkansas were near 45 m.p.h., in gusts, and only 20 to 30 m.p.h., or lower in other areas of the middle Mississippi and lower Ohio Valleys.

Moderate to heavy rainfall, totaling 3 to 7 inches, occurred over a broad area near the storm path from the lower Mississippi Valley into the middle Mississippi and lower Ohio Valleys with 1 to 3 inches in parts of West Virginia, western Maryland, and Pennsylvania during September 10, 11, and/or 12. The rains were beneficial in most places in providing needed soil moisture.

During Betsy's journey from Florida to Louisiana tides caused considerable local inundations and beach erosion along the Gulf coast. Tides along the Florida coast were estimated at 3 to 5 feet above normal south of Clearwater. Water levels were generally 4 to 5 feet, m.l.w., in northwestern and panhandle sections of Florida, with substantial variations locally due to coastline configuration. Along the Alabama coast tides ranged up to 4.7 feet above normal at Mobile. In Mississippi, water levels reached 7.4 feet, m.l.w. at Pascagoula and up to 10 feet or more above normal near the mouth of the Pearl River. The low, marshy Mississippi River Delta of southeastern Louisiana was almost completely inundated. Tides were at least 10 to 12 feet, m.s.l. over most of the area from Grand Isle to the Mississippi coast, but ranged locally up to about 15 feet above m.s.l. in some places. The Mississippi River at New Orleans rose 10.2 feet during the storm to a stage 12.4 feet above m.s.l.

Storm damage in Florida totaled about $140 million. The major damage occurred in the southeast coastal areas from Palm Beach southward and in the Keys. Direct wind damage was mainly to power and communication facilities, residential roofs, and glass breakage. Salt water inundation caused the major portion of the damage in Florida. It was widespread in the Miami-Miami Beach-Ft. Lauderdale oceanfront areas, on the upper Keys, and around Homestead. The 7,201-ton Panamanian freighter AMARYLLIS went hard aground 1-1/2 miles north of Palm Beach Inlet. Property damage in Alabama was light and concentrated mainly in the coastal and extreme southwest sections where some powerlines were downed and some minor damage to roofs occurred.

Most of the property damage in Mississippi, estimated at more than $80 million, also occurred along the coast where waves and high tides swept away most of the buildings near the beach from Biloxi westward. Trees were blown down and roofs blown off in much of southwestern Mississippi. Power and communications facilities suffered extensive damage.

In the area from the Louisiana coast inland to north of Baton Rouge, winds left power and communications in a snarl. More than 382,000 telephones were out of order, and over half the area had no electricity. Hardly a residence in New Orleans escaped some damage. The greatest damage, however, was due to flooding. Water moved across the marshlands, over back levees, up the Mississippi, and through Lakes Borgne and Pontchartrain; pushed along by the hurricane winds it eventually topped some levees. The devastating flood was not in the form of a wall of water, but it took only 20 minutes to attain maximum depths at some points. Damage was excessive. Greatest losses from wind and water occurred at New Orleans, and damage in all the region south and southeast of the city was extensive. Several communities along the Mississippi below New Orleans were almost completely destroyed.

All industries, including the offshore oil facilities and shipping, had heavy losses. Numerous oil drilling rigs, gathering lines, supply installations and materials were destroyed or damaged, and three refineries were forced to shut down operations.

Many ocean ships in the New Orleans area, including the freighters ELIZABETH LYKES, WINGED ARROW, WAKE FOREST VICTORY, RUTH LYKES, MASON LYKES, MSTS WATERFORD and HUNTSVILLE, broke moorings and went adrift in the Mississippi together with some 200 barges. Two nearly-completed hulls - the GENEVIEVE LYKES and LETITIA LYKES - drifted some 7 miles upriver before sinking one atop the other. Other vessels and barges ended up high and dry on the battures below the levees on both sides of the river.

Upriver around Baton Rouge several hundred barges sank or went aground, including one loaded with four large tanks containing 600 tons of potentially-dangerous liquid chlorine. The chlorine barge was located after a week's search and finally refloated safely on November 12.

Over 27,000 homes received major damage or were destroyed, and over 2,000 businesses were destroyed. Total property and crop damage in Louisiana has been estimated at about $1.2 billion.

Tornadoes were reported in connection with Betsy at Punta Gorda, Fla. (4:30 p.m., e.s.t., Sept. 8); Big Pine Key, Fla. (4:00 p.m., Sept. 8); Okaloosa County Fla. (4:05 p.m., Sept. 9); Theodore, Ala. (about midnight, Sept. 9); Cullman County, Ala. (8:00 p.m., Sept. 11); near Walnut, Miss. (6:30 p.m., c.s.t., Sept. 10).

Known fatalities in Florida totaled 4: 1 in Miami; 1 in West Plam Beach; 1 in Tampa; 1 in Panama City; 9 additional casualties were recorded over adjacent waters due to loss of small boats. Some 250,000 persons in the coastal parishes of Louisiana sought shelter in interior sections of the State. The known death toll in Louisiana due to flooding or falling buildings was 58, including 41 in Orleans Parish (New Orleans). Three fatalities in Arkansas and 1 in Mississippi were indirectly attributable to Betsy.

TROPICAL STORM DEBBIE, SEPTEMBER 24-30

Weather conditions became disturbed over the extreme western Caribbean late on September 23, and a weak tropical depression had formed in the Gulf of Honduras on the 24th. Heavy showers and thunderstorms in the eastern quadrants of the circulation during this period (23d-24th) left 6.21 inches of rain at Swan Island.

The depression remained weak, with winds in the 20- to 30-knot range from the 24th until the morning of the 28th, when Debbie was upgraded to a tropical storm on the basis of Air Force reconnaissance reports. During these days the circulation had moved northward and northwestward; crossed the tip of the Yucatan Peninsula on the 26th; then slowly turned back northward while moving at about 7 knots across the southern Gulf of Mexico.

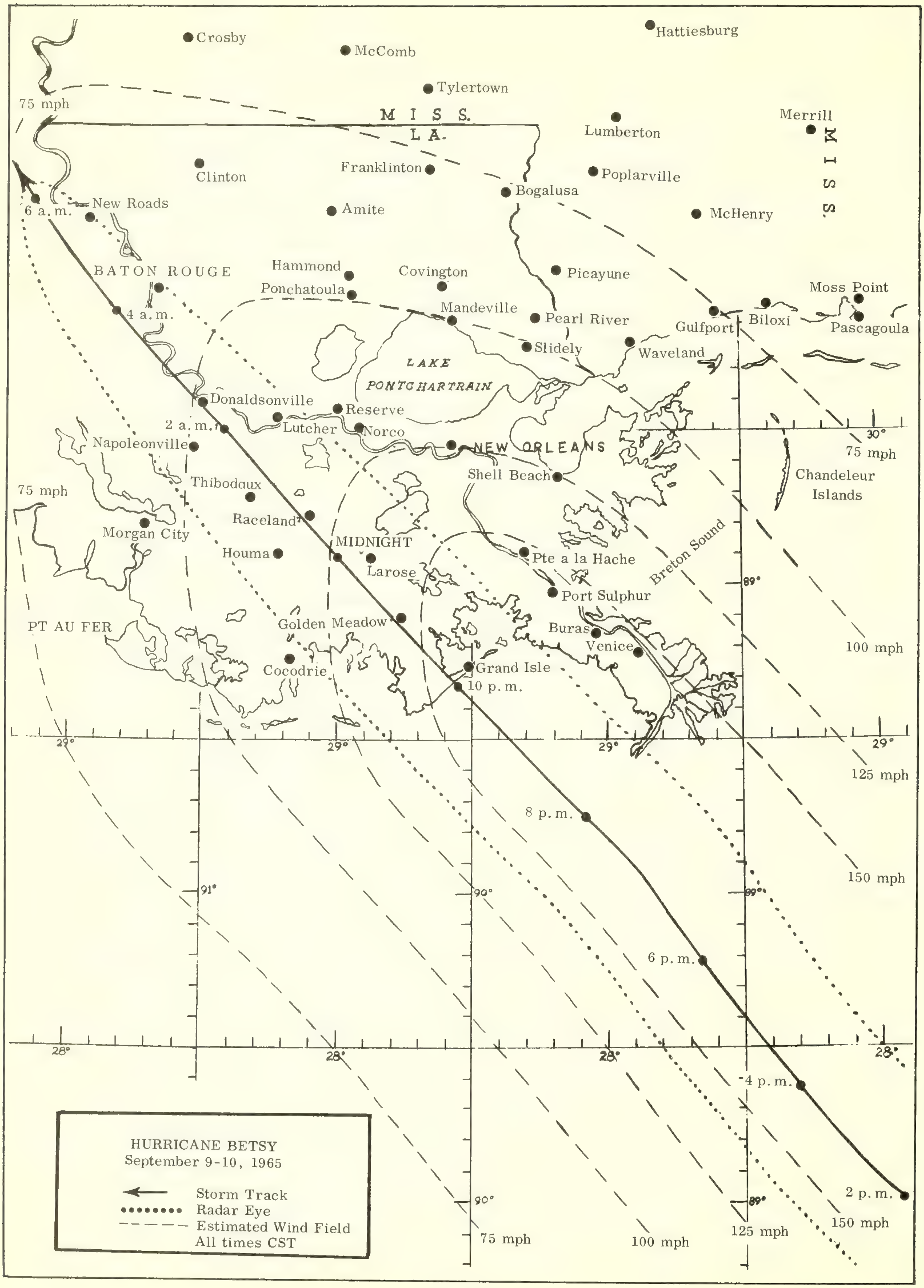
Highest winds on the 28th were about 30 to 45 knots in squalls extending out about 200 miles in the northeastern semicircle. Debbie moved northeastward during the 28th at about 10 knots, but that night it became almost stationary about 125 miles south-southwest of Pensacola and a short distance east of the mouth of the Mississippi River, and began to weaken as cool and dry air entered the circulation. Aircraft and coastal radar reports showed Debbie's tropical eye had dissipated by the evening of the 28th. On the morning of the 29th all that remained was a trough of low pressure along 89° W. longitude with 30- to 45-knot winds in a few squalls from Mississippi Sound to Apalachee Bay. By midday winds were only 20 to 30 knots, and by sundown the storm had broken up over the Chandeleur Islands, and no organized circulation remained.

The Gulf moisture brought into the coastal areas resulted in torrential rains over much of southern Alabama. This rain began during the night of the 29th and ended during the afternoon of the 30th. Other sections of Alabama, Georgia, northern Florida, and southern Mississippi also received locally heavy rains.

The greatest totals were reported from the city of Mobile and heavy amounts extended to the northeast into Monroe, Lee, and Tallapoosa Counties. In Mobile, rainfall from 9 p.m., c.s.t. on the 29th to the afternoon of the 30th totaled 16.85 inches. About half of this fell in 3-1/2 hours, from 5 a.m. to 8:30 a.m. on the 30th. The 24-hour rainfall was the greatest in 95 years of record.

Small streams and lowland areas were flooded. In Mobile and Pritchard flooding was severe and affected large areas of the city. Water entered many homes and buildings and extensive damage occurred to roads, streets, and bridges. Crops over a wide area were heavily damaged. Some flooding also occurred in southeastern Mississippi. Flood damages were extimated at $25 million.

Some tidal inundation occurred in Louisiana, from around Lake Borgne southward to the mouth of the Mississippi River as tides rose generally from 2 to 4 feet.



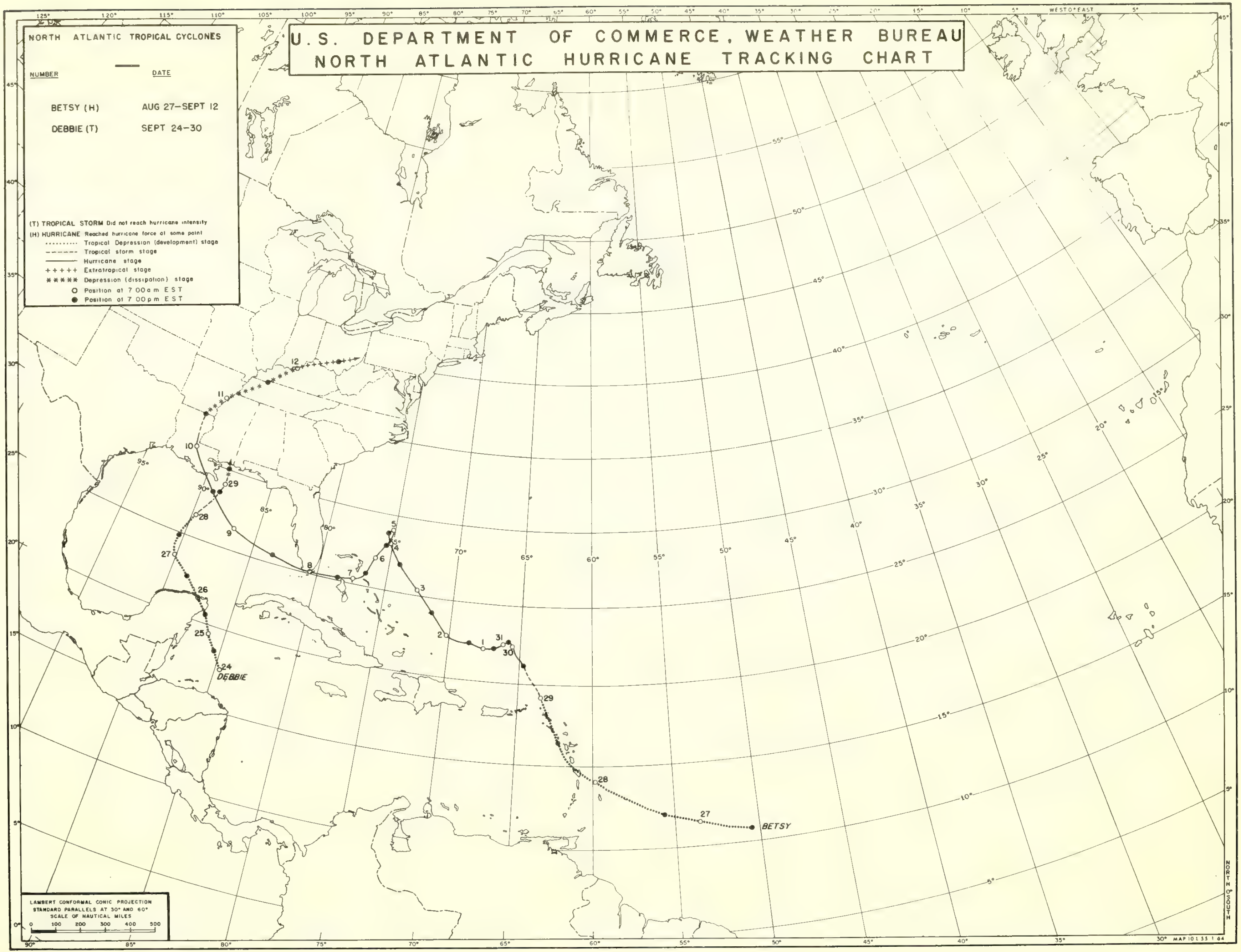
HURRICANE BETSY
September 9-10, 1965

TROPICAL CYCLONE DATA

HURRICANE BETSY, AUGUST 27-SEPTEMBER 12, 1965

Station	Date	Pressure (inches)		Wind (miles per hour)				Highest Tide (feet) #	Time+	Storm Rainfall (inches)	Remarks
		Low	Time+	Fastest Mile	Time+	Gusts	Time+				
FLORTDA											
Jacksonville WBAS	8	29.90	0140 EST					3.2 MLW		0.13	Tide 1.6 ft. above normal
Daytona Beach WBAS	8	29.83	0453	NE 38	7/2055	NE 56				0.19	Tide estimated 3 ft. above normal
Orlando WBAS	8	29.77	0418	E 27	1255	E 38				0.24	
Lakeland WBO	8	29.66	1523	NE 33	1420	NE 50*				0.87	
Melbourne Beach	8	29.72	1900			ENE 60	1900			1.01	
Vero Beach FAA	8	29.69	0800			E 65	0700			0.65	
West Palm Beach WBAS	8	29.46	0400	NNE 55	7 2340	NNE 60	07/2340			0.45	Ocean tides estimated 7ft. above normal; intercoastal waterway tides 3ft. above normal north sections of Palm Beach County, estimated 5 ft. above normal south sections.
Juniper Light	8	29.48	0430			NE 75	0220				
Port Everglades	8	29.38	0600			ENE 95	0600	7.0 MLW		4.25	
Fort Lauderdale WWIL	8	29.17	0425			NE 120Ƶ	0230			4.32	
Miami Beach	8			NNE 92	0252			6.1 MLW	0512	4.24	Power failed, wind may have gone higher.
Miami WBAS	8	29.02	0333	NE 69	0410	NE 94	0410			6.02	
Miami NHC	8	28.99	0300			NE 104	0246			6.21	
Homestead AFB	8	28.71	0500			ENE 140*	0620			10.89	
North Key Largo	8					E 160*	0500				Tide estimated 9 ft.
Plantation Key	8	28.30	0630	ENE 100Ƶ		140*				11.80	In eye 0530-0730, Sept. 8. Tide estimated 4.7 ft. Atlantic side, 5.5 ft. bay side.
Tavernier	8	28.12	0710	NW 120*	0300	NW 140*		7.7 MLW		6.40	
Big Pine Key	8	28.68	1120	SW 125*	1145	165*	1145			10.52	Tide estimated 8.0 ft. above normal anemometer blew away.
Grassy Key	8					160*	0715				
Key West WBAS	8	28.97	1040	SW 81	1020	SW 88	1020	3.8 MLW	0936	3.97	
Flamingo R.S.	8	28.40	0730			NNE 160*	0545	7.3 MLW			In eye 1 1/2 hours about 0730, Sept. 8.
Everglades City	8	29.19	1030			140*	0840			2.63	Tide 1.9 ft. below normal
Clewiston	8	29.50	0630	50		NE 68	0430			2.51	
Naples	8	29.24	1500			NNE 61	1226	4.8 MLW	9/1018	2.70	
Fort Myers Beach	8			NE 53		NE 70					
Fort Myers WBAS	8	29.43	1445	ENE 46	1051	ENE 56	1051	2.9 MLW	9/1530	0.37	
Tampa WBAS	8	29.65	1456	E 31	2055			5.0 MLW	9	0.42	Tide 3.8 ft. above normal on Sept. 9; below normal on 8th.
St. Petersburg	9							4.7 MLW	1342	0.26	
Cedar Key	9							6.3 MLW	1342		
Apalachicola WBO	9	29.79	0530 EST	SE 33	0920	SE 45	0912	4.5 MLW		0	
Pensacola WBAS	9	29.78	1840 CST	SE 43	2307	SE 60	2256	3.8 MLW	10 0824	0.35	
ALABAMA											
Mobile WBAS	9	29.70	2355 CST	SE 32	2355	SE 44	2355			2.19	Tide 4.7 ft. above normal
Dauphin Island	9					80*					
MISSISSIPPI											
Pascagoula	9	29.63	2230	ESE 46	10/0200	ESE 60	10/0200	7.4 MLW	10/0200	0.90	Tide 6.5 ft. above normal
Gulfport	10					100*					
Bay St. Louis	10					120*				3.00	Tide 7.0 ft. above normal
Purvis	10	29.35	0400	60*	0400	90*	0400			2.02	
Picayune	10			65		85				3.98	
Columbia	10	29.43	0500	SE 50	0430	SE 67	0430			1.03	
Tylertown	10			S 50*	0400	S 60*	0400			1.60	
McComb	10			NE 28	0256	NE 63	0457			3.93	
Vicksburg	10	29.45	1105	SE 34	1440	SE 55*	1440			2.23	
Jackson WBAS	10	29.61	0930	SE 43	1210	SE 52	1047			6.22	
Port Gibson	10			SSE 30*		SSE 60*				1.76	
LOUISIANA											
Grand Isle	9	28.00	2151	NNE 105*	2000	NNE 160*	2000	8.8 MSL	2250	3.20+	
Thibodaux	10	28.02									Calm 0030-0205, sky cleared
Houma	9	28.00						2.8 MSL	1500	5.71	
New Orleans WBAS	9	28.65	2347	E 69	2355	E 112	2353			4.09	
New Orleans WBO	9	28.75	2340	125*	2345					1.63+	
New Orleans (Audibon)	9							12.4 MSL		5.13	Tide is Mississippi River level
Schriever	10	28.26	0015	N90-95*	0000	N95-110*	0000			5.80	Calm 0015-0125
Paradis	9			E 135*						3.60	
Port Sulphur	9	28.84	2200	SSE 136	2200	SE 145	2230				
Point a la Hache	9							15.2 MSL	2240		High water mark. Gage out 2300.
Golden Meadow	9	28.60	2230			NE 160*	2230	2.9 MSL	1500		Calm 2300-2345
Franklin	10	28.65	0235	WNW 68	0330	WNW 85	0330	3.8 MSL	0800	5.25	
Lafayette	10	29.00	0358	NW 49	0358	NW 76	0358			3.97	
Morgan City	9			N 100*	2000	N 128*	10/0000			5.70	
Baldwin	10	29.00	0215			NW 100*	0200	3.5 MSL		3.98	
Quarantine	9	28.62	2100			163*		9*			
Elizabeth	10	29.48	1000			NW 50	0700			3.81	
Jennings	10	29.08	0330	NE 45	0245	NE 70	0250			0.97	
Lake Charles WBAS	10	29.51	0500	NW 26	0456	NW 36	0456			0.28	
Cameron	10	29.58	0300	NNW 23	0200						
Crowley	10	29.18	0422	NNE 60*	0400	N 74*	0430			4.87	
Baton Rouge WBAS	10	28.53	0356	ENE 58		NNE 92	0215	15.5 MSL	0445	3.49	Lowest pressure of record. Tide is Mississippi River level.
Clinton	10	28.89	0420			ENE 110*				3.83	
LSU-Ben Hur	10	28.63	0332							5.30	Calm 0250-0400
Burtville	10	28.40	0345							3.41	Calm 0315-0400
Alexandria WBAS	10	29.10	0918	N 46	0533	N 62	0533			3.07	
Bunkie	10	28.84	0700	NE 40*	0600	NNW80-85*	0630			3.35	
Melville	10	28.65	0630	NW 60*		NW 90*				5.30	Calm 0630-0730, sky cleared; winds before calm.
New Roads	10			NE 90*	2330 9	NE 100*	0230			5.21	Near calm 0430-0530
Opeloosa	10	29.03	0450	NW 60		NW 75				4.86	
Bastrop	10	29.32	1100			NE 55	1100			4.38	
Monroe FAA	10	29.11	1435	NNE 60	0804					4.37	
Winfield	10	29.19	1105	NE 50*	0900	ENE 70*	0815			2.90	
Cotton Valley	10	29.63	1700	ENE 37*	1320	NW 46*	1735			4.11	
TEXAS											
Port Arthur WBAS	10	29.60	0358	W 26	1134			2.4 MSL	09/1500	0.02	
ARKANSAS											
Pine Bluff FAA	10			NE 34	1658	NE 46	1658			3.87	
Walnut Ridge FAA	10			NE 29	0900	NE 46	0900			6.33	
Little Rock WBAS	11	29.56	0200	NE 28	10 2055	NE 34	10/2055			3.25	

+ Time are Eastern Standard in most of Florida; central standard in other areas
# Tides are Mean Low Water (MLW); or Mean Sea Level (MSL) as indicated
* Estimated
Ƶ End of Scale



U.S. DEPARTMENT OF COMMERCE, WEATHER BUREAU
NORTH ATLANTIC HURRICANE TRACKING CHART

NORTH ATLANTIC TROPICAL CYCLONES
NUMBER
DATE
BETSY (H)
AUG 27–SEPT 12
DEBBIE (T)
SEPT 24–30
(T) TROPICAL STORM Did not reach hurricane intensity
(H) HURRICANE Reached hurricane force at some point
.... Tropical Depression (development) stage
– – – – Tropical storm stage
——— Hurricane stage
+ + + + + Extratropical stage
✱✱✱✱✱ Depression (dissipation) stage
○ Position at 7:00 a.m. EST
● Position at 7:00 p.m. EST
BETSY
DEBBIE
LAMBERT CONFORMAL CONIC PROJECTION
STANDARD PARALLELS AT 30° AND 60°
SCALE OF NAUTICAL MILES
0 100 200 300 400 500
WEST 0° EAST
NORTH 0° SOUTH
MAP 10135 1 64

STORM SUMMARY

SEPTEMBER 1965

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				∅ ALL OTHER			
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE	
								PROP-ERTY	CROPS			PROP-ERTY	CROPS			PROP-ERTY	CROPS			PROP-ERTY	CROPS			PROP-ERTY	CROPS			PROP-ERTY	CROPS
Alabama	3	3	0	0	4																					0	0	7	6
Alaska *																													
Arizona						0	0	2	0																				
Arkansas	3	1	0	0	4																								
California										0	0	6	5																
Colorado	1	1	0	0	0	0	0	°3	C	0	2	°4	C																
Connecticut *																													
Delaware										0	1	4	0	0	1	0	0												
Florida	2	1	0	0	0					B 8	?	°8	C																
Georgia	1	1	0	0	0					0	0	3	0	0	0	4	0									0	0	5	3
Hawaii														0	0	4	0									0	0	°4	C
Idaho *																													
Illinois	4	2	0	34	6	0	0	4	6	0	0	6	5	0	0	4	0									0	0	4	4
Indiana	4	1	0	0	5	0	0	3	4	0	3	4	5																
Iowa	8	4	0	4	6	0	0	5	5	0	3	5	5	1	4	0	0									0	0	5	5
Kansas	8	4	0	27	6	0	0	6	4	0	15	5	3	1	9	5	3									RF1	0	5	4
Kentucky								4	?			?	?																
Louisiana										58	17,500+	9	7																
Maine	1	1	0	0	3					0	0	4	0													0	0	2	0
Maryland *																													
Massachusetts										0	1	4	0													0	0	R 4	0
Michigan	2	0	0	0	4	0	0	4	C	0	6	6		0	0	5													
Minnesota	1	1	0	0	4									2	0	3	3									0	0	0	8
Mississippi	2	1	0	0	3					0	0	4	0	0	1	1	0									0	0	7	7
Missouri	9	3	0	0	5	0	1	5	0	0	2	4	6																
Montana *																													
Nebraska										0	0	4	0					0	0	3	4								
Nevada *																													
New Hampshire *																													
New Jersey *																													
New Mexico	1	1	0	0	4									0	0	4	0									0	0	4	0
New York	1	1	0	0	4						1	5				4													
North Carolina	1	1	0	0	4									0	0	4	0									0	0	4	0
North Dakota	1	1	0	0	4	0	0	4	5	0	0	4	C	0	0	3	0									0	0	4	4
Ohio *																													
Oklahoma	5	2	0	0	4	0	0	4	4	0	0	4	3	1	1	0	0									0	0	6	6
Oregon *																													
Pacific Area																										0	0	°4	C
Pennsylvania										0	2	4	0	1	0	5	0												
Puerto Rico	1	1	0	0	3																					2	0	4	0
Rhode Island *																													
South Carolina																										0	0	3	0
South Dakota *																													
Tennessee										0	0	°5	C	0	0	5	0									0	0	°4	C
Texas	4	3	0	0	5	0	2	0	0																				
Utah						0	0	3	4					1	2	5	4	0	0	4	4					0	8	0	6
Vermont *																													
U. S. Virgin Is. *																													
Virginia *																													
Washington *																													
West Virginia										0	0	2	0	0	0	2	0											F 4	
Wisconsin	1	1	0	0	3					0	0	6	5	0	1	5	0									0	0	W 6	7
Wyoming																		0	0	°6	C								

° Includes crop damage
C Crop damage
B Hurricane Betsy

RF Rain, flash floods
R Rain
F Flash flood
W Water damage

* No occurrence of storms or unusual weather phenomena.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
∅ For breakdown of "All Others", and for detailed listing of other storms, see the U. S. Weather Bureau monthly publication STORM DATA.

† Storm damages are placed in categories varying from 1 to 9 as follows:

1	Less than $50
2	$50 to $500
3	$500 to $5,000
4	$5,000 to $50,000
5	$50,000 to $500,000
6	$500,000 to $5,000,000
7	$5,000,000 to $50,000,000
8	$50,000,000 to $500,000,000
9	$500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

SEPTEMBER 1965

The most damaging floods during September occurred in northeastern Kansas, northwestern Missouri, and central Oklahoma. Soldier Creek reached the highest stage since records began in 1958 at Delia, Kans. Record high September stages were reported at a few points along the lower Missouri River. Extensive local flash flooding occurred in the Arkansas and Red Basins in Oklahoma. Record to near record stages were reached on some streams. Heavy agricultural losses were reported. Over 1,000 families were evacuated. Record high September stages occurred in the Upper Mississippi Basin at and below Keithsburg, Ill.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--Minor flooding occurred in tributaries of the Upper Mississippi River in Minnesota, Iowa, Wisconsin, Missouri, and Illinois during September. One of the hardest hit areas was the Kickapoo River Valley in Wisconsin. Three distinct rises occurred in this valley. Heavy rainfall over the Wisconsin River drainage produced a 4-foot rise at Portage, Wis., on the 23d. The Lemonweir River which enters the Wisconsin River just downstream from the Castle Rock hydro plant overflowed its banks and flooded parts of New Lisbon and Mauston, Wis. The lower Maquoketa River in Iowa exceeded flood stage by 8 feet on the 22d.

The large amount of runoff contributed by the tributaries to the main stem of the Mississippi produced record September floods at many reporting points. The Mississippi was out of its banks from Keithsburg, Ill., to Cape Girardeau, Mo., a distance of nearly 400 miles. At Quincy, Ill., and Hannibal, Mo., the Mississippi reached the highest September level since September 1938. At St. Louis, Mo., the crest of 30.4 feet on September 28 was the highest September stage since 1905. At Chester, Ill., the crest of 29.8 feet on the same date was 5.6 feet higher than the previous highest September stage of 1951. Stages at other points were generally the highest September stages since 1961. Flooding continued into October in the reach at and below Louisiana, Mo., except at St. Louis, Mo., where the river was out of its banks on September 27-29.

The flooding in the Upper Mississippi Basin was due to heavy rains during the 48-hour period ending on the 21st. Dubuque, Iowa, reported 7.01 inches during this period. Other stations reported generally 4 to 6 inches of rain. The rainfall on the 26-29th produced moderate rises which continued into October. Rainfall during September was much above normal over the basin, ranging from near 2 inches above the long-term mean in the Lake Itasca, Minn., area to near 12 inches above in the Guttenberg-Dubuque, Iowa, area. Record to near record rainfall amounts were reported during September at many stations throughout the basin.

Flood losses were mostly agricultural and may run into several million dollars. Principal crops damaged were corn and soybeans which were still green and could not be harvested. Dollar damage due to flooding in Minnesota and Wisconsin was negligible. However, damage to crops because of excessive rainfall and little sunshine may run into millions of dollars.

Missouri Basin.--Locally heavy rains during the evening of the 6th and the morning of the 7th caused the Papillion Creek at Ft. Crook, Nebr., to overflow its natural banks by over 6.5 feet on the morning of the 7th. The recent addition of a protective levee prevented any flooding in that area. The crest of 25.55 feet was within inches of the top of this protective levee. However, the locally heavy rains with poor surface drainage caused considerable streambank erosion and property damage along Cole Creek in northwest Omaha, Nebr. The overflow of the Big and Little Papio Creeks southwest of Omaha and northeast of Ralston, Nebr., caused flooding of streets, some residential and trailer court areas, and undeveloped land. Over 300 persons were evacuated during the night. The U. S. Engineers estimated the total damages at $540,000.

Repeated heavy rains brought widespread and prolonged flooding in the lower Missouri Basin during September. There was flooding somewhere in the lower basin on all but 5 days of the month.

The first heavy rain of September occurred on the 3d and 4th in west-central Missouri, northeastern Kansas, and southwestern Iowa. Flooding resulted on many tributary streams in Missouri and Kansas. Additional rains on the night of the 5th and 6th prolonged the flooding through the 6th on the Lamine River at Clifton City, Mo. Additional flooding resulted on the Blackwater at Blue Lick, Mo., from the 6th to the 9th. There was also minor flooding on the Gasconade at Jerome, Mo., on the 6th and on the Nishnabotna River at Hamburg, Iowa, on the 7th.

Flooding on the Marais Des Cygnes River in the reach from Ottawa, Kans., to La Cygne, Kans., on Sept., 4-9 resulted from 3 to 6 inches of rainfall. Flooding also occurred on the Osage River from Schell City, Mo., to St. Thomas, Mo., between the 5th and 11th.

Rains up to 9.5 inches occurred on the nights of the 7th and 8th in extreme northeastern Kansas, southeastern Nebraska, and northwestern Missouri. These rains caused the main stem of the Missouri to go out of its banks at St. Joseph, Mo., on the 8th and reach bankfull stage at Waverly, Mo., on the 9th.

Minor flooding occurred on the Lamine River at Clifton City, Mo., on the 14th from heavy rains of the previous night. Heavy rain occurred again in west-central Missouri on the night of the 14th and 15th. These rains caused the Blackwater to go above flood stage at Blue Lick, Mo., on the 15th. Flooding continued until the 27th as heavy rains fell repeatedly in west-central Missouri. Minor flooding occurred on Moniteau Creek at Fayette, Mo., on the 16th and on the Little Platte at Smithville, Mo., on the 17th.

The most widespread and damaging floods during the month developed from the heavy rains on the 18th-21st in northeast Kansas and northwestern Missouri. The Blue, the Little Blue, the Platte, the Chariton, and the Grand Rivers in Missouri went out of their banks on the 20th. In Kansas, the Turkey, Lyon, and Stranger Creeks overflowed their banks on the same date. The flooding was intensified and more widespread by the 21st. Moderate to heavy flooding was centered on the smaller tributaries of the Kansas River on the 21st-22d. Flooding extended to the Marais des Cygnes, the Republican, the Big Blue, and the lower Smoky Hill River basins in Kansas. Notably high tributary stages in the Kansas River Valley were within 1.5 feet of the 1951 levels. Soldier Creek at Delia, Kans., reached the highest stage since records began in 1958. Cross Creek overflowed into parts of Rossville, Kans., for the first time since 1951. Considerable agricultural flooding occurred along Cross and Vermillion Creeks. The overflow on Stranger Creek near Tonganoxie, Kans., had been exceeded on only a few occurrences. Partial evacuation was effected on the upper Stranger Creek at Easton, Kans., where flood waters entered lower areas on the east side of town. Heavy agricultural losses occurred along Stranger, Vermillion, and Cross Creeks. Crests on the Grand River at Sumner, Mo., were more than 10 feet above flood stage. On the Platte, the crest at Agency, Mo., was near 6 feet above flood stage and on the Little Platte, the crest at Smithville, Mo., was over 4 feet above flood stage.

The main stem of the Missouri went out of its natural banks at several points at and below St. Joseph, Mo., on the 21st. By the 23d, it was overflowing its banks to its conjunction with the Mississippi River. Record high September stages were reached at Hermann and St. Charles, Mo., on the 25th and the 27th, respectively. The crest of 30.6 feet at St. Charles was the highest September crest since 1951 when it reached a stage of 29.0 feet. The Missouri was back within its banks at all points by the end of the month except at St. Charles, Mo.

On the 30th, 4 to 5 inches of rain in the upper Big Blue River basin in the Surprise, Nebr., area caused locally high stages past Ulysses, Nebr. Locally heavy rainfall caused the Little Blue River to go out of its banks at Deweese, Nebr., on the 30th.

Ohio Basin.--Widespread heavy rain and scattered thunderstorms on the 11th and 12th produced minor floods on the smaller tributaries of the Scioto River in Ohio. No damage resulted from the light overflow of Paint Creek at Bourneville, Ohio, on the 12th. The flooding was due to rainfall averaging 2.1 inches on the lower Scioto.

White Basin.--Moderate to heavy rainfall occurred over the eastern half of the White River basin on the 11th and 12th. Rainfall over the Cache Basin in Arkansas averaged 5.25 inches during the duration of the storm. It went above flood stage at Patterson on September 12. Additional rain (3 inches) on the 21st-23d was sufficient to keep the Cache out of its banks until October 12.

The Black River exceeded flood stage at Black Rock, Ark., on the 23d and 24th. The crest on the 23d was 2.6 feet above flood stage. This overflow was due to 3 inches of rain on the 21st and 22d.

Arkansas Basin.--Heavy rains on the 6th caused minor flooding on the Chikaskia at Corbin, Kans., and on the Walnut at Augusta, Kans. This was the 4th time this year that the Chikaskia had gone over its banks at Corbin, Kans. Downstream at Blackwell, Okla., the crest was 5 feet below flood stage.

The equinoctial storm of the 18th to the 22d was more intense, causing extensive local flash flooding on Kingfisher, Uncle Johns, and Cottonwood Creeks at Kingfisher and Guthrie, Okla. Uncle Johns Creek at Kingfisher reported a high-water mark of 26.3 feet. The highest previous report was 25.0 feet in September 1961. One hundred thirty city blocks were inundated forcing 80 families from their homes. Thirteen thousand acres were flooded in Kingfisher County from Uncle Johns and Dead Indian Creeks. At Guthrie, Okla., the Cottonwood Creek crested 14 inches below the record flood of 1959. This was the first time since September 1961 that the Cimarron River had been out of its banks at Guthrie and Perkins, Okla. Keystone Reservoir reached a record elevation of 728.23 feet at midnight on the 29th. The previous record was 726.9 feet on November 24, 1964. One thousand families or more had to be evacuated from the area by early morning of the 21st. At Stillwater, Okla., nearly 6 inches of rain on the 20th and 21st caused Stillwater Creek to go out of its banks. At least 60 persons had to be evacuated from their homes. Bird Creek reported 1/2 to 1-1/2 feet of flooding from Avant, Okla., to Owasso, Okla. At Copan, Okla., the Little Caney River exceeded bankfull stage by 1.1 feet. Flood damage reports are incomplete but are expected to range between $1-1/4 million and $1.5 million at Kingfisher and Guthrie. Greatest damages were to residential and public property, including homes, home furnishings, streets, and bridges. The principal crop damage was to alfalfa.

Minor lowland flooding occurred along the Cottonwood River at Cottonwood Falls, and Emporia, Kans., between the 21st and 25th. Minor flooding occurred on the upper Neosho at Emporia, Kans., on the 22d. Flood losses were small.

Heavy rains over the North Canadian and Canadian Rivers in Oklahoma on the 20th and 21st resulted in flash flooding of creeks. The North Canadian at El Reno, Okla., exceeded flood stage briefly on the 21st. The Canadian River at Union City, Okla., crested during midmorning on the 21st, 1.7 feet above flood stage.

Most extensive damage was caused by flash flooding during the night of the 20th and morning of 21st. Highways, rural roads, and approaches to bridges were hardest hit with damage estimates to public property over $1/2 million in the Canadian Basin. About 100 families in a vulnerable area at El Reno were evacuated. Property damage in the city approached $100 thousand.

Red Basin.--Heavy rain over the upper Saline River caused light overflow at Benton, Ark., on the 23d. The heaviest rain occurred in the upper and central portions with amounts over 7 inches.

Heavy rains, 4 to 8 inches, over southwestern Oklahoma late on the 19th and early on the 20th caused flash flooding of creeks. Damage to public roads was moderately heavy. Additional heavy rains, up to 13 inches, occurred in southwestern and central Oklahoma on the 20th and 21st, resulted in flooding on the Washita River at Carnegie and Anadarko, Okla., between the 20th and 24th. Agricultural damage was estimated in the millions due to erosion of topsoil. Six to 8 inches of topsoil was stripped from entire fields in Fort Cobb, Okla., area. Several families in the Mountain View community of Kiowa County were evacuated.

Lower Mississippi Basin.--The flooding on the St. Francis River at Fisk, Mo., and St. Francis, Ark., in late September and early October establishes a record for so early in the fall. September, a month with very little rain and runoff in this area had heavy rain during September 1965. Heavy rains occured on the 11th and 12th with totals of 6.20 inches at Fisk, Mo., 3.74 inches at Wappapello Dam, and 7.13 inches at St. Francis, Ark. Above Wappapello Dam, the totals ranged from about 1-1/4 inches in the upper basin to almost 7 inches near the Dam. Slightly over 1 inch of rain was reported on the 14th and 15th. Rains began again on the 21st, with the heaviest rains occurring generally above Wappapello Dam on the 22d. The amounts ranged from 1.63 inches at Wappapello Dam to 5.62 inches at Fredericktown, Mo.

Major flooding associated with Hurricane Betsy occurred in New Orleans, La., in many sections of Jefferson Parish, and in most of St. Bernard and Plaquemines Parishes. The Mississippi River overflowed the levees on both sides as far north as Point-a-la-Hache, La. This was water forced northward from the Gulf of Mexico and was not associated with freshet conditions. Hurricane Betsy was one of the most intense and destructive storms ever to strike the United States. The storm knocked out the New Orleans power system, its communications system, and its water purification system, leaving hundreds of thousands of people helpless and bringing the city's economic life to a dead halt.

FLOOD STAGE DATA

(All dates in September unless otherwise specified) SEPTEMBER 1965

River and station	Flood stage	Above flood stages -dates		Crest*	
		From–	To–	Stage	Date
MISSISSIPPI SYSTEM	Ft.			Ft.	
Upper Mississippi Basin					
Root: Hokah, Minn.	47	20 29	21 Oct. 1	E47.5 48.4	20 30
Upper Iowa: Dorchester(nr), Iowa	14	29	Oct. 1	15.8	Oct. 1
Kickapoo: Soldiers Grove, Wis.	723	20 29	23 Oct. 1	724.5 723.7	21 Oct. 1
Gays Mills, Wis.	698	22 Oct. 1	23 Oct. 1	699.1 698.0	22 Oct. 1
Steuben, Wis.	8	(10 (20 (30	14 26 Oct. 4	9.0 9.3 9.2	12 23 Oct. 2
Maquoketa: Maquoketa, Iowa	13	21	22	21.0	22
Wapsipinicon: DeWitt, Iowa	10	21	26	11.5	24
Pecatonica: Martintown, Wis.	11	21	27	15.05	25
Freeport, Ill.	13	22	27	13.7	23
Shirland, Ill.	10E	22	Oct. 3	13.45	27
Rock: Joslin, Ill.	10	22	Oct. 5	#11.6	24
Cedar: Charles City, Iowa	12	29	1/	15.25	30
Finchford, Iowa	12	21	24	14.4	21
Iowa: Marshalltown, Iowa	13	20	25	15.2	23
Wapello, Iowa	10	21	Oct. 2	16.0	23
North Skunk: Sigourney, Iowa	16T	20	25	22.6	21
Oskaloosa, Iowa	15	21	21	15.6	21
Brighton, Iowa	14	20	27	20.7	21
Skunk: Augusta, Iowa	15	21 21	28 23	24.9 11.5	24 22
Boone: Webster City, Iowa	10	29	30	#10.2	29
North Racoon: Jefferson, Iowa	10	29	Oct. 1	12.4	30
Des Moines: Tracy, Iowa	14	22	23	16.2	22
Eddyville, Iowa	15	21	23	19.0	23
Ottumwa, Iowa	10	20	23	13.65	21
Fox: Wayland, Mo.	15	23	23	15.2	23
Salt: New London, Mo.	19	17	19	23.4	18
Sangamon: Riverton, Ill.	12	17	27	17.3	18
Big Muddy: Murphysboro, Ill.	16	27	Oct. 1	16.9	29
Mississippi: Keithsburg, Ill.	12	23	26	13.4	25
Burlington, Iowa	15	24	26	16.0	25
Keokuk, Iowa	16	23	26	16.9	25
Quincy, Ill.	17	23	28	19.6	25
Hannibal, Mo.	16	23	29	19.9	26
Louisiana, Mo.	15	23	30	18.1	26
L&D #24 Tw, Clarksville, Mo.	25	23	30	28.4	26
L&D #25 Tw, Winfield, Mo.	26	23	30	28.5	27-28
Grafton, Ill.	18	24	Oct. 1	20.9	28
L&D #26 Tw, Alton, Ill.	21	24	Oct. 1	24.65	28
St. Louis, Mo.	30	27	29	30.4	28
Chester, Ill.	27	25	Oct. 1	29.8	28
Cape Girardeau, Mo.	32	26	Oct. 1	33.6	29
Missouri Basin					
Papillion Creek: Ft. Crook, Nebr.	19	7	7	25.55	7
Nishnabotna: Hamburg, Iowa	18	7	7	18.1	7
Nemaha: Falls City, Nebr.	20	21	21	22.8	21
Little Platte: Smithville, Mo.	27	17 21	17 22	28.7 31.5	17 21
Platte: Agency, Mo.	20	20	24	25.95	22
Beaver Creek: Beaver City, Nebr.	11	Oct. 1	Oct. 1	11.4	Oct. 1
Sappa Creek: Oberlin, Kans.	11	29	Oct. 2	#12.85	1
Republican: Clay Center, Kans.	15	21	21	17.2	21
Wakefield, Kans.	11	21	21	11.0	21
Missouri Basin (Cont'd.)	Ft.			Ft.	
North Fork Solomon: Lenora, Kans.	10	(6 (21	6 21	11.0 #12.0	6 21
Turkey Creek: Abilene, Kans.	15	20	21	23.5	21
Lyon Creek: Woodbine, Kans.	17	20	21	24.75	21
Chapman Creek: Chapman, Kans.	19	21	22	18.9	22
Mill Creek: Washington, Kans.	18	21	21	18.3	21
Little Blue: Deweese, Nebr.	8	30	Oct. 1	9.8	Oct. 1
Black Vermillion: Frankfort, Kans.	19	21	22	27.6	21
Fancy Creek: Winkler, Kans.	11	20	21	18.4	21
Big Blue: Ulysses, Nebr.	15	30	30	#16.8	30
Blue Rapids, Kans.	1101	21	21	1102.6	21
Vermillion Creek: Wamego, Kans.	24	21	21	28.15	21
Mill Creek: Paxico, Kans.	19	21	21	22.7	21
Soldier Creek: Delia, nr, Kans.	17	21	22	21.05	21-22
Topeka, Kans.	12	21	22	(13.6 (13.1	21 22
Delaware: Valley Falls, Kans.	22	21	22	24.2	22
Stranger Creek: Easton, Kans.	15	20	22	22.5	21-22
Tonganoxie, nr, Kans.	22	21	24	26.3	23
Wakarusa: Lawrence, nr, Kans.	23	21	22	25.8	22
Kansas: LeCompton, Kans.	17	22	22	17.3	22
Blue: Kansas City, Mo. (Bannister)	21	4 20	4 20	26.7 21.5	4 20
Little Blue: Lake City, nr, Mo.	18	20	22	(19.9 (22.95	20 22
Crooked: Richmond, nr, Mo.	20	22	22	26.2	22
Wakenda: Carrollton, Mo.	20	21	22	22.7	22
Grand: Pattonsburg, Mo.	25	21	23	31.1	22
Gallatin, Mo.	21	21	24	27.0	23
Chillicothe, Mo.	24	20	25	31.7	22
Sumner, Mo.	26	20	28	36.2	24
Brunswick, Mo.	12	21	29	20.95	25
Trenton, Mo.	20	21	21	20.2	21
Chariton: Rathbun, nr, Iowa	18	20	24	22.4 22.95	21 22-23
Novinger, Mo.	20	21	22	22.1	21
Prairie Hill, Mo.	15	21	27	19.9	23
Lamine: Clifton City, Mo.	19	4 14 21	6 14 23	27.2 19.5 E25.0	5 14 22
Blackwater: Valley City, Mo.	20	16 20	16 22	26.15 E27.5	16 20
Blue Lick, Mo.	25	4 6 15	4 9 27	25.4 27.5 (28.4 (31.3 (30.0	4 8 16 20 24
Moniteau Creek: Fayette, Mo.	16	16	16	17.0	16
Pottawatomie Creek: Garnett, nr, Kans.	26	4 21	5 22	28.1 28.2	4 21
South Grand: Brownington, Mo.	19	4 23	10 26	29.1 24.2	7 24
Marais des Cygnes: Reading, nr, Kans.	18	21	21	25.8	21
Melvern, Kans.	23	21	22	25.4	22
Ottawa, Kans.	27	4	5	31.5	4
Osawatomie, Kans.	28	(5 (21	7 24	33.6 31.2	[illegible] 23
LaCygne, Kans.	25	5 22	[illegible] 25	29.2 28.5	8 24
Trading Post, Kans.	24	22	23	24.35	23
Osage: Schell City, Mo.	25	(5 (22	11 28	28.3 28.9	7 24
Lakeside, Mo.	60	(5 (22	11 29	61.6 60.6	6 24

FLOOD STAGE DATA

(All dates in September unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest*	
		From–	To–	Stage	Date
Missouri Basin (Cont'd.)	Ft.			Ft.	
Osage (Cont'd.): St. Thomas, Mo.	23	7	7	23.0	7
Gasconade: Jerome, Mo.	15	6	6	15.4	6
Missouri: St. Joseph, Mo.	17	8 21	8 22	18.9 17.7	8 21
Leavenworth, Kans.	19	21	22	19.8	21
Napoleon, Mo.	17	22	23	18.3	22
Lexington, Mo.	22	21	24	24.9	22
Waverly, Mo.	18	9 21	9 25	18.0 23.2	9 23
Miami, Mo.	18	21	25	23.1	23
Glasgow, Mo.	25	21	26	30.0	24
Boonville, Mo.	21	22	27	25.2	24
Jefferson City, Mo.	23	22	27	26.9	24
Hermann, Mo.	21	23	29	27.3	25
St. Charles, Mo.	25	23	30	30.6	27
Ohio Basin					
Paint Creek: Bourneville, Ohio	10	12	12	11.0	12
White Basin					
Black: Black Rock, Ark.	14	23	24	16.6	23
Cache: Patterson, Ark.	7	12	Oct. 12	(8.6 (8.5	18 24
Arkansas Basin					
Little Arkansas: Sedgwick, Kans.	18	21	22	21.3	21
Walnut: Augusta, Kans.	23	6 19	6 22	27.25 24.5	6 20
Chikaskia: Corbin, Kans.	10	6	6	10.35	6
Blackwell, Okla.	22	21	21	25.4	21
Kingfisher Creek: Kingfisher, Okla.	22	21	21	22.8	21
Arkansas Basin (Cont'd.)	Ft.			Ft.	
Uncle Johns Creek: Kingfisher, Okla.	24	21	21	26.3	21
Cottonwood Creek: Guthrie, Okla.	23	21	22	27.6	21
Cimarron: Dover, Okla.	17	21	21	18.7	21
Guthrie, Okla.	10	21	22	12.3	21
Perkins, Okla.	12	21 22	21 22	12.5 12.85	21 22
Little Caney: Copan, Okla.	21	21	22	12.1	21
Bird Creek: Avant, Okla.	16	21	21	17.5	21
Sperry, Okla.	21	22	22	22.2	22
Owasso, Okla.	25	22	22	#25.0	22
Cottonwood: Cottonwood Falls, Kans.	9	21	22	#10.6	21
Emporia, Kans.	20	21	25	#23.9	22
Neosho: Emporia, Kans.	24	22	22	#25.5	22
North Canadian: El Reno, Okla.	18	21	21	18.3	21
Canadian: Union City, Okla.	7	21	21	8.65	21
Arkansas: Arkansas City, Kans.	16	22	22	16.7	22
Red Basin					
Saline: Benton, Ark.	20	23	23	20.8	23
Washita: Carnegie, Okla.	18	20	24	23.5	22
Anadarko, Okla.	19	23	24	22.25	23
Lower Mississippi Basin					
St. Francis: Fisk, Mo.	20	24	Oct. 2	23.7	28
St. Francis, Ark.	18	Oct. 2	Oct. 5	18.5	Oct. 4

* Provisional
# Highest Stage Observed
T Tentative
Record Flooding
1/ Continued at End of Month
E Estimated

RAWINSONDE DATA

Average monthly values

SEPTEMBER 1965

ALBANY, N. Y.
1011 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	86	12.6	91	196	1.9
1000	30	179	13.1	84	218	2.5
950	30	614	13.3	70	246	5.8
900	30	1,065	11.8	66	271	9.7
850	30	1,543	10.2	58	277	14.0
800	30	2,047	8.9	50	278	17.1
750	30	2,578	6.7	45	276	19.2
700	30	3,144	3.9	45	276	21.6
650	30	3,740	.6	43	272	24.3
600	30	4,382	- 2.7	38	272	28.9
550	30	5,061	- 6.6	35	270	29.3
500	30	5,808	-10.9	R27	273	32.1
450	30	6,605	-16.2	R26	272	37.1
400	30	7,488	-22.3	R29	270	40.8
350	30	8,455	-29.2	R29	270	44.7
300	30	9,539	-37.2	R27	273	49.1
250	30	10,774	-46.8		278	53.6
200	29	12,220	-54.8		282	61.0
175	29	13,067	-58.1		284	58.5
150	29	14,031	-61.2		282	51.7
125	29	15,155	-63.7		276	43.1
100	29	16,523	-63.6		276	29.3
80	29	17,901	-60.8		279	17.3
70	29	18,734	-58.8		277	12.6
60	29	19,708	-56.5		267	8.2
50	29	20,871	-54.2		263	4.1
40	29	22,306	-52.7		342	1.9
30	29	24,174	-50.0		39	2.1
25	29	25,370	-48.4		37	1.7
20	28	26,844	-46.4		306	2.5
15	19	28,757	-43.7		303	3.9
10						
7						
5						

ALBUQUERQUE, N. MEX.
839 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	1,619	13.7	75	120	2.5
1000	30	103				
950	30	545				
900	30	1,013				
850	30	1,503				
800	30	2,016	14.0	55	230	6.6
750	30	2,555	11.0	53	246	10.5
700	30	3,131	7.0	56	248	11.8
650	30	3,731	2.6	60	250	14.0
600	30	4,379	- 1.6	56	252	18.5
550	30	5,058	- 5.8	49	250	23.9
500	30	5,809	- 9.6	38	248	26.0
450	30	6,608	-14.8	R34	243	30.7
400	30	7,498	-20.9	R30	240	35.4
350	30	8,469	-28.3	R29	244	37.7
300	30	9,557	-36.0	R30	243	44.1
250	30	10,800	-44.8		241	49.7
200	30	12,262	-53.9		249	49.5
175	30	13,110	-58.6		250	45.8
150	30	14,067	-63.2		250	42.5
125	30	15,175	-67.6		254	34.2
100	30	16,513	-68.0		257	23.9
80	29	17,862	-64.5		263	10.9
70	27	18,683	-61.4		260	5.1
60	27	19,644	-58.6		198	4.3
50	27	20,797	-55.9		171	2.9
40	25	22,222	-53.7		123	6.4
30	25	24,080	-51.3		103	8.4
25	24	25,269	-49.7		82	9.5
20	21	26,726	-48.4		83	10.9
15	14	28,518	-46.3		77	12.4
10						
7						
5						

AMARILLO, TEXAS
891 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	1,095	14.6	80	193	6.0
1000	30	108				
950	30	551				
900	30	1,016				
850	30	1,498	16.3	63	224	14.0
800	30	2,014	15.0	55	234	16.1
750	30	2,553	11.9	51	237	16.3
700	30	3,132	7.8	52	238	15.7
650	30	3,735	3.4	55	241	15.9
600	30	4,384	- 1.0	50	244	17.3
550	30	5,067	- 4.7	39	245	21.0
500	30	5,819	- 9.2	33	245	23.1
450	30	6,620	-14.4	36	247	27.4
400	30	7,510	-20.4	34	246	30.9
350	30	8,484	-27.7	36	245	34.2
300	30	9,575	-35.3	32	249	39.2
250	30	10,820	-44.4		255	45.3
200	30	12,282	-54.2		252	46.2
175	29	13,128	-59.2		250	43.5
150	29	14,082	-64.2		250	42.2
125	29	15,183	-68.8		251	38.1
100	28	16,513	-68.9		252	26.6
80	28	17,961	-65.2		248	10.9
70	28	18,678	-62.4		224	7.2
60	28	19,637	-59.2		200	4.1
50	28	20,788	-56.3		135	3.3
40	27	22,212	-54.1		87	6.2
30	25	24,067	-51.3		97	6.4
25	24	25,256	-49.7		94	6.4
20	23	26,721	-48.3		81	9.7
15	16	28,636	-45.3		80	13.2
10	13	31,378	-41.4		93	13.8
7	11	33,828	-37.9		95	15.7
5	11	36,165	-33.9			

ANCHORAGE, ALASKA
1011 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	29	11.4	76	195	4.5
1000	30	136	11.3	74	178	6.6
950	30	562	8.7	73	161	9.7
900	30	1,008	6.0	79	172	12.4
850	30	1,474	3.0	85	182	12.8
800	30	1,963	.6	84	190	14.6
750	30	2,480	- 1.5	78	201	17.1
700	30	3,028	- 4.5	77	208	19.8
650	30	3,608	- 7.3	80	218	21.0
600	30	4,229	-10.4	76	223	25.1
550	30	4,890	-14.3	73	227	27.6
500	30	5,612	-19.0	69	228	31.7
450	30	6,380	-24.3	63	227	33.6
400	30	7,237	-30.2	59	235	37.9
350	30	8,175	-36.6	55	239	40.4
300	30	9,227	-43.6	51	238	44.5
250	30	10,432	-50.7		237	44.9
200	30	11,867	-56.0		241	41.8
175	30	12,718	-55.0		244	35.7
150	30	13,703	-54.8		243	29.7
125	29	14,866	-55.4		241	24.7
100	29	16,290	-54.8		246	19.0
80	29	17,716	-54.8		251	14.2
70	29	18,569	-55.1		257	13.2
60	29	19,553	-55.3		263	12.0
50	28	20,714	-55.6		269	10.3
40	28	22,133	-55.9		284	10.7
30	26	23,964	-55.2		284	12.4
25	22	25,130	-54.3		284	12.0
20	21	26,556	-53.5		291	15.3
15	11	28,478	-50.1			
10						
7						
5						

* ANNETTE, ALASKA
1017 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	37	10.0	86	347	3.1
1000	30	178	11.1	78	340	4.5
950	30	608	10.0	73	335	5.6
900	30	1,055	7.8	70	330	6.6
850	30	1,525	6.4	58	313	9.9
800	30	2,021	4.2	53	311	15.0
750	30	2,538	1.6	53	311	20.0
700	30	3,098	- 1.2	48	308	22.7
650	30	3,680	- 4.1	44	313	27.4
600	30	4,315	- 7.4	38	314	31.1
550	30	4,980	-11.7	39	313	34.0
500	30	5,713	-16.5	41	311	37.1
450	30	6,492	-21.7	40	309	39.8
400	30	7,357	-27.7	40	308	43.3
350	30	8,304	-34.3	40	309	48.2
300	30	9,365	-42.2	41	311	51.7
250	30	10,573	-51.2		315	55.9
200	30	11,995	-58.6		316	52.6
175	30	12,831	-59.6		316	46.2
150	30	13,795	-59.6		315	40.4
125	30	14,936	-59.3		315	35.4
100	30	16,334	-58.8		318	27.8
80	29	17,740	-57.9		321	22.9
70	29	18,581	-57.6		322	19.4
60	29	19,557	-57.5		323	17.3
50	29	20,711	-56.9		328	13.6
40	29	22,126	-56.1		322	11.7
30	29	23,960	-54.6		316	11.7
25	28	25,125	-53.4		307	12.6
20	26	26,570	-51.4		303	12.8
15	26	28,452	-48.5		287	14.4
10	22	31,132	-45.1		278	22.3
7	14	33,481	-41.7			
5						

ATHENS, GA.
992 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	246	18.4	93	60	3.1
1000	30	172				
950	30	614	18.8	83	114	6.2
900	30	1,077	16.8	78	135	7.2
850	30	1,564	14.6	72	150	6.8
800	30	2,075	12.1	67	175	7.0
750	30	2,615	9.9	54	200	6.2
700	30	3,186	7.1	46	215	5.4
650	30	3,791	3.7	44	222	6.2
600	30	4,438	.3	37	220	8.0
550	30	5,131	- 3.3	39	225	6.6
500	30	5,881	- 7.7	33	241	8.0
450	30	6,690	-12.9	28	257	8.7
400	30	7,582	-18.8	26	263	10.9
350	30	8,563	-26.0	28	259	14.8
300	30	9,660	-34.4	29	261	16.3
250	30	10,910	-43.6		273	18.6
200	30	12,377	-53.9		285	22.0
175	30	13,223	-59.3		288	20.0
150	30	14,177	-64.5		292	20.2
125	29	15,282	-69.9		299	15.3
100	29	16,600	-71.9		303	10.5
80	29	17,926	-67.2		352	2.9
70	29	18,740	-63.4		67	4.5
60	29	19,693	-60.0		61	5.8
50	29	20,839	-56.8		77	9.7
40	28	22,266	-53.2		80	11.8
30	29	24,128	-51.1		89	12.0
25	28	25,318	-49.1		87	12.8
20	24	26,791	-47.3		85	13.2
15	13	28,678	-46.0			
10						
7						
5						

* BARROW, ALASKA
1016 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	8	- 2.1	93	82	8.4
1000	30	135	- 2.6	92	86	7.8
950	30	544	- 1.4	85	94	7.2
900	30	973	- 2.1	78	97	5.6
850	30	1,426	- 3.6	72	130	3.9
800	30	1,904	- 5.5	69	178	3.7
750	30	2,410	- 7.8	67	178	5.1
700	30	2,944	-10.4	61	196	4.5
650	30	3,510	-13.4	59	201	5.2
600	30	4,117	-17.0	57	209	6.0
550	30	4,761	-21.0	52	212	7.8
500	30	5,463	-25.6	51	219	9.3
450	30	6,214	-30.8	49	225	10.9
400	30	7,047	-36.9	48	225	13.8
350	30	7,958	-43.7	34	226	17.5
300	30	8,978	-50.4		227	19.8
250	30	10,158	-52.8		233	22.7
200	30	11,603	-51.5		237	20.8
175	30	12,472	-50.6		243	19.4
150	30	13,476	-50.8		241	17.7
125	30	14,662	-51.4		250	16.9
100	30	16,108	-52.2		257	14.8
80	30	17,550	-52.5		259	14.0
70	30	18,411	-53.0		259	12.4
60	30	19,403	-53.5		266	12.6
50	30	20,574	-54.1		273	12.4
40	29	22,001	-54.8		279	11.1
30	26	23,945	-55.1		284	10.5
25	26	25,009	-55.1		294	10.9
20	25	26,427	-54.4		296	10.3
15	25	28,275	-53.1		299	11.1
10	23	30,897	-50.5		293	11.1
7	18	33,226	-47.7		275	17.9
5	6	35,261	-49.3			

BARTER IS., ALASKA
1014 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	24	15	- .8	95	87	1.7
1000	24	126	- .1	87	95	2.1
950	24	539	1.0	80	162	1.0
900	24	973	.2	75	228	2.5
850	24	1,430	- 1.6	70	271	5.8
800	24	1,911	- 3.7	70	270	7.8
750	24	2,415	- 6.2	66	272	9.7
700	24	2,956	- 9.2	63	268	11.5
650	24	3,518	-12.5	63	270	12.4
600	24	4,134	-16.1	61	268	13.4
550	24	4,775	-20.2	57	267	16.3
500	24	5,485	-24.8	54	266	21.6
450	24	6,236	-30.1	46	266	22.5
400	24	7,072	-36.5	47	267	23.5
350	24	7,985	-43.0	49	267	26.6
300	24	9,009	-49.3		270	32.6
250	24	10,193	-52.4		266	35.9
200	24	11,638	-51.5		268	29.7
175	24	12,505	-51.1		269	28.6
150	24	13,507	-51.6		269	26.8
125	24	14,688	-52.0		275	24.7
100	23	16,132	-52.3		277	20.4
80	23	17,573	-53.1		283	17.9
70	22	18,431	-53.2		282	15.2
60	22	19,422	-53.7		285	13.4
50	22	20,592	-54.3		284	11.7
40	22	22,021	-54.7		293	11.8
30	21	23,973	-54.4		296	11.1
25	21	25,042	-54.0		299	11.1
20	17	26,442	-53.8		294	14.0
15	14	28,286	-52.8		298	16.1
10	6	30,767	-54.5			
7						
5						

BETHEL, ALASKA
1005 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	39	8.0	93	137	4.3
1000	30	80			182	4.3
950	30	503	6.7	84	165	11.8
900	30	946	4.0	86	174	15.0
850	30	1,409	1.4	85	179	17.5
800	30	1,895	- 1.4	82	185	19.0
750	30	2,408	- 3.9	73	185	17.9
700	30	2,950	- 6.4	66	185	17.9
650	30	3,526	- 9.4	63	189	18.6
600	30	4,142	-13.0	55	192	19.6
550	30	4,799	-17.0	49	195	21.0
500	30	5,510	-21.6	47	198	24.7
450	30	6,273	-26.8	49	202	26.4
400	30	7,120	-32.6	50	204	30.5
350	30	8,048	-39.0	48	206	38.5
300	30	9,090	-45.4		205	45.6
250	30	10,292	-50.0		211	50.3
200	30	11,744	-50.9		214	41.2
175	30	12,614	-50.7		213	34.4
150	30	13,617	-51.0		212	29.1
125	30	14,801	-51.8		214	24.9
100	30	16,245	-52.5		219	20.8
80	30	17,687	-52.6		222	16.5
70	30	18,548	-52.9		227	14.2
60	30	19,541	-53.4		232	11.8
50	29	20,709	-53.9		238	10.9
40	29	22,141	-54.1		252	10.9
30	29	23,986	-53.7		264	10.3
25	27	25,173	-52.9		272	9.7
20	24	26,621	-51.9		275	12.0
15	16	28,457	-51.5		270	15.5
10						
7						
5						

BISMARCK, N. DAK.
956 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	505	4.1	84	325	1.6
1000	30	139				
950	30	564			348	1.2
900	30	1,001	5.1	64	303	6.8
850	30	1,466	3.2	64	292	8.5
800	30	1,957	1.8	62	286	10.1
750	30	2,473	.4	55	275	15.0
700	30	3,028	- 1.8	54	273	19.2
650	30	3,611	- 4.7	55	268	22.5
600	30	4,242	- 8.3	53	262	25.8
550	30	4,909	-12.3	48	259	31.1
500	30	5,635	-17.2	49	256	34.4
450	30	6,407	-22.6	43	256	38.9
400	30	7,272	-28.8	37	253	45.6
350	30	8,213	-36.0	35	251	50.7
300	30	9,267	-43.5	R27	249	58.7
250	30	10,473	-50.7		248	65.7
200	30	11,913	-53.7		250	66.0
175	30	12,770	-54.3		253	63.1
150	30	13,756	-55.5		256	56.5
125	30	14,917	-55.5		258	44.7
100	30	16,335	-56.7		258	36.9
80	30	17,751	-56.0		262	27.2
70	30	18,601	-55.3		260	22.7
60	30	19,598	-54.7		263	19.0
50	30	20,758	-53.3		261	17.3
40	30	22,200	-51.6		263	15.3
30	30	24,075	-49.9		258	11.5
25	28	25,274	-48.5		264	10.9
20	28	26,747	-47.3		265	9.9
15	23	28,671	-44.8		261	8.0
10	7	31,382	-40.5			
7						
5						

BOISE, IDAHO
916 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	868	9.0	62	158	3.3
1000	30	128				
950	30	559				
900	30	1,010	11.5	50	165	1.7
850	30	1,488	11.0	41	316	4.5
800	30	1,991	7.7	43	302	7.4
750	30	2,519	4.0	45	301	10.1
700	30	3,078	.3	45	300	12.6
650	30	3,665	- 3.2	43	298	13.4
600	30	4,298	- 6.9	42	294	15.3
550	30	4,967	-11.3	41	292	18.3
500	30	5,698	-15.9	33	292	19.0
450	30	6,484	-21.2	31	288	22.1
400	30	7,345	-27.1	R29	293	24.1
350	29	8,292	-34.2	R26	297	26.2
300	29	9,353	-41.9	R28	301	27.2
250	29	10,566	-50.0		297	28.9
200	29	12,006	-54.8		293	30.9
175	28	12,855	-55.7		291	31.1
150	27	13,835	-57.5		288	28.4
125	25	14,985	-59.0		286	28.2
100	25	16,383	-59.2		282	23.9
80	23	17,784	-58.5		282	16.5
70	23	18,624	-57.9		277	14.8
60	22	19,596	-56.8		272	11.3
50	19	20,742	-56.2		270	10.1
40	18	22,159	-54.0		260	13.4
30	17	24,021	-51.0		261	17.9
25	16	25,212	-49.6		266	16.9
20	15	26,675	-47.9		261	17.3
15	10	28,562	-47.0			
10						
7						

* BROWNSVILLE, TEXAS
1011 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	7	23.5	91	159	3.7
1000	30	104	24.9	88	154	6.4
950	30	555	22.7	84	156	12.2
900	30	1,026	20.1	71	153	13.6
850	30	1,518	17.6	62	147	10.9
800	30	2,034	14.7	59	136	7.6
750	30	2,578	12.1	53	117	6.2
700	30	3,154	9.4	46	100	4.7
650	30	3,763	6.0	41	88	3.7
600	30	4,417	2.3	37	84	3.5
550	30	5,108	- 1.8	37	83	3.3
500	30	5,868	- 6.6	34	53	3.3
450	29	6,682	-11.9	31	83	3.7
400	29	7,578	-17.9	30	65	4.1
350	29	8,562	-25.1	32	26	3.3
300	29	9,663	-33.5	32	352	3.3
250	29	10,916	-43.0		349	3.1
200	29	12,384	-53.8		4	2.5
175	29	13,230	-59.7		11	3.5
150	29	14,179	-65.9		48	5.1
125	29	15,268	-72.3		90	6.8
100	29	16,566	-75.3		105	7.6
80	28	17,869	-71.2		83	13.2
70	27	18,668	-66.9		87	16.1
60	27	19,608	-62.8		92	18.1
50	27	20,740	-59.6		91	22.9
40	27	22,145	-56.4		89	25.3
30	26	23,989	-52.8		86	28.0
25	26	25,171	-50.7		89	29.1
20	26	26,634	-47.9		88	28.7
15	24	28,542	-45.5		88	28.9
10	20	31,252	-42.8		89	32.6
7	12	33,694	-38.6		93	35.2

BUFFALO, N. Y.
994 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	218	14.8	84	197	3.3
1000	30	166				
950	30	599	15.2	77	236	9.9
900	30	1,058	13.0	72	252	12.6
850	30	1,537	10.6	62	255	15.0
800	30	2,041	8.8	57	256	19.4
750	30	2,574	6.5	50	260	21.2
700	30	3,137	3.8	49	261	24.1
650	30	3,735	.4	47	261	25.4
600	30	4,374	- 3.2	41	259	27.8
550	30	5,057	- 6.9	33	260	30.5
500	30	5,796	-11.4	31	261	34.2
450	30	6,594	-16.6	27	264	36.5
400	30	7,473	-23.0	26	270	40.0
350	30	8,438	-29.7	32	269	45.6
300	30	9,520	-37.6	28	269	49.7
250	30	10,753	-46.7		268	58.9
200	30	12,204	-55.1		272	67.2
175	30	13,051	-58.1		276	63.3
150	30	14,014	-61.2		281	54.4
125	30	15,140	-63.7		270	45.1
100	30	16,506	-63.2		264	38.3
80	30	17,887	-60.5		265	28.6
70	30	18,722	-58.7		266	20.2
60	30	19,693	-56.7		264	15.9
50	30	20,854	-54.6		270	12.6
40	30	22,289	-52.4		274	6.4
30	29	24,159	-50.1		278	8.4
25	29	25,352	-48.9		278	9.7
20	26	26,822	-46.8		267	5.4
15	12	28,740	-43.9			
10						
7						

*CANTON IS., PACIFIC AREA
+ 1009 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	4	30.7	66	101	9.5
1000	30	84	29.2	65	98	10.9
950	30	533	23.8	67	101	11.5
900	30	1,009	20.6	63	99	11.5
850	30	1,501	17.9	57	96	11.7
800	30	2,018	15.3	45	94	12.2
750	30	2,559	13.1	39	94	13.2
700	30	3,140	10.2	37	90	12.6
650	30	3,750	6.7	36	84	14.6
600	30	4,406	2.9	33	83	17.1
550	30	5,100	- 1.1	27	83	17.5
500	30	5,859	- 5.2	23	82	20.0
450	30	6,674	- 9.7	22	84	22.0
400	30	7,580	-15.3	20	87	20.8
350	30	8,575	-22.2	21	90	19.0
300	30	9,689	-30.8	22	87	15.7
250	30	10,955	-41.1		78	13.0
200	30	12,432	-53.3		73	10.5
175	30	13,278	-60.4		78	8.0
150	30	14,221	-67.9		95	7.4
125	29	15,295	-75.3		75	7.4
100	29	16,576	-76.9		342	3.3
80	29	17,879	-70.7		271	15.0
70	29	18,674	-68.8		272	18.3
60	29	19,602	-66.2		287	5.2
50	29	20,713	-63.8		89	28.9
40	29	22,092	-60.2		90	54.4
30	29	23,910	-54.6		90	63.1
25	29	25,085	-51.8		90	67.6
20	28	26,536	-49.0		89	73.6
15	25	28,443	-44.3		88	74.2
10	18	31,225	-35.7		6	5.4
7						

* CAPE HATTERAS, N. C.
1019 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	4	21.0	88	12	1.7
1000	30	170	22.1	79	41	2.7
950	30	611	19.0	80	78	3.1
900	30	1,078	16.2	74	117	1.7
850	30	1,563	14.0	66	185	.8
800	30	2,073	11.9	56	221	1.7
750	30	2,609	9.5	52	243	1.6
700	30	3,182	6.5	51	237	3.1
650	30	3,784	3.2	48	261	4.3
600	30	4,433	- .2	45	268	5.8
550	30	5,118	- 3.8	40	288	6.8
500	30	5,873	- 8.2	38	290	8.5
450	30	6,675	-13.6	33	276	10.7
400	30	7,571	-19.6	32	277	11.8
350	30	8,550	-26.5	31	276	12.2
300	30	9,645	-34.9	29	281	15.2
250	30	10,893	-44.1		288	18.6
200	29	12,357	-54.6		297	21.8
175	29	13,201	-59.9		303	24.7
150	29	14,153	-64.6		309	19.8
125	29	15,253	-69.2		313	19.4
100	29	16,580	-70.0		309	11.7
80	29	17,918	-66.2		324	5.2
70	29	18,734	-62.6		16	4.5
60	29	19,690	-59.9		47	6.4
50	29	20,836	-56.9		66	9.1
40	28	22,258	-53.8		78	9.5
30	28	24,119	-50.5		85	10.3
25	28	25,314	-48.1		84	9.5
20	27	26,789	-46.7		92	8.9
15	24	28,699	-44.9		73	10.1
10	18	31,422	-41.5		81	10.1
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SEPTEMBER 1965

*** CARIBOU, ME.** 997 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	191	8.2	92	253	2.3
1000	30	168			307	3.5
950	30	598	9.9	70	277	8.0
900	30	1,044	7.8	68	285	13.2
850	30	1,514	5.6	66	279	15.2
800	30	2,009	4.1	60	277	18.8
750	30	2,533	2.3	53	277	22.9
700	30	3,089	.3	45	276	26.6
650	30	3,679	- 2.6	45	274	30.5
600	30	4,312	- 5.7	44	270	32.6
550	30	4,984	- 9.7	44	268	35.7
500	30	5,719	-14.2	39	269	37.7
450	30	6,509	-19.5	35	271	42.3
400	30	7,377	-25.4	35	268	43.9
350	30	8,332	-32.5	34	270	46.2
300	30	9,400	-40.5	34	275	52.8
250	30	10,618	-49.5		273	56.7
200	30	12,057	-55.8		275	57.9
175	30	12,903	-57.3		277	56.1
150	30	13,876	-57.9		270	51.1
125	30	15,019	-59.8		270	44.9
100	30	16,414	-59.3		267	36.9
80	30	17,818	-56.9		265	23.3
70	30	18,664	-56.1		265	19.4
60	30	19,647	-54.5		267	15.2
50	30	20,817	-53.4		262	9.5
40	30	22,255	-52.2		273	8.9
30	29	24,125	-50.5		295	4.9
25	28	25,320	-49.1		334	1.7
20	28	26,789	-47.3		322	1.6
15	26	28,703	-44.3		313	2.1
10	19	31,436	-40.1		226	2.7
7	5	33,939	-35.0			

CHARLESTON, S. C. 1018 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	13	20.2	93	17	4.3
1000	30	164	21.4	89	54	4.5
950	30	606	20.1	82	91	5.4
900	30	1,075	17.9	73	125	5.1
850	30	1,563	15.2	69	112	4.9
800	30	2,075	12.7	62	117	3.9
750	30	2,616	10.0	58	136	2.5
700	30	3,187	7.2	53	183	2.1
650	30	3,791	4.2	42	194	2.7
600	30	4,442	.6	40	224	2.5
550	30	5,131	- 2.8	R30	215	1.4
500	30	5,887	- 7.4	R27	225	2.3
450	30	6,695	-12.6	R27	289	3.5
400	30	7,592	-18.6	R28	297	5.1
350	30	8,574	-25.8	R27	294	5.6
300	30	9,672	-34.4	R26	277	7.0
250	30	10,922	-43.7		284	10.1
200	30	12,388	-53.9		307	15.3
175	30	13,235	-59.5		309	14.2
150	30	14,187	-64.6		318	15.9
125	30	15,287	-69.6		328	15.3
100	30	16,607	-71.8		331	7.6
80	30	17,931	-68.3		23	4.7
70	30	18,740	-64.1		66	6.0
60	30	19,692	-60.3		78	6.8
50	30	20,836	-57.3		75	11.3
40	30	22,257	-53.7		87	12.2
30	30	24,119	-50.6		85	14.2
25	29	25,309	-49.1		90	15.2
20	28	26,780	-47.5		93	13.2
15	23	28,693	-45.4		71	13.4
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*** COLD BAY, ALASKA** 1006 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	30	8.5	91	183	6.6
1000	30	76			196	6.0
950	30	498	7.4	66	183	10.1
900	30	944	4.9	90	190	11.8
850	30	1,409	2.7	84	187	14.8
800	30	1,898	.6	78	194	16.1
750	30	2,413	- 1.4	70	200	19.6
700	30	2,964	- 4.0	66	202	21.6
650	30	3,540	- 7.3	62	201	24.9
600	30	4,165	-10.4	56	201	29.7
550	30	4,828	-14.3	55	204	31.1
500	30	5,548	-18.7	51	204	36.3
450	30	6,320	-23.8	49	204	42.5
400	30	7,178	-29.4	47	207	46.2
350	30	8,117	-36.3	50	209	50.1
300	30	9,171	-43.6	56	210	58.1
250	30	10,379	-49.5		207	64.5
200	30	11,829	-52.5		211	51.7
175	30	12,694	-51.9		208	43.3
150	30	13,691	-52.5		206	37.5
125	30	14,867	-53.0		211	29.5
100	30	16,306	-53.0		218	21.6
80	30	17,742	-53.2		220	16.1
70	30	18,601	-53.1		218	15.9
60	30	19,593	-53.4		225	11.8
50	30	20,764	-53.9		230	10.1
40	30	22,194	-54.0		241	9.1
30	30	24,043	-53.2		254	8.4
25	29	25,217	-52.9		271	7.8
20	27	26,655	-51.8		286	8.9
15	24	28,524	-50.4		290	12.6
10	21	31,221	-46.4		[illegible]	15.9
7	6	33,549	-43.3			

COLUMBIA, MO. 988 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	238	16.9	88	147	4.1
1000	30	133				
950	30	572	17.4	74	198	10.9
900	30	1,034	16.0	68	221	12.0
850	30	1,518	13.5	69	246	12.8
800	30	2,027	10.8	64	245	13.8
750	30	2,560	8.2	56	240	15.7
700	30	3,131	5.3	47	238	17.9
650	30	3,725	1.8	46	240	20.4
600	30	4,374	- 2.0	45	242	25.3
550	30	5,053	- 5.8	40	243	27.4
500	30	5,803	-10.2	39	245	32.1
450	30	6,602	-15.4	33	248	34.2
400	30	7,488	-21.5	30	249	37.3
350	30	8,458	-28.4	30	250	42.7
300	30	9,545	-36.6	31	250	45.1
250	30	10,784	-45.4		252	48.4
200	30	12,242	-54.9		255	52.3
175	30	13,087	-59.1		257	53.8
150	30	14,044	-63.1		256	50.7
125	30	15,154	-67.2		253	42.0
100	30	16,496	-67.3		255	28.4
80	30	17,851	-63.9		252	15.9
70	30	18,674	-61.2		252	12.0
60	30	19,636	-58.4		257	7.2
50	30	20,790	-56.0		277	1.7
40	29	22,217	-53.8		269	.6
30	28	24,078	-51.1		67	2.1
25	28	25,268	-49.8		84	1.4
20	26	26,738	-48.3		10	1.4
15	19	28,647	-45.8		345	2.7
10	6	31,357	-42.2			
7						

DAYTON, OHIO 984 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	297	15.7	91	148	1.9
1000	30	[illegible]				
950	30	602	17.6	76	202	6.4
900	30	1,060	15.4	70	228	9.5
850	30	1,544	13.2	65	240	10.9
800	30	2,053	10.9	59	241	11.8
750	30	2,590	8.2	56	243	13.0
700	30	3,157	5.0	52	240	16.1
650	30	3,754	1.7	47	248	19.8
600	30	4,400	- 2.0	44	246	[illegible]
550	30	5,081	- 5.7	42	245	23.1
500	30	5,830	-10.1	39	247	26.2
450	30	6,631	-15.3	36	252	28.4
400	30	7,516	-21.1	30	259	29.7
350	30	8,489	-28.2	29	[illegible]	33.2
300	30	9,578	-36.2	29	262	36.1
250	30	10,819	-45.4		264	41.0
200	30	12,276	-54.6		267	49.7
175	30	13,123	-59.1		266	46.4
150	30	[illegible]	-63.3		269	46.0
125	30	15,189	-67.0		268	38.7
100	30	16,533	-67.8		263	25.8
80	30	17,886	-63.7		263	[illegible]
70	30	18,711	-60.4		262	11.3
60	30	19,677	-57.9		263	7.4
50	30	20,831	-55.8		288	3.1
40	30	22,258	-53.4		6	1.9
30	29	24,117	-50.9		16	1.9
25	28	25,306	-49.1		332	1.2
20	27	26,775	-46.9		281	4.3
15	13	28,682	-44.7		241	2.1
10						
7						

DEL RIO, TEXAS 977 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	314	22.9	75	109	6.6
1000	30	108				
950	30	556	22.4	70	128	12.0
900	30	1,027	20.2	70	159	17.7
850	30	1,520	18.2	67	164	15.9
800	30	2,037	15.4	67	158	11.5
750	30	2,577	12.4	62	156	7.2
700	30	3,159	9.1	54	141	4.5
650	30	3,765	5.8	43	152	2.7
600	30	4,421	2.0	40	218	3.1
550	30	5,109	- 2.2	35	210	4.3
500	30	5,869	- 6.8	R32	203	6.2
450	30	6,677	-12.1	R29	205	7.4
400	30	7,575	-18.4	R28	220	9.1
350	30	8,557	-25.6	R28	230	10.7
300	30	9,657	-33.6	R28	249	10.5
250	30	10,912	-42.7		264	15.7
200	30	12,385	-53.1		262	17.9
175	30	13,234	-59.1		262	18.1
150	30	14,186	-65.3		257	15.5
125	29	15,278	-71.8		241	13.4
100	27	16,581	-74.1		229	10.1
80	25	17,891	-70.2		163	4.3
70	25	18,692	-65.6		98	5.1
60	25	19,639	-61.1		97	10.5
50	25	20,779	-58.6		98	15.9
40	25	22,189	-56.1		93	17.5
30	25	24,034	-52.5		93	20.8
25	25	25,217	-50.8		89	20.4
20	25	26,676	-48.8		87	22.9
15	24	28,581	-45.9		83	23.1
10	14	31,305	-41.9			
7						
5						

DENVER, COLO. 838 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	1,611	8.1	75	195	1.6
1000	30	124				
950	30	555				
900	30	1,015				
850	30	1,491				
800	30	1,993	9.1	62	268	4.1
750	30	2,527	7.3	56	290	6.0
700	30	3,093	4.5	52	262	10.3
650	30	3,690	.9	52	262	17.3
600	30	4,332	- 3.6	54	259	22.3
550	30	5,008	- 8.1	51	260	25.1
500	30	5,749	-12.4	43	255	28.7
450	30	6,541	-17.5	34	253	32.9
400	30	7,420	-23.6	33	249	38.1
350	30	8,382	-30.5	31	250	43.5
300	30	9,460	-38.8	29	248	48.6
250	30	10,688	-47.1		248	55.9
200	29	12,144	-54.1		249	62.0
175	29	12,994	-57.1		252	64.5
150	29	13,962	-60.4		254	57.7
125	29	15,092	-62.5		256	45.6
100	29	16,466	-63.2		258	29.5
80	29	17,843	-61.2		257	16.9
70	29	18,675	-59.1		250	10.3
60	29	19,648	-57.1		248	8.5
50	29	20,808	-54.7		243	6.8
40	29	22,240	-53.3		245	4.7
30	28	24,101	-51.3		274	2.7
25	27	25,291	-49.4		252	2.5
20	25	26,753	-48.5		250	2.3
15	19	28,668	-46.0		215	.4
10	11	31,409	-42.2			
7						
5						

DODGE CITY, KANS. 924 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	792	13.4	92	164	1.6
1000	30	118				
950	30	556				
900	30	1,013	13.9	79	192	7.0
850	30	1,497	14.8	66	213	15.0
800	30	2,009	13.1	60	225	15.7
750	30	2,548	10.4	57	231	17.5
700	30	3,121	6.9	55	236	19.2
650	30	3,723	2.8	52	239	19.6
600	30	4,369	- 2.2	57	243	22.1
550	30	5,049	- 6.3	47	245	23.5
500	30	5,796	-10.5	34	244	27.4
450	30	6,594	-15.5	30	247	32.1
400	30	7,479	-21.7	29	247	36.1
350	30	8,449	-28.9	30	247	39.8
300	30	9,534	-37.1	27	247	44.1
250	30	10,773	-45.5		249	49.3
200	30	12,233	-54.4		250	53.0
175	30	13,080	-58.9		251	53.6
150	30	14,038	-63.2		251	51.5
125	30	15,149	-66.6		251	41.6
100	30	16,494	-67.3		252	29.3
80	30	17,851	-63.7		249	17.5
70	30	18,674	-61.1		239	11.8
60	30	19,637	-58.0		233	7.0
50	30	20,792	-56.0		222	3.7
40	30	22,217	-54.0		221	2.9
30	28	24,079	-51.0		65	.8
25	24	25,262	-50.2		291	.4
20	22	26,714	-48.7		241	3.3
15	19	28,615	-46.3		279	3.9
10	12	31,339	-41.6			
7						
5						

EL PASO, TEXAS 882 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	1,193	18.3	65	347	.8
1000	30	100				
950	30	548				
900	30	1,019				
850	30	1,512	19.1	49	52	.4
800	30	2,031	16.3	49	230	4.3
750	30	2,572	12.5	51	227	7.8
700	30	3,154	8.4	50	228	9.9
650	30	3,756	4.3	49	219	10.3
600	30	4,410	.1	47	228	12.4
550	30	5,093	- 4.1	39	240	14.6
500	30	5,848	- 8.4	32	243	15.2
450	30	6,654	-13.5	R30	[illegible]	18.3
400	30	7,545	-20.0	R31	243	21.6
350	30	8,522	-26.9	R28	244	24.3
300	30	9,617	-35.0	R26	245	30.1
250	30	10,865	-44.2		244	32.6
200	30	12,329	-54.1		249	40.0
175	30	13,175	-59.4		248	39.4
150	30	14,127	-65.0		248	36.5
125	29	15,224	-70.4		246	28.0
100	28	16,541	-71.2		243	18.6
80	28	17,871	-67.3		244	7.8
70	28	18,682	-64.2		168	3.3
60	28	19,633	-60.5		109	5.8
50	28	20,776	-57.7		95	9.5
40	26	22,188	-55.1		90	13.8
30	26	24,037	-52.1		90	15.7
25	24	25,220	-50.7		87	16.1
20	22	26,679	-48.5		87	16.1
15	15	28,597	-45.7		78	15.7
10	11	31,295	-41.1			
7	[illegible]	33,740	-36.5			
5	5	36,070	-33.4			

ELY, NEV. 809 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	1,908	3.0	63	196	5.2
1000	30	145				
950	30	574				
900	30	1,028				
850	30	1,499				
800	30	1,996	7.2	51	206	3.9
750	30	2,529	7.1	44	265	1.4
700	30	3,093	3.3	46	280	6.2
650	30	3,688	- .9	48	265	10.9
600	30	4,324	- 4.6	41	261	14.4
550	30	4,999	- 8.8	40	261	16.9
500	30	5,735	-13.6	35	263	19.8
450	30	6,523	-19.2	[illegible]	[illegible]	22.5
400	30	7,394	-25.9	R30	261	25.6
350	30	8,348	-32.7	R25	259	29.1
300	30	9,415	-40.7	R25	257	33.2
250	30	10,635	-48.2		258	36.5
200	28	12,085	-54.1		254	42.9
175	28	12,937	-56.5		260	42.5
150	28	13,909	-59.2		259	43.9
125	27	15,054	-60.8		264	34.2
100	26	16,436	-62.2		266	22.3
80	25	17,814	-61.6		265	14.9
70	24	18,639	-60.2		261	12.2
60	24	19,606	-57.8		271	9.3
50	24	20,762	-55.5		263	6.8
40	23	22,190	-53.3		256	6.0
30	22	24,048	-51.0		251	5.1
25	20	25,233	[illegible]		268	1.9
20	18	26,688	-48.1		240	1.2
15	16	28,586	-46.3		137	.4
10	12	31,305	-43.0			
7	5	33,693	-41.8			
5	5	35,984	-39.2			

EMPALME, MEXICO 1009 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	26	12	25.2	69	19	3.1
1000	26	93	25.9	67	23	2.3
950	26	543	24.5	63	108	1.4
900	26	1,018	22.1	58	164	2.7
850	26	1,513	19.1	57	180	4.7
800	26	2,032	16.1	55	185	6.6
750	26	2,575	13.3	47	201	6.4
700	26	3,156	9.7	46	204	8.5
650	26	3,766	6.0	40	210	10.1
600	26	4,418	1.6	44	217	10.3
550	26	5,110	- 2.7	40	225	8.9
500	26	5,863	- 7.1	30	225	8.9
450	26	6,675	-12.5	24	229	10.5
400	26	7,567	-18.4	22	239	10.3
350	26	8,550	-25.4	21	236	14.4
300	26	9,650	-33.4	19	239	19.4
250	25	10,907	-42.6		242	27.2
200	25	12,378	-53.5		236	31.3
175	25	13,224	-59.7		240	28.7
150	25	14,173	-66.4		244	27.0
125	25	15,259	-72.3		245	23.1
100	24	16,567	-72.9		228	10.9
80	23	17,889	-67.3		201	4.9
70	17	18,694	-64.1		96	5.1
60	17	19,646	-60.9		99	12.8
50	16	20,785	-58.3		97	14.2
40	14	22,199	-54.6		94	20.6
30	14	24,050	-52.4		96	21.2
25	11	25,240	-50.1		91	23.5
20	7	26,701	-49.2			
15						
10						

*** FAIRBANKS, ALASKA** 998 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	135	6.3	74	340	1.6
1000	30	120			27	1.6
950	30	544	8.2	68	138	4.9
900	30	988	5.7	70	185	7.2
850	30	1,454	2.9	73	204	8.7
800	30	1,942	- .1	76	215	11.5
750	30	2,455	- 3.1	78	214	12.2
700	30	3,001	- 5.7	74	229	14.6
650	30	3,577	- 8.9	67	233	15.5
600	30	4,194	-12.7	64	238	17.5
550	30	4,852	-16.9	58	[illegible]	21.6
500	30	5,563	-21.6	57	243	25.3
450	30	6,325	-26.8	52	246	25.8
400	30	7,171	-32.8	49	245	32.4
350	30	8,098	-39.4	46	246	39.8
300	30	9,137	-46.3		246	47.6
250	30	10,333	-51.5		253	56.7
200	30	11,770	-54.2		257	46.6
175	30	12,628	-53.0		259	36.9
150	30	13,623	-52.9		[illegible]	32.4
125	30	14,796	-53.7		260	26.6
100	30	16,229	-53.9		264	22.5
80	30	17,659	-54.0		268	18.1
70	30	18,515	-54.2		269	15.9
60	30	19,502	-54.6		276	15.3
50	30	20,667	-55.1		281	13.0
40	29	22,090	-55.7		294	13.4
30	27	23,915	-55.5		295	13.2
25	27	25,078	-54.8		296	13.2
20	24	26,491	-54.3		298	14.6
15	19	28,365	-52.4		297	12.4
10						

FLINT, MICH. 991 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	234	14.2	87	190	3.5
1000	30	156				
950	30	591	14.4	78	227	9.7
900	30	1,046	12.8	70	243	13.4
850	30	1,526	11.1	61	245	16.5
800	30	2,031	9.1	53	248	19.4
750	30	2,560	6.4	54	246	22.9
700	30	3,127	3.3	54	248	25.3
650	30	3,720	- .1	55	252	27.2
600	30	4,362	- 3.8	51	255	29.5
550	30	5,039	- 7.5	48	[illegible]	33.4
500	30	5,782	-11.9	39	255	37.5
450	30	6,577	-16.8	37	253	39.0
400	30	7,457	-22.4	36	256	43.1
350	30	8,424	-29.2	34	255	48.2
300	30	9,507	-37.4	29	258	51.9
250	30	10,742	-46.2		260	60.2
200	30	12,193	-55.1		265	69.9
175	30	13,040	-57.6		269	65.1
150	30	14,006	-60.8		266	57.3
125	30	15,131	-63.3		263	47.6
100	30	16,499	-63.2		263	32.8
80	30	17,876	-61.2		265	22.1
70	30	18,709	-59.0		262	15.5
60	30	19,681	-56.8		262	11.1
50	30	20,842	-54.7		270	8.0
40	29	22,278	-52.6		268	4.9
30	28	24,146	-50.2		[illegible]	3.5
25	26	25,341	-48.6		301	2.9
20	23	26,815	-46.9		316	3.5
15	13	28,735	-44.3		314	5.1
10	7	31,490	-40.1			

FORT WORTH, TEXAS 994 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	180	21.3	82	182	3.3
1000	30	128				
950	30	575	20.9	73	184	11.1
900	30	1,040	19.4	69	195	11.5
850	30	1,531	17.1	64	209	9.5
800	30	2,047	14.5	57	222	6.6
750	30	2,590	11.4	53	221	4.7
700	30	3,164	8.0	53	219	4.1
650	30	3,770	4.5	48	227	4.9
600	30	4,420	.7	40	235	7.2
550	30	5,109	- 3.1	36	231	9.1
500	30	5,863	- 7.4	R28	246	11.3
450	30	6,670	-13.0	R27	249	13.2
400	30	7,564	-19.0	R27	241	15.3
350	30	8,544	-26.1	R28	242	17.1
300	30	9,641	-34.4	R30	250	19.4
250	30	10,891	-43.6		256	22.5
200	30	12,357	-54.2		251	27.0
175	29	13,208	-59.7		254	28.6
150	29	14,158	-65.5		[illegible]	25.3
125	28	15,253	-70.9		244	22.1
100	28	16,568	-72.1		242	17.7
80	27	17,889	-68.4		223	6.0
70	27	18,697	-64.0		185	3.9
60	27	19,653	-60.0		104	4.3
50	27	20,800	-57.0		100	8.9
40	27	22,223	-54.4		88	12.4
30	26	24,077	-51.5		92	15.5
25	26	25,266	-49.6		89	15.2
20	24	26,737	-47.8		79	17.3
15	19	28,631	-46.0		82	17.1
10	5	31,320	-42.3			

GLASGOW, MONT. 935 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	696	5.6	73	21	3.5
1000	30	143				
950	30	562				
900	30	1,010	5.2	65	331	3.1
850	30	1,475	2.5	65	307	5.6
800	30	1,962	- .3	69	307	8.4
750	30	2,475	- 2.0	66	302	10.9
700	30	3,024	- 4.7	59	285	13.6
650	30	3,599	- 7.6	51	284	17.1
600	30	4,223	-11.4	51	283	19.4
550	30	4,877	-15.5	48	[illegible]	24.7
500	29	5,599	-20.2	47	277	26.2
450	29	6,359	-25.6	41	274	30.7
400	29	7,215	-31.6	35	270	35.5
350	28	8,153	-37.9	R33	265	44.1
300	28	9,198	-45.4		265	48.6
250	28	10,397	-51.5		265	50.5
200	28	11,839	-52.7		268	44.1
175	28	12,700	-53.0		269	41.8
150	28	13,693	-53.8		269	38.1
125	28	14,859	-55.2		270	33.4
100	28	16,281	-55.7		272	28.7
80	28	17,702	-55.4		273	24.5
70	28	18,551	-55.4		272	22.0
60	28	19,534	-54.7		272	18.6
50	28	20,702	-54.2		272	16.3
40	28	22,135	-52.8		264	14.8
30	27	24,004	-50.4		264	14.6
25	26	25,199	-49.4		268	12.8
20	24	26,669	-47.9		270	11.7
15	20	28,590	-45.2		279	10.5
10	13	31,257	-41.8			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SEPTEMBER 1965

Standard pressure surface (mb.)	* GRAND JUNCTION, COLO. 851 MB					
					Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	30	1,474	12.4	60	120	5.4
1000	30	95				
950	30	535				
900	30	1,000				
850	30	1,485			122	6.4
800	30	1,994	12.2	47	170	8.2
750	30	2,529	9.2	48	226	9.7
700	30	3,101	5.2	53	247	14.2
650	30	3,700	.5	58	248	17.3
600	30	4,339	- 4.2	61	248	19.4
550	30	5,015	- 9.0	61	246	22.7
500	30	5,752	-13.5	48	245	28.0
450	30	6,542	-18.7	42	249	31.1
400	30	7,414	-25.1	40	250	35.5
350	30	8,371	-32.1	39	248	42.0
300	30	9,441	-39.8	36	247	49.0
250	30	10,666	-47.4		253	51.3
200	30	12,118	-53.7		255	55.4
175	29	12,974	-57.4		255	55.8
150	29	13,940	-60.1		257	48.2
125	28	15,076	-62.2		255	36.3
100	28	16,446	-64.2		258	28.4
80	28	17,816	-62.0		258	17.7
70	28	18,645	-59.8		260	12.0
60	27	19,614	-57.2		256	7.6
50	26	20,766	-55.2		242	6.0
40	26	22,194	-53.9		235	4.9
30	24	24,048	-51.7		156	.4
25	24	25,234	-50.4		144	1.9
20	23	26,698	-49.2		339	.8
15	23	28,595	-47.1		60	1.9
10	14	31,267	-43.2		126	2.9
7						

Standard pressure surface (mb.)	* GREAT FALLS, MONT. 889 MB					
					Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	30	1,123	4.0	82	260	3.7
1000	30	151				
950	30	576				
900	30	1,023				
850	30	1,485	3.9	68	274	7.4
800	30	1,976	1.2	72	291	8.2
750	30	2,497	- 1.7	73	299	8.9
700	30	3,040	- 4.3	69	303	11.5
650	30	3,620	- 7.6	65	291	14.8
600	30	4,240	-11.5	61	290	18.6
550	30	4,903	-15.6	55	290	21.2
500	30	5,617	-19.9	50	287	25.6
450	30	6,391	-25.0	44	291	25.4
400	30	7,239	-30.6	41	293	28.7
350	30	8,175	-37.0	38	292	34.2
300	30	9,225	-44.0		287	41.6
250	30	10,431	-50.7		286	45.6
200	30	11,872	-53.5		288	41.0
175	30	12,730	-53.5		286	36.3
150	30	13,720	-54.6		283	35.0
125	30	14,882	-56.0		281	28.9
100	30	16,300	-56.2		278	25.3
80	30	17,719	-56.0		277	19.0
70	29	18,572	-56.0		271	17.5
60	29	19,552	-55.4		268	16.5
50	29	20,717	-54.9		269	14.2
40	28	22,145	-53.7		261	14.2
30	27	24,014	-50.8		262	15.3
25	25	25,201	-49.7		265	14.2
20	25	26,666	-48.4		259	13.4
15	25	28,568	-4 .5		265	11.9
10	22	31,281	-42.9		262	14.6
7	5	33,624	-39.8			

Standard pressure surface (mb.)	GREEN BAY, WIS. 991 MB					
					Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	30	210	11.6	89	166	1.4
1000	30	136				
950	30	568	11.2	79	227	8.4
900	30	1,017	9.8	75	238	14.2
850	30	1,491	8.4	68	245	18.5
800	30	1,991	6.9	56	249	22.5
750	30	2,518	4.4	55	250	26.4
700	30	3,078	1.4	59	253	29.7
650	30	3,669	- 1.7	58	254	34.4
600	30	4,305	- 5.4	53	255	35.9
550	30	4,978	- 9.5	44	253	38.3
500	30	5,714	-14.0	39	255	40.8
450	30	6,501	-19.0	39	259	45.5
400	30	7,374	-24.8	R35	256	50.5
350	30	8,332	-31.3	R35	256	55.9
300	30	9,407	-39.0	37	256	64.9
250	30	10,635	-47.5		257	75.0
200	29	12,092	-54.9		260	83.7
175	29	12,940	-57.5		263	82.4
150	29	13,909	-59.1		265	73.0
125	29	15,047	-60.9		262	53.8
100	29	16,433	-61.6		259	39.6
80	29	17,820	-59.6		267	27.0
70	28	18,655	-57.7		275	18.5
60	27	19,636	-55.5		275	13.0
50	27	20,802	-53.9		269	8.0
40	26	22,237	-52.7		269	6.2
30	26	24,102	-50.6		304	3.3
25	25	25,302	-48.9		337	3.1
20	24	26,687	-46.5		318	2.3
15	14	28,679	-44.9			
10						
7						

Standard pressure surface (mb.)	GREENSBORO, N. C. 989 MB					
					Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	30	273	16.4	94	50	.6
1000	30	181				
950	30	622	18.2	80	275	1.4
900	30	1,084	15.9	75	230	2.7
850	30	1,569	14.0	63	213	3.1
800	30	2,079	11.7	61	218	4.1
750	30	2,616	9.1	53	233	4.5
700	30	3,187	6.6	44	261	4.7
650	30	3,790	3.8	35	253	6.2
600	30	4,440	.3	33	256	8.5
550	30	5,128	- 3.6	30	252	10.3
500	30	5,882	- 8.0	27	257	10.7
450	30	6,691	-13.4	25	262	12.8
400	30	7,580	-19.6	28	267	16.1
350	30	8,560	-26.4	26	266	20.2
300	30	9,656	-34.7	25	273	22.1
250	30	10,906	-43.8		281	24.9
200	30	12,372	-54.2		284	26.2
175	30	13,218	-59.3		288	24.9
150	30	14,172	-64.4		292	24.1
125	30	15,275	-69.0		298	22.5
100	30	16,602	-70.2		291	15.0
80	30	17,939	-66.5		291	5.8
70	30	18,754	-62.6		328	2.3
60	30	19,711	-59.6		49	2.7
50	30	20,960	-56.4		72	6.6
40	30	22,285	-53.3		78	8.5
30	29	24,150	-50.1		81	5.8
25	28	25,347	-48.5		80	6.2
20	25	26,923	-47.0		77	6.2
15	18	28,734	-44.6		75	6.6
10	5	31,478	-41.5			
7						

Standard pressure surface (mb.)	GUAM, MARIANA IS. 997 MB					
					Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	30	111	24.8	95	151	2.3
1000	30	83				
950	30	534	23.4	89	176	6.6
900	30	1,006	21.0	83	172	7.0
850	30	1,500	18.4	80	175	5.8
800	30	2,019	15.8	77	169	5.1
750	30	2,566	13.1	71	139	4.7
700	30	3,143	9.8	67	140	4.9
650	30	3,755	6.3	68	136	3.1
600	30	4,408	2.4	72	118	3.3
550	30	5,108	- 1.6	71	82	3.5
500	30	5,860	- 5.7	62	79	4.9
450	30	6,676	-10.4	55	91	6.0
400	30	7,577	-15.9	55	96	6.6
350	30	8,571	-22.5	46	106	7.0
300	30	9,684	-30.8	44	109	8.0
250	30	10,950	-40.9		97	8.0
200	29	12,423	-53.6		67	9.7
175	29	13,267	-60.9		64	13.0
150	28	14,208	-68.8		57	14.6
125	28	15,276	-76.6		60	19.8
100	22	16,547	-78.3		83	25.1
80	18	17,835	-72.8		88	23.1
70	17	18,623	-69.8		89	25.3
60	16	19,554	-65.6		89	29.1
50	16	20,672	-62.2		87	34.2
40	16	22,058	-59.6		92	44.7
30	15	23,880	-54.9		88	55.2
25	15	25,053	-52.5		88	62.5
20	13	26,505	-49.2		87	66.0
15	12	28,404	-46.5		88	63.3
10	6	31,128	-45.0			
7						

Standard pressure surface (mb.)	HILO, HAWAII 1013 MB					
					Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	29	11	21.5	85	226	5.2
1000	29	126	22.6	80	224	4.9
950	29	578	19.5	84	151	4.5
900	29	1,036	16.3	88	112	4.7
850	29	1,522	14.1	81	102	5.4
800	29	2,033	12.0	73	100	5.1
750	29	2,579	10.2	50	102	3.9
700	29	3,145	8.5	33	97	2.5
650	29	3,754	5.3	33	135	.6
600	29	4,405	1.6	31	239	2.3
550	29	5,095	- 2.6	29	237	5.2
500	29	5,851	- 7.5	30	246	5.8
450	29	6,661	-13.0	28	249	9.3
400	29	7,552	-19.2	29	256	11.8
350	29	8,532	-26.1	26	262	17.1
300	29	9,630	-34.3	28	259	27.0
250	29	10,880	-43.8		257	36.3
200	29	12,342	-55.2		257	45.3
175	29	13,183	-61.4		259	46.6
150	29	14,125	-67.3		257	40.6
125	29	15,210	-72.2		256	27.8
100	29	16,521	-71.8		232	7.6
80	27	17,840	-69.4		89	9.5
70	27	18,641	-66.7		88	18.3
60	27	19,579	-63.5		89	23.5
50	27	20,706	-60.7		88	29.7
40	27	22,104	-57.6		91	34.0
30	26	23,938	-54.0		91	39.6
25	26	25,115	-51.5		93	42.2
20	25	26,570	-49.2		95	44.9
15	18	28,460	-47.2		90	44.5
10	7	31,154	-43.4			
7						

Standard pressure surface (mb.)	HUNTINGTON, W. VA. 991 MB					
					Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	30	246	15.9	94	185	1.4
1000	30	167				
950	30	607	18.5	74	206	5.4
900	30	1,070	16.5	71	236	7.6
850	30	1,556	14.0	68	248	8.7
800	30	2,066	11.7	63	240	10.3
750	30	2,603	8.9	60	243	10.9
700	30	3,174	6.1	52	242	12.6
650	30	3,773	2.8	46	242	13.8
600	30	4,422	- .7	40	243	14.8
550	30	5,106	- 4.3	32	243	16.3
500	30	5,859	- 8.9	28	249	18.3
450	30	6,664	-14.1	R26	253	21.6
400	30	7,552	-20.1	R27	259	23.7
350	30	8,528	-27.1	R26	263	25.8
300	30	9,621	-35.2	R27	269	27.6
250	30	10,867	-44.2		273	32.1
200	29	12,329	-53.8		272	42.0
175	29	13,177	-58.8		274	40.0
150	29	14,134	-63.5		274	37.5
125	29	15,241	-67.6		275	34.4
100	29	16,578	-68.9		272	22.9
80	29	17,924	-64.4		263	12.2
70	29	18,746	-61.5		270	8.0
60	29	19,710	-58.1		290	2.9
50	29	20,865	-55.6		92	.8
40	29	22,294	-53.3		58	3.1
30	28	24,160	-50.2		77	4.5
25	27	25,353	-49.0		64	4.3
20	19	26,820	-47.1		55	3.5
15	12	28,708	-44.6		43	6.6
10	9	31,423	-41.2			
7						

Standard pressure surface (mb.)	* INTERNAT. FALLS, MINN. 973 MB					
					Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	30	360	5.2	85	256	1.4
1000	30	135				
950	30	554	6.1	80	237	2.3
900	30	997	3.6	79	261	5.6
850	30	1,460	1.4	73	278	7.2
800	30	1,947	- .3	69	278	9.9
750	30	2,459	- 2.1	62	266	14.6
700	30	3,008	- 4.1	62	261	20.0
650	30	3,587	- 6.5	61	262	26.6
600	30	4,212	-10.1	58	260	31.3
550	30	4,871	-13.9	55	260	37.7
500	30	5,597	-18.3	51	261	41.4
450	30	6,368	-23.5	45	260	46.2
400	30	7,228	-29.3	40	261	51.9
350	30	8,167	-36.2	41	260	58.1
300	30	9,220	-43.8		257	66.8
250	30	10,424	-51.3		253	70.3
200	29	11,864	-53.9		252	71.5
175	29	12,720	-54.7		256	63.9
150	28	13,704	-55.8		257	55.8
125	28	14,861	-56.9		259	44.5
100	28	16,277	-56.0		261	35.7
80	26	17,696	-55.8		260	26.6
70	26	18,547	-55.1		260	24.3
60	26	19,534	-54.4		259	22.5
50	26	20,703	-53.5		262	21.4
40	26	22,144	-52.1		259	18.3
30	22	24,004	-50.2		258	15.7
25	22	25,198	-49.1		256	16.3
20	20	26,663	-47.4		257	14.4
15	19	28,581	-44.9		257	13.0
10	15	31,323	-41.0		263	14.0
7	6	33,743	-36.7			

Standard pressure surface (mb.)	JACKSON, MISS. 1005 MB					
					Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	30	94	21.1	92	121	2.5
1000	30	134			135	3.1
950	30	580	20.6	81	153	9.7
900	30	1,047	18.6	76	164	9.1
850	30	1,537	16.6	66	174	7.4
800	30	2,052	13.9	59	177	6.6
750	30	2,590	10.7	56	180	6.0
700	30	3,167	7.7	49	179	5.1
650	30	3,769	4.8	41	184	5.8
600	30	4,424	1.6	35	204	4.9
550	30	5,112	- 2.2	31	213	5.6
500	30	5,872	- 6.6	29	220	5.2
450	30	6,680	-12.1	30	230	5.2
400	30	7,580	-18.2	33	257	5.4
350	30	8,562	-25.4	31	250	8.4
300	30	9,663	-33.4	31	249	9.9
250	30	10,918	-42.6	28	258	12.2
200	30	12,388	-53.5		270	16.1
175	30	13,236	-59.1		266	16.5
150	30	14,190	-64.6		262	16.1
125	30	15,286	-70.6		257	14.0
100	30	16,596	-73.9		259	7.8
80	30	17,913	-68.7		181	2.1
70	30	18,721	-63.8		115	3.9
60	30	19,675	-60.7		95	6.8
50	29	20,917	-57.5		86	11.1
40	29	22,237	-54.3		89	13.6
30	25	24,093	-51.1		87	16.9
25	25	25,283	-49.3		93	16.1
20	24	26,746	-47.8		92	15.7
15	20	28,661	-45.6		86	16.3
10	11	31,388	-43.2			
7	5	33,805	-39.7			

Standard pressure surface (mb.)	* JACKSONVILLE, FLA. 1018 MB					
					Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	30	5	23.2	92	62	3.3
1000	30	162	23.2	89	80	5.8
950	30	609	20.8	85	109	9.5
900	30	1,076	18.4	77	110	9.5
850	30	1,564	15.7	73	112	9.9
800	30	2,077	13.2	63	112	8.9
750	30	2,617	10.5	57	106	8.0
700	30	3,190	7.4	47	102	5.8
650	30	3,793	4.2	44	96	4.7
600	30	4,444	.7	43	104	4.1
550	30	5,131	- 2.9	37	105	5.8
500	30	5,887	- 7.3	33	92	4.3
450	30	6,696	-12.5	28	79	4.3
400	30	7,589	-18.8	29	65	3.9
350	30	8,570	-25.8	26	39	4.1
300	30	9,668	-34.4	24	36	3.1
250	30	10,917	-43.8		344	5.8
200	30	12,381	-54.4		334	10.3
175	30	13,226	-60.0		336	13.6
150	30	14,174	-65.8		346	14.4
125	30	15,267	-70.9		358	12.6
100	30	16,576	-73.5		29	8.0
80	30	17,894	-68.9		66	8.4
70	30	18,699	-65.0		81	11.3
60	30	19,650	-60.4		78	13.4
50	30	20,794	-57.5		87	17.7
40	30	22,212	-54.4		91	18.1
30	30	24,068	-51.5		90	21.0
25	30	25,255	-49.6		93	20.4
20	28	26,716	-47.9		86	20.6
15	26	28,633	-45.1		76	23.7
10	23	31,356	-40.8		80	23.1
7	13	33,911	-38.2		93	26.4

Standard pressure surface (mb.)	JOHN F. KENNEDY INT. ARPT.NY 1021 MB					
					Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	30	5	17.2	81	348	2.5
1000	30	185	16.8	77	346	2.7
950	30	623	15.8	71	305	3.5
900	30	1,080	13.8	68	275	7.2
850	30	1,561	12.0	61	266	10.1
800	30	2,068	10.0	54	278	11.3
750	30	2,604	7.8	46	278	14.0
700	30	3,169	5.0	41	279	15.7
650	30	3,767	1.9	37	276	18.5
600	30	4,411	- 1.9	35	273	20.8
550	30	5,094	- 6.1	33	274	22.0
500	30	5,838	-10.5	R34	276	23.9
450	30	6,643	-15.5	R29	275	27.2
400	30	7,521	-21.6	R29	277	29.3
350	30	8,490	-28.9	R30	277	33.8
300	30	9,574	-37.4	R28	277	36.5
250	30	10,808	-46.7		278	41.8
200	30	12,256	-55.6		285	45.5
175	30	13,100	-58.9		289	45.1
150	30	14,057	-63.2		284	39.2
125	30	15,168	-66.4		279	32.6
100	30	16,520	-65.6		281	24.3
80	30	17,885	-62.5		281	13.2
70	30	18,713	-60.1		287	8.0
60	30	19,681	-57.2		284	3.5
50	30	20,839	-55.2		294	1.4
40	30	22,271	-52.6		58	2.3
30	30	24,139	-50.1		34	2.5
25	29	25,334	-48.3		37	1.9
20	28	26,813	-46.3		324	1.6
15	16	28,710	-43.8			
10						
7						

Standard pressure surface (mb.)	JOHNSTON IS., PACIFIC AREA 1013 MB					
					Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	29	3	26.5	78	109	9.5
1000	29	115	25.4	80	103	10.5
950	29	574	21.9	87	94	11.7
900	29	1,035	19.0	79	93	11.8
850	29	1,526	17.0	64	87	9.7
800	29	2,043	14.8	49	96	7.2
750	29	2,587	12.2	40	84	5.2
700	29	3,163	9.2	33	90	3.7
650	29	3,772	5.8	30	85	2.9
600	29	4,425	2.0	31	49	2.1
550	29	5,116	- 1.6	22	12	1.4
500	28	5,876	- 5.7	20	342	4.1
450	28	6,691	-11.0	19	309	5.6
400	28	7,589	-17.2	22	301	7.4
350	28	8,576	-24.5	23	290	12.0
300	28	9,680	-32.8	22	278	17.9
250	28	10,937	-42.9		268	23.5
200	28	12,403	-54.7		268	31.1
175	28	13,244	-61.1		265	32.6
150	28	14,186	-67.9		262	30.7
125	28	15,264	-74.3		270	21.0
100	28	16,557	-74.3		319	2.9
80	27	17,870	-69.9		87	14.0
70	27	18,669	-67.0		91	20.6
60	27	19,606	-64.1		90	25.6
50	27	20,731	-60.5		90	31.9
40	27	22,132	-57.6		89	38.3
30	25	23,963	-54.1		90	46.0
25	25	25,140	-51.4		89	50.5
20	25	26,599	-48.5		90	53.0
15	22	28,500	-46.0		90	56.1
10	7	31,210	-42.6			
7						

Standard pressure surface (mb.)	KEY WEST, FLORIDA 1013 MB					
					Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	13	3	26.8	82	87	5.1
1000	13	114	26.0	84	96	5.8
950	13	562	22.9	84	105	5.2
900	13	1,037	20.0	76	113	6.0
850	13	1,529	17.4	68	108	6.6
800	13	2,045	14.7	67	106	5.8
750	13	2,588	11.8	64	102	5.4
700	13	3,165	8.8	56	108	4.1
650	13	3,767	5.6	42	82	3.9
600	13	4,427	2.4	42	110	3.1
550	13	5,118	- 1.7	37	92	3.9
500	13	5,878	- 6.2	28	64	4.9
450	13	6,686	-11.6	29	82	6.2
400	13	7,590	-17.3	21	48	5.2
350	13	8,577	-24.7	21	40	7.0
300	13	9,680	-33.2	22	24	8.7
250	13	10,936	-43.1		7	6.2
200	13	12,402	-54.7		340	6.0
175	13	13,246	-60.9		339	5.4
150	13	14,191	-67.0		4	9.1
125	13	15,276	-72.6		27	14.4
100	13	16,578	-74.0		54	13.6
80	13	17,891	-69.9		73	15.2
70	13	18,691	-66.6		76	17.3
60	13	19,631	-62.7		80	21.0
50	13	20,766	-58.8		82	23.9
40	13	22,178	-55.4		83	26.8
30	12	24,025	-51.6		90	30.1
25	12	25,215	-49.3		87	29.3
20	11	26,694	-47.6		81	30.9
15	11	28,607	-45.1		82	31.9
10	11	31,333	-41.6		88	33.8
7	10	33,767	-38.3		81	25.8

Standard pressure surface (mb.)	KING SALMON, ALASKA 1010 MB					
					Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	30	15	9.2	91	137	5.4
1000	30	93	9.3	87	150	7.6
950	30	517	8.0	82	163	15.0
900	30	964	5.5	86	175	15.2
850	30	1,430	3.0	90	185	17.1
800	30	1,919	.6	85	194	18.5
750	30	2,436	- 1.7	74	199	21.8
700	30	2,983	- 4.2	62	206	25.3
650	30	3,562	- 7.0	56	210	28.4
600	30	4,185	-10.6	56	214	31.1
550	30	4,848	-14.7	55	216	33.0
500	30	5,565	-18.9	51	217	36.9
450	30	6,340	-23.8	50	220	42.2
400	30	7,193	-29.4	50	222	49.3
350	30	8,133	-35.9	52	222	53.6
300	30	9,188	-43.0	53	223	51.3
250	30	10,397	-50.1		224	50.3
200	30	11,838	-54.5		223	44.9
175	30	12,693	-54.3		224	38.7
150	30	13,682	-53.9		229	32.2
125	30	14,851	-54.6		231	25.6
100	28	16,280	-54.3		235	18.6
80	28	17,709	-54.3		238	16.9
70	27	18,561	-54.4		247	14.6
60	27	19,550	-54.6		252	12.2
50	25	20,721	-55.0		257	10.7
40	21	22,139	-54.8		264	9.9
30	19	23,993	-53.7		287	8.4
25	19	25,168	-52.8		275	9.1
20	16	26,603	-51.8		285	11.7
15	10	28,494	-50.3			
10						
7						

Standard pressure surface (mb.)	KOTZEBUE, ALASKA 1010 MB					
					Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	30	5	6.0	85	111	3.3
1000	30	89	5.3	81	131	2.7
950	30	505	3.6	80	144	7.2
900	30	945	1.4	84	152	7.8
850	30	1,404	- .8	78	166	8.2
800	30	1,887	- 3.3	77	174	9.7
750	30	2,394	- 6.3	74	176	11.1
700	30	2,932	- 9.0	72	182	12.0
650	30	3,498	-12.5	65	188	14.0
600	30	4,110	-16.2	61	189	16.1
550	30	4,758	-20.3	57	190	17.9
500	30	5,460	-24.9	51	190	19.8
450	30	6,216	-30.0	49	191	21.0
400	30	7,049	-35.9	51	196	22.9
350	30	7,963	-42.5	49	202	26.6
300	30	8,990	-48.8		203	29.1
250	30	10,180	-51.4		206	29.3
200	30	11,631	-50.8		213	25.8
175	30	12,502	-50.1		214	25.3
150	30	13,508	-50.6		220	22.0
125	29	14,691	-51.3		223	18.8
100	29	16,138	-52.3		229	16.3
80	27	17,580	-52.6		234	13.0
70	27	18,441	-52.8		238	12.8
60	27	19,436	-53.3		246	11.5
50	27	20,608	-53.9		252	9.5
40	27	22,039	-54.6		262	9.9
30	26	23,972	-55.0		279	11.1
25	26	25,038	-54.7		283	11.7
20	25	26,471	-53.8		283	13.4
15	21	28,303	-52.6		282	11.7
10	7	30,958	-51.9			
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SEPTEMBER 1965

KWAJALEIN, MARSHALL IS. 1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	4	27.6	78	81	7.2
1000	30	97	27.0	78	83	8.5
950	30	549	23.9	84	83	10.7
900	30	1,022	20.9	82	85	11.1
850	30	1,516	18.1	81	87	10.9
800	30	2,035	15.5	77	85	10.9
750	30	2,581	12.8	70	89	11.8
700	30	3,158	9.9	66	90	12.4
650	30	3,771	6.3	62	91	12.6
600	30	4,424	2.3	63	89	12.8
550	30	5,123	- 1.9	71	91	12.8
500	30	5,875	- 6.3	65	89	11.3
450	30	6,693	-11.1	62	90	10.5
400	30	7,588	-16.5	54	96	10.9
350	30	8,582	-22.3	52	107	11.1
300	30	9,695	-31.0	51	105	9.3
250	30	10,961	-41.3	39	112	8.4
200	30	12,434	-54.0	35	120	8.0
175	30	13,276	-61.4	35	115	7.4
150	30	14,214	-69.3	34	97	8.0
125	30	15,281	-76.5		90	10.1
100	26	16,560	-77.4		91	12.6
80	24	17,962	-72.1		87	15.2
70	23	18,650	-69.8		90	15.9
60	23	19,575	-66.7		83	23.7
50	22	20,688	-62.6		87	34.6
40	21	22,075	-59.5		90	49.7
30	19	23,996	-54.7		89	62.0
25	19	25,069	-51.8		89	62.7
20	18	26,526	-48.8		90	67.8
15	17	28,431	-44.2		90	60.0
10	15	31,174	-39.3		96	27.2
7	9	33,635	-34.5			

LAKE CHARLES, LA. 1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	5	21.4	93	43	3.1
1000	30	124	23.2	83	88	4.1
950	30	576	21.7	75	142	5.4
900	30	1,041	19.5	69	159	5.1
850	30	1,533	16.9	63	158	3.9
800	30	2,048	13.8	60	159	4.3
750	30	2,589	10.9	57	158	3.5
700	30	3,163	8.4	48	154	3.1
650	30	3,772	5.2	44	146	1.9
600	30	4,423	1.9	38	175	.8
550	30	5,113	- 1.9	33	29	.8
500	30	5,873	- 6.5	R29	56	1.6
450	30	6,685	-11.7	R28	54	1.6
400	30	7,582	-18.1	R28	310	1.6
350	30	8,566	-25.0	R31	290	3.3
300	30	9,669	-32.9	R29	273	3.7
250	30	10,928	-42.0		273	7.8
200	30	12,402	-53.2		267	10.5
175	30	13,251	-59.1		274	9.3
150	30	14,204	-64.9		264	9.7
125	30	15,299	-70.6		232	8.9
100	30	16,608	-73.9		220	3.7
80	30	17,923	-69.0		116	3.9
70	28	18,725	-64.4		106	6.2
60	28	19,679	-60.7		93	10.7
50	28	20,822	-57.7		89	15.2
40	27	22,240	-54.5		87	17.7
30	27	24,100	-50.9		88	20.6
25	27	25,293	-49.1		92	21.4
20	25	26,763	-47.6		85	20.8
15	22	28,687	-44.6		84	20.2
10	6	31,391	-41.8			
7						

LANDER, WYO. 829 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	1,696	4.9	70	261	2.7
1000	30	139				
950	30	565				
900	30	1,018				
850	30	1,491				
800	30	1,988	5.9	51	288	1.4
750	30	2,511	3.4	50	269	4.1
700	30	3,072	.5	47	275	9.1
650	30	3,657	- 3.3	44	269	15.2
600	30	4,292	- 7.0	43	266	21.6
550	30	4,959	-11.1	42	266	29.1
500	30	5,693	-15.5	34	265	32.2
450	30	6,478	-20.8	R31	262	34.8
400	30	7,343	-27.1	R30	260	37.1
350	30	8,292	-34.1	R26	261	42.5
300	30	9,352	-42.1	R24	262	48.6
250	30	10,565	-49.8		258	57.1
200	30	12,007	-54.3		259	59.8
175	30	12,862	-54.9		258	58.5
150	30	13,842	-56.9		257	53.8
125	30	14,992	-58.9		257	41.4
100	30	16,389	-59.7		260	27.8
80	29	17,782	-59.4		258	20.9
70	29	18,619	-57.9		256	18.5
60	29	19,596	-56.5		252	14.6
50	29	20,757	-55.0		254	10.9
40	26	22,195	-52.8		256	7.6
30	25	24,064	-50.9		257	7.0
25	24	25,255	-50.1		257	6.0
20	20	26,698	-49.1		271	5.8
15	9	28,606	-46.9			
10						
7						

LAS VEGAS, NEV. 935 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	660	18.2	26	240	4.9
1000	30	79				
950	30	521				
900	30	992	20.7	25	250	4.3
850	30	1,482	18.1	26	261	4.7
800	30	1,997	14.1	28	228	4.1
750	30	2,535	10.0	30	221	5.4
700	30	3,106	5.5	32	217	6.8
650	30	3,702	1.5	32	229	8.4
600	30	4,348	- 1.8	R23	246	13.0
550	30	5,029	- 6.1	R20	255	18.5
500	30	5,774	-11.0	R20	260	22.0
450	30	6,572	-16.8	R21	262	26.2
400	30	7,449	-23.2	R21	261	31.3
350	30	8,412	-30.7	R22	258	36.3
300	30	9,488	-38.3	R24	255	44.1
250	30	10,720	-46.0		253	51.5
200	30	12,176	-53.9		254	55.8
175	30	13,027	-57.3		253	54.2
150	30	13,995	-60.4		255	47.6
125	30	15,123	-63.3		259	38.9
100	30	16,489	-64.2		266	22.9
80	29	17,859	-63.2		265	12.2
70	29	18,683	-61.0		273	7.0
60	29	19,646	-58.1		268	1.9
50	29	20,802	-55.5		204	1.6
40	29	22,230	-53.2		98	3.1
30	27	24,088	-51.2		80	6.0
25	26	25,274	-50.0		81	7.6
20	22	26,742	-48.2		84	8.4
15	11	28,663	-45.2			
10						
7						

* **LIHUE, HAWAII** 1011 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	36	22.8	87	8	1.0
1000	30	129	23.8	82	43	3.1
950	30	580	20.6	84	78	[illegible]
900	30	1,043	17.4	79	86	[illegible]
850	30	1,530	14.5	79	101	5.6
800	30	2,041	11.9	[illegible]	113	[illegible]
750	30	2,585	10.6	50	156	2.5
700	30	3,154	8.5	36	205	2.7
650	30	3,760	5.3	32	[illegible]	4.5
600	30	4,412	1.3	33	226	5.4
550	30	5,103	- 3.0	28	225	5.6
500	30	5,856	- 7.6	29	224	4.9
450	30	6,661	-13.1	26	251	[illegible]
400	30	7,555	-19.6	28	266	[illegible]
350	30	8,531	-27.1	28	271	9.7
300	30	9,623	-35.6	28	271	15.7
250	30	10,866	-45.1		273	22.0
200	30	12,322	-55.4		271	26.2
175	29	13,152	-60.9		269	29.7
150	29	14,108	-66.1		267	27.0
125	29	15,203	-69.7		266	18.6
100	29	16,529	-69.6		249	5.2
80	29	17,863	-68.3		91	9.3
70	29	18,668	-65.4		90	15.9
60	28	19,612	-62.5		89	23.1
50	27	20,745	-60.0		85	27.6
40	26	22,149	-57.3		89	30.9
30	25	23,985	-53.7		89	37.1
25	25	25,163	-51.4		93	39.0
20	24	26,624	-49.2		93	39.6
15	23	28,524	-46.7		92	39.6
10	22	31,228	-43.6		84	40.8
7	12	33,632	-39.8			

LITTLE ROCK, ARK. 1007 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	79	19.2	90	65	.8
1000	30	136	19.7	85	121	1.6
950	30	580	19.8	74	193	6.2
900	30	1,045	17.7	74	192	8.7
850	30	1,533	15.3	70	198	8.0
800	30	2,046	13.0	60	217	7.2
750	30	2,582	10.6	48	213	6.0
700	30	3,159	7.7	43	232	4.7
650	30	3,763	4.4	40	217	5.6
600	30	4,415	.6	39	237	6.0
550	30	5,105	- 2.8	32	240	9.9
500	30	5,860	- 7.2	R29	244	12.4
450	30	6,665	-12.7	R28	255	13.8
400	30	7,563	-19.1	R29	258	16.1
350	30	8,543	-26.1	R27	256	20.0
300	30	9,641	-34.1	R28	263	26.2
250	30	10,894	-43.3		263	30.1
200	30	12,362	-53.8		260	31.7
175	30	13,210	-59.1		258	31.9
150	30	14,164	-64.5		257	29.9
125	30	15,264	-69.5		251	27.0
100	30	16,585	-71.3		249	18.8
80	30	17,917	-66.8		247	6.8
70	30	18,732	-62.6		233	2.9
60	30	19,692	-59.2		100	2.5
50	30	20,842	-56.2		93	5.8
40	29	22,273	-53.6		92	9.5
30	29	24,134	-50.7		86	11.1
25	29	25,326	-49.1		83	10.5
20	26	26,803	-46.9		83	10.7
15	17	28,728	-44.2		85	12.2
10						
7						
5						

MCGRATH, ALASKA 1000 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	103	7.6	87	181	2.7
1000	30	106			186	2.9
950	30	527	6.9	83	160	5.4
900	30	972	4.7	84	184	9.1
850	30	1,437	2.3	84	194	12.8
800	30	1,925	- .4	82	197	13.6
750	30	2,436	- 3.1	78	201	12.2
700	30	2,983	- 6.2	79	196	11.8
650	30	3,553	- 9.0	72	199	15.3
600	30	4,177	-12.4	70	201	17.9
550	30	4,831	-16.4	63	202	18.8
500	30	5,548	-21.3	60	205	20.8
450	30	6,306	-26.5	56	201	24.1
400	30	7,160	-32.4	55	204	22.5
350	30	8,090	-38.6	53	211	25.8
300	30	9,134	-45.3		225	24.7
250	30	10,336	-50.5		227	24.7
200	30	11,780	-53.1		230	27.0
175	30	12,642	-51.9		228	22.7
150	30	13,642	-51.8		231	15.9
125	30	14,821	-52.8		226	11.8
100	30	16,260	-53.0		254	9.9
80	30	17,696	-53.5		251	7.8
70	30	18,554	-53.7		256	8.5
60	30	19,543	-53.9		261	7.6
50	30	20,711	-54.3		264	8.[illegible]
40	30	22,139	-54.7		276	7.8
30	30	23,979	-54.5		285	9.3
25	27	25,133	-54.3		291	11.1
20	26	26,569	-53.3		285	12.2
15	22	28,429	-51.3			
10	10	31,152	-47.5			
7						
5						

+ **MAJURO, MARSHALL IS.** 1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	3	28.6	80	90	3.3
1000	30	90	27.3	75	89	3.5
950	30	538	23.3	72	92	6.0
900	30	1,013	20.5	69	92	8.4
850	30	1,506	18.1	66	91	8.9
800	30	2,024	15.7	60	96	9.3
750	30	2,567	12.9	57	94	8.7
700	30	3,147	9.7	54	96	9.5
650	30	3,758	6.2	54	98	12.7
600	30	4,412	2.3	53	95	12.6
550	30	5,118	- 1.3	48	98	13.[illegible]
500	30	5,865	- 5.4	45	97	12.8
450	30	6,684	-10.0	42	99	11.8
400	30	7,586	-15.2	35	101	10.5
350	30	8,582	-22.0	31	100	12.0
300	30	9,698	-30.3	27	98	11.1
250	30	10,968	-40.5	26	101	10.1
200	30	12,447	-53.4		105	10.7
175	30	13,292	-60.8		104	11.3
150	30	14,233	-68.6		98	11.[illegible]
125	30	15,304	-76.2		98	11.1
100	30	16,577	-78.5		90	10.9
80	28	17,878	-71.9		85	10.7
70	27	18,670	-69.0		87	14.0
60	26	19,599	-65.3		93	20.[illegible]
50	25	20,720	-61.9		92	31.7
40	24	22,110	-59.5		89	48.8
30	21	23,932	-54.9		90	59.8
25	18	25,104	-52.0		90	66.6
20	9	26,534	-48.7			
15						
10						
7						
5						

+ **MARCUS IS., N. PACIFIC** 1012 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	9	29.4	73	107	10.5
1000	30	119	27.9	71	105	12.2
950	30	571	23.5	70	107	15.9
900	30	1,043	20.7	62	111	15.3
850	30	1,537	18.3	53	111	14.4
800	30	2,055	16.2	43	112	13.8
750	30	2,599	13.4	38	110	14.0
700	30	3,179	10.0	35	109	14.6
650	30	3,786	6.6	32	114	14.0
600	30	4,444	2.7	[illegible]	116	13.8
550	30	5,136	- 1.4	28	113	12.2
500	30	5,897	- 5.6	25	108	12.2
450	30	6,713	-10.6	23	102	13.8
400	30	7,614	-16.4	22	100	13.6
350	30	8,605	-23.2	23	99	12.8
300	30	9,715	-31.6	22	93	11.7
250	30	10,979	-41.7		99	9.5
200	30	12,454	-53.3		84	9.9
175	30	13,302	-59.6		64	12.6
150	30	14,252	-65.7		78	14.6
125	30	15,345	-71.2		84	17.9
100	30	16,650	-75.3		86	20.4
80	30	17,952	-71.4		87	21.2
70	30	18,749	-66.4		86	21.4
60	30	19,692	-62.3		89	22.7
50	30	20,827	-58.9		92	25.3
40	29	22,239	-55.2		93	31.7
30	23	24,097	-51.2		98	34.2
25	16	25,291	-48.8		98	36.9
20	9	26,757	-47.4			
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* **MEDFORD, OREG.** 970 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	401	8.1	72	351	.4
1000	30	143				
950	30	575	12.3	58	330	1.0
900	30	1,026	12.6	50	342	.6
850	30	1,504	10.5	49	45	2.1
800	30	2,007	8.5	38	14	3.7
750	30	2,538	6.2	33	344	7.0
700	30	3,101	3.4	29	342	11.5
650	30	3,695	.2	27	346	14.6
600	30	4,336	- 3.5	25	344	18.5
550	30	5,012	- 7.7	26	345	[illegible]
500	30	5,754	-12.6	27	340	[illegible]
450	30	6,542	-18.4	29	339	[illegible]
400	30	7,418	-24.9	26	337	27.4
350	30	8,375	-32.2	25	337	30.3
300	30	9,444	-40.5	25	339	29.5
250	30	10,662	-49.8		340	31.7
200	30	12,094	-57.4		335	27.6
175	30	12,932	-59.6		320	26.0
150	30	13,896	-60.0		306	25.8
125	30	15,032	-60.8		301	23.3
100	30	16,417	-61.1		295	19.2
80	30	17,805	-60.2		295	14.2
70	30	18,638	-59.2		297	11.7
60	30	19,607	-57.5		291	9.1
50	30	20,761	-56.3		282	8.4
40	30	22,183	-54.0		276	9.9
30	30	24,041	-50.8		265	[illegible]
25	29	25,233	-49.4		270	[illegible]
20	29	26,698	-48.2		265	[illegible]
15	29	28,599	-46.1		[illegible]	6.4
10	26	31,318	-42.5		264	[illegible]
7	11	33,757	-38.8		[illegible]	1.7
5	5	36,076	-36.2			

MERIDA, MEXICO 1012 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	11	22.3	98	90	5.1
1000	28	116	23.9	94	98	7.8
950	28	566	22.5	84	118	10.5
900	28	1,036	20.2	76	118	10.3
850	28	1,528	17.4	72	113	8.9
800	28	2,045	14.6	71	115	7.6
750	28	2,584	11.9	62	111	7.0
700	28	3,165	9.4	56	112	7.0
650	28	3,767	5.6	51	98	7.0
600	28	4,426	2.2	45	79	7.8
550	28	5,108	- 1.7	36	65	9.7
500	28	5,877	- 6.0	30	57	9.9
450	28	6,685	-11.2	29	53	10.3
400	28	7,589	-17.3	29	56	8.7
350	28	8,577	-24.0	26	45	5.2
300	28	9,683	-32.3	22	31	4.3
250	28	10,943	-42.2		9	3.9
200	28	12,415	-53.5		32	5.1
175	28	13,262	-59.9		33	7.6
150	27	14,211	-66.1		48	10.9
125	27	15,299	-72.1		66	15.5
100	26	16,603	-75.3		68	21.2
80	26	17,914	-69.6		86	23.7
70	26	18,716	-65.9		95	23.5
60	26	19,661	-62.4		88	22.9
50	26	20,796	-58.5		86	27.0
40	26	22,210	-55.0		88	32.6
30	25	24,057	-51.1		90	35.2
25	22	25,253	-48.7		90	38.1
20	16	26,732	-47.1		92	39.0
15	6	28,632	-44.5			
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* **MIAMI, FLA.** 1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	28	4	24.6	92	93	3.1
1000	28	131	25.2	86	95	5.6
950	28	581	22.0	87	96	11.1
900	28	1,051	19.2	79	10	11.8
850	28	1,542	16.5	76	97	11.3
800	28	2,057	14.1	65	94	9.7
750	28	2,599	11.4	59	90	9.9
700	28	3,174	8.6	46	85	8.9
650	28	3,779	5.1	46	76	9.1
600	28	4,432	1.3	49	70	8.7
550	28	5,119	- 2.6	44	64	6.4
500	28	5,877	- 7.2	40	70	6.0
450	28	6,684	-12.5	34	73	7.4
400	28	7,581	-18.5	35	66	6.0
350	28	8,564	-25.3	33	62	6.0
300	28	9,664	-33.8	33	47	5.6
250	28	10,916	-43.7		23	7.2
200	28	12,380	-54.6		351	10.3
175	28	13,223	-60.4		8	12.4
150	28	14,171	-66.1		23	15.9
125	27	15,263	-71.6		32	18.6
100	27	16,569	-73.8		53	17.7
80	26	17,885	-69.2		73	16.1
70	26	18,688	-65.8		78	17.3
60	26	19,632	-62.6		83	21.8
50	26	20,766	-58.9		86	26.8
40	25	22,176	-55.9		92	30.3
30	24	24,027	-51.4		91	30.7
25	23	25,214	-49.6		93	29.3
20	23	26,681	-47.8		87	28.7
15	23	28,591	-45.1		86	32.1
10	22	31,312	-42.1		88	33.0
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* **MIDLAND, TEXAS** 915 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	874	18.6	75	144	4.5
1000	30	103				
950	30	549				
900	30	1,017	19.6	68	159	9.1
850	30	1,509	18.7	62	183	15.0
800	30	2,028	16.4	54	194	12.4
750	30	2,572	13.0	49	207	8.9
700	30	3,152	9.0	50	217	5.6
650	30	3,758	4.8	53	222	6.0
600	30	4,411	.9	44	227	9.3
550	30	5,099	- 2.9	33	229	11.8
500	30	5,855	- 7.2	28	230	13.6
450	30	6,664	-12.6	28	238	16.1
400	30	7,559	-18.8	29	235	18.5
350	30	8,539	-26.1	32	247	18.8
300	30	9,636	-34.3	36	249	24.3
250	30	10,888	-43.4		253	28.9
200	30	12,356	-53.8		257	33.0
175	30	13,203	-59.2		256	32.6
150	30	14,156	-65.0		252	30.7
125	30	15,251	-70.6		245	26.6
100	30	16,567	-71.7		245	18.5
80	30	17,895	-67.3		226	6.2
70	30	18,706	-63.7		161	1.6
60	30	19,660	-60.4		106	5.2
50	29	20,806	-57.3		100	9.9
40	27	22,226	-55.1		92	11.5
30	27	24,078	-51.7		89	15.9
25	27	25,264	-50.3		94	15.7
20	25	26,720	-47.9		87	17.5
15	25	28,629	-45.2		88	[illegible]
10	21	31,366	-41.6		83	19.0
7	13	33,792	-39.2		106	15.5
5	8	36,123	-34.6			

MONTERREY, MEXICO 963 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	423	22.1	82	89	1.7
1000	30	91				
950	30	539	21.5	82	101	3.1
900	30	1,008	19.1	85	128	7.8
850	30	1,500	18.2	70	135	12.4
800	30	2,018	16.4	56	130	10.9
750	30	2,566	13.2	53	126	6.4
700	30	3,142	9.9	47	112	2.7
650	30	3,753	6.0	49	44	1.2
600	30	4,405	1.6	51	25	2.5
550	30	5,095	- 2.3	43	90	3.9
500	30	5,853	- 6.6	38	104	4.1
450	30	6,666	-12.1	33	113	4.1
400	30	7,559	-18.1	[illegible]	112	3.5
350	30	8,543	-25.2	30	117	1.7
300	30	9,643	-33.6	30	[illegible]	3.5
250	30	10,896	-43.2		278	5.6
200	30	12,365	-53.9		300	8.2
175	30	13,210	-60.0		315	7.6
150	30	14,159	-66.3		337	4.1
125	30	15,246	-72.5		57	2.5
100	30	16,546	-74.7		97	5.6
80	27	17,856	-69.5		87	10.1
70	27	18,657	-66.5		80	15.5
60	27	19,602	-62.4		91	18.3
50	27	20,738	-58.7		84	22.1
40	25	22,151	-55.6		85	25.4
30	23	23,999	-52.5		84	29.1
25	23	25,183	-50.4		83	30.1
20	21	26,640	-48.4		79	30.5
15	15	28,556	-45.7		83	35.5
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MONTGOMERY, ALA. 1011 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	61	20.4	95	75	4.1
1000	30	152	20.8	91	84	5.9
950	30	600	20.7	78	128	12.2
900	30	1,065	18.5	76	145	10.9
850	30	1,554	16.1	70	157	9.9
800	30	2,069	13.6	62	[illegible]	7.8
750	30	2,608	10.8	59	170	8.4
700	30	3,184	7.9	50	176	[illegible]
650	30	3,790	4.6	49	187	7.2
600	30	4,441	1.1	40	[illegible]	[illegible]
550	30	5,129	- 2.6	34	[illegible]	6.2
500	30	5,887	- 6.9	R28	208	5.6
450	30	6,696	-12.1	R27	[illegible]	5.4
400	30	7,594	-18.3	[illegible]	244	5.8
350	30	8,578	-25.0	R28	253	9.1
300	30	9,679	-33.5	R28	260	9.3
250	30	10,935	-42.6		272	9.9
200	30	12,408	-53.3		[illegible]	13.2
175	29	13,253	-59.1		293	13.6
150	28	14,204	-64.8		289	15.2
125	28	15,301	-70.2		[illegible]	12.2
100	28	16,616	-73.1		307	5.4
80	27	17,934	-68.6		100	2.1
70	27	18,742	-63.8		93	4.3
60	27	19,697	-60.4		86	7.8
50	27	20,842	-57.1		79	12.6
40	27	22,265	-54.2		87	13.4
30	27	24,121	-50.9		89	16.3
25	27	25,314	-48.5		91	15.3
20	27	26,786	-47.2		85	16.9
15	27	28,698	-45.2		81	18.1
10	25	31,429	-40.9		81	21.2
7	24	33,883	-35.8		92	[illegible]
5	13	36,226	-32.0			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SEPTEMBER 1965

Standard pressure surface (mb.)	* NANTUCKET, MASS. 1020 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	14	14.3	95	73	1.0
1000	30	181	15.4	76	203	1.6
950	30	610	13.8	65	299	2.5
900	30	1,071	12.5	63	287	6.6
850	30	1,551	11.9	49	289	1[illegible].7
800	30	2,057	9.9	43	286	12.0
750	30	2,586	7.3	45	283	14.0
700	30	3,156	4.7	41	283	17.3
650	30	3,752	1.5	42	280	19.6
600	30	4,398	- 2.0	42	280	22.0
550	30	5,079	- 6.1	39	281	22.3
500	30	5,826	-10.4	35	283	24.1
450	30	6,625	-15.4	29	284	27.8
400	30	7,510	-21.5	28	283	29.3
350	30	8,480	-28.9	27	283	30.9
300	30	9,564	-37.4	25	287	34.2
250	30	10,798	-46.8		290	38.5
200	30	12,247	-55.4		292	43.7
175	30	13,093	-58.7		291	44.1
150	30	14,053	-62.2		290	39.2
125	30	15,170	-65.3		288	32.8
100	30	16,529	-65.0		282	22.9
80	30	17,898	-61.4		286	15.9
70	30	18,729	-59.6		289	10.7
60	30	19,698	-57.2		284	6.8
50	30	20,855	-55.3		292	5.2
40	30	22,283	-53.6		328	4.1
30	30	24,142	-5[illegible].8		354	2.3
25	30	25,333	-48.9		353	1.0
20	29	26,803	-46.9		337	1.9
15	28	28,722	-43.9		297	1.2
10	18	31,471	-40.3		271	4.7
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Standard pressure surface (mb.)	* NASHVILLE, TENN. 998 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	177	18.1	92	130	2.6
1000	30	159				
950	30	600	18.4	76	183	10.7
900	30	1,062	16.1	76	200	12.2
850	30	1,548	14.2	73	218	11.7
800	30	2,058	11.7	68	222	11.1
750	30	2,595	9.4	55	224	9.7
700	30	3,166	6.7	48	226	9.7
650	30	3,768	3.3	47	225	10.7
600	30	4,416	- .2	41	230	12.0
550	30	5,103	- 3.9	36	233	13.6
500	30	5,855	- 8.4	33	242	15.2
450	30	6,659	-13.7	29	247	16.7
400	30	7,550	-19.9	30	254	18.3
350	30	8,526	-27.0	30	256	21.6
300	30	9,620	-34.8	29	260	23.5
250	30	10,869	-43.3		264	28.6
200	30	12,338	-53.4		267	32.1
175	30	13,187	-58.7		265	31.7
150	30	14,143	-63.9		268	31.9
125	30	15,245	-68.6		266	28.4
100	30	16,572	-70.5		264	19.8
80	30	17,908	-66.4		262	8.5
70	30	18,725	-62.0		254	4.3
60	29	19,688	-59.2		60	.6
50	29	20,839	-56.0		78	3.3
40	28	22,264	-53.5		78	4.1
30	28	24,125	-51.0		89	7.2
25	28	25,316	-49.1		82	7.4
20	27	26,788	-47.5		89	8.2
15	26	28,698	-44.7		82	8.7
10	24	31,421	-41.8		83	10.9
7	12	33,861	-37.5		76	12.0
5	5	36,158	-34.8			

Standard pressure surface (mb.)	NOME, ALASKA 1009 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	7	6.0	86	26	2.7
1000	30	77			39	2.5
950	30	497	3.8	84	131	6.2
900	30	934	1.3	84	152	6.8
850	30	1,393	- .7	76	153	7.2
800	30	1,875	- 3.3	75	168	8.4
750	30	2,382	- 6.3	73	177	10.3
700	30	2,921	- 9.2	69	177	12.4
650	30	3,488	-11.9	60	180	13.8
600	30	4,097	-15.6	58	184	16.1
550	30	4,747	-19.3	58	190	18.8
500	30	5,455	-24.1	59	192	20.8
450	30	6,210	-29.7	54	191	21.6
400	30	7,045	-35.8	49	196	24.5
350	30	7,961	-42.0	48	193	31.3
300	30	8,991	-47.7		204	31.3
250	30	10,185	-50.2		207	37.5
200	30	11,643	-49.6		211	32.8
175	30	12,519	-49.2		213	30.1
150	30	13,529	-49.7		217	26.6
125	30	14,719	-50.7		221	23.1
100	30	16,171	-51.3		227	17.9
80	30	17,618	-51.7		230	15.3
70	30	18,481	-52.3		236	13.4
60	30	19,477	-52.9		245	11.3
50	30	20,651	-53.5		254	10.7
40	30	22,082	-54.4		265	9.7
30	30	23,924	-54.4		275	11.1
25	26	25,098	-53.8		282	11.8
20	26	26,533	-53.2		284	12.8
15	22	28,376	-52.2		279	16.5
10	5	30,999	-49.8			
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Standard pressure surface (mb.)	* NORTH PLATTE, NEBR. 917 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	848	8.0	87	43	3.7
1000	30	126				
950	30	558				
900	30	1,003	8.3	80	47	3.3
850	30	1,476	8.5	78	258	2.1
800	30	1,978	8.4	70	261	9.1
750	30	2,511	6.8	63	268	13.8
700	30	3,076	4.1	60	261	18.1
650	30	3,674	.4	57	264	19.6
600	30	4,313	- 4.1	60	259	24.1
550	30	4,987	- 9.0	60	256	28.0
500	30	5,727	-13.5	53	256	30.9
450	30	6,520	-18.6	44	255	35.4
400	30	7,390	-24.4	39	253	41.8
350	30	8,349	-31.5	35	253	45.8
300	30	9,422	-39.3	38	250	52.1
250	30	10,647	-47.7		251	59.8
200	29	12,097	-54.5		254	64.7
175	29	12,946	-57.5		253	64.7
150	29	13,914	-60.0		256	55.4
125	29	15,044	-62.5		256	47.0
100	29	16,418	-62.8		257	31.1
80	28	17,796	-60.6		257	18.3
70	28	18,628	-59.4		255	14.6
60	28	19,600	-56.5		255	10.9
50	28	20,762	-54.6		261	10.3
40	28	22,194	-53.2		246	7.4
30	27	24,054	-50.7		296	1.9
25	26	25,249	-49.5		274	2.1
20	26	26,716	-47.8		276	2.1
15	23	28,607	-45.9		288	2.1
10	18	31,323	-41.6		303	2.3
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Standard pressure surface (mb.)	* OAKLAND, CALIF. 1013 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	6	14.8	79	293	2.5
1000	30	113	13.7	77	278	2.5
950	30	550	13.6	64	274	3.3
900	30	1,003	15.5	37	306	3.3
850	30	1,487	14.0	35	340	2.3
800	30	1,996	11.8	32	4	2.1
750	30	2,527	8.8	31	352	2.7
700	30	3,101	5.8	28	328	5.4
650	30	3,698	2.3	27	325	8.2
600	30	4,346	- 1.5	27	324	11.8
550	30	5,023	- 6.2	26	323	13.6
500	30	5,773	-11.4	26	325	16.3
450	30	6,567	-17.2	26	325	18.1
400	30	7,446	-23.8	26	322	21.2
350	30	8,407	-31.3	27	319	22.9
300	30	9,480	-39.6	27	324	24.3
250	30	10,705	-47.8		309	22.7
200	30	12,151	-54.9		290	26.6
175	30	13,000	-57.4		287	25.8
150	30	13,968	-60.0		275	28.6
125	29	15,096	-61.9		278	28.4
100	28	16,474	-62.5		277	21.4
80	28	17,850	-61.8		277	13.6
70	28	18,677	-60.6		291	8.5
60	28	19,641	-58.8		291	6.4
50	27	20,794	-55.9		271	4.5
40	27	22,221	-53.3		276	3.1
30	27	24,082	-51.0		206	1.2
25	27	25,271	-49.6		81	2.3
20	26	26,737	-48.2		75	3.9
15	22	28,631	-46.3		73	3.3
10	18	31,344	-43.4		72	3.9
7	6	33,748	-38.6			
5						

Standard pressure surface (mb.)	OKLAHOMA CITY, OKLA. 969 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	392	18.1	83	154	3.7
1000	30	119				
950	30	562	18.7	77	180	9.9
900	30	1,026	18.2	68	202	18.5
850	30	1,516	16.6	65	217	17.5
800	30	2,031	14.1	59	226	14.4
750	30	2,570	11.0	54	226	13.[illegible]
700	30	3,146	7.2	53	226	12.[illegible]
650	30	3,749	3.4	49	235	12.[illegible]
600	30	4,398	- .3	44	241	15.5
550	30	5,085	- 4.2	37	241	17.7
500	30	5,836	- 8.5	35	244	22.3
450	30	6,640	-13.7	30	245	26.4
400	30	7,531	-19.8	33	248	30.1
350	30	8,509	-26.8	35	245	34.4
300	30	9,603	-35.0	36	247	37.3
250	30	10,850	-44.1		252	39.6
200	30	12,314	-54.0		252	44.9
175	29	13,164	-59.2		252	43.1
150	29	14,119	-64.2		250	41.6
125	29	15,221	-69.2		250	35.9
100	28	16,549	-70.0		251	23.9
80	27	17,888	-65.7		233	10.1
70	27	18,704	-62.7		217	5.8
60	27	19,663	-58.7		151	2.5
50	26	20,815	-56.4		88	5.4
40	26	22,239	-54.2		90	8.0
30	25	24,096	-51.4		94	8.0
25	25	25,283	-49.7		92	7.6
20	20	26,738	-48.5		81	9.3
15	14	28,618	-46.0		65	11.8
10						
7						
5						

Standard pressure surface (mb.)	OMAHA, NEBR. 968 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	403	11.2	90	36	1.2
1000	30	128				
950	30	559	11.8	85	265	.4
900	30	1,013	12.9	73	243	10.5
850	30	1,494	12.1	71	242	15.9
800	30	2,000	9.8	64	238	17.7
750	30	2,530	7.1	55	238	20.2
700	30	3,099	4.0	51	241	23.3
650	30	3,692	.4	52	246	25.1
600	30	4,336	- 3.8	51	249	27.6
550	30	5,012	- 8.1	54	249	30.5
500	30	5,754	-12.2	45	248	34.8
450	30	6,547	-17.2	41	249	38.3
400	30	7,427	-23.1	42	251	42.7
350	30	8,391	-30.0	38	252	46.4
300	30	9,470	-37.9	39	251	52.1
250	30	10,703	-46.6		248	59.6
200	30	12,156	-54.3		250	68.8
175	30	13,005	-57.5		250	67.2
150	30	13,969	-61.1		253	63.7
125	27	15,090	-63.2		255	50.3
100	25	16,448	-62.8		251	33.2
80	25	17,830	-60.5		248	20.6
70	25	18,664	-58.8		248	14.4
60	25	19,636	-56.4		254	12.0
50	25	20,800	-53.9		265	8.2
40	25	22,238	-52.2		258	5.8
30	24	24,104	-50.4		272	5.1
25	24	25,296	-49.2		281	3.7
20	23	26,769	-47.3		275	4.1
15	18	28,670	-44.9		262	6.6
10						
7						
5						

Standard pressure surface (mb.)	* PEORIA, ILL. 994 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	200	14.3	95	156	2.7
1000	30	144				
950	30	580	16.1	76	222	9.5
900	30	1,039	14.8	66	240	13.2
850	30	1,522	12.6	57	246	15.2
800	30	2,029	10.0	52	249	17.1
750	30	2,562	7.2	49	248	19.0
700	30	3,128	4.4	47	250	21.0
650	30	3,725	.8	49	248	22.1
600	29	4,368	- 2.9	45	244	25.1
550	29	5,047	- 6.7	41	244	27.6
500	29	5,791	-10.9	35	245	32.2
450	29	6,587	-15.8	33	246	37.3
400	29	7,471	-21.7	31	249	42.3
350	29	8,441	-28.9	32	252	46.4
300	29	9,527	-36.9	32	257	52.1
250	29	10,766	-45.6		254	58.3
200	29	12,227	-54.0		257	66.8
175	29	13,076	-58.0		263	64.7
150	29	14,039	-61.4		262	58.3
125	29	15,160	-65.0		259	45.8
100	29	16,516	-65.1		258	33.6
80	29	17,884	-62.1		259	18.1
70	29	18,713	-59.3		258	11.5
60	29	19,685	-56.9		275	7.4
50	29	20,845	-55.0		281	3.1
40	29	22,278	-52.9		289	3.3
30	29	24,144	-50.5		319	1.6
25	29	25,337	-49.0		20	1.6
20	28	26,808	-47.2		23	2.9
15	28	28,721	-45.2		39	3.3
10	21	31,467	-40.4		41	3.7
7	6	33,853	-36.2			
5						

Standard pressure surface (mb.)	* PITTSBURGH, PA. 978 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	353	15.1	91	180	2.5
1000	30	173				
950	30	608	16.8	80	216	6.8
900	30	1,069	14.9	75	247	10.9
850	30	1,552	12.6	67	252	12.2
800	30	2,059	10.2	62	254	13.4
750	30	2,593	7.7	49	254	15.3
700	30	3,160	5.0	45	257	16.5
650	30	3,757	1.4	49	255	17.9
600	30	4,402	- 2.4	45	255	22.1
550	30	5,078	- 6.0	41	256	23.5
500	30	5,829	-10.0	37	257	26.2
450	30	6,630	-15.2	34	260	28.6
400	30	7,515	-21.5	34	263	30.3
350	30	8,485	-28.4	29	269	32.1
300	30	9,572	-36.5	29	268	33.2
250	30	10,812	-45.6		271	39.0
200	30	12,268	-54.3		278	49.3
175	30	13,116	-58.3		277	46.4
150	30	14,075	-62.7		277	43.7
125	30	15,190	-65.5		275	35.7
100	30	16,540	-66.4		275	25.[illegible]
80	30	17,900	-62.9		269	14.0
70	30	18,727	-60.5		274	8.7
60	30	19,693	-57.8		288	5.2
50	30	20,849	-55.2		290	3.7
40	30	22,279	-53.1		321	2.1
30	30	24,143	-50.4		349	2.1
25	30	25,336	-48.8		314	1.7
20	29	26,806	-46.9		324	2.1
15	29	28,720	-44.5		303	2.1
10	28	31,459	-40.1		295	2.9
7	15	33,891	-37.2		324	2.1
5	6	36,126	-34.4			

Standard pressure surface (mb.)	PONAPE, CAROLINE IS. + 1005 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	39	27.8	82	232	1.4
1000	30	82	27.2	80	231	1.7
950	30	525	23.6	76	274	3.9
900	30	1,006	20.6	76	281	3.1
850	30	1,499	17.9	73	289	1.9
800	30	2,017	15.5	69	25	1.2
750	30	2,561	12.8	64	67	1.7
700	30	3,140	9.6	61	86	5.1
650	30	3,750	6.0	59	92	7.0
600	30	4,405	2.3	59	94	9.9
550	30	5,099	- 1.3	55	96	11.7
500	30	5,859	- 5.2	46	95	12.6
450	30	6,676	-10.1	40	100	12.4
400	30	7,580	-15.7	36	98	12.9
350	30	8,575	-22.2	33	95	11.7
300	30	9,691	-30.4	29	81	11.1
250	30	10,961	-40.6	33	75	13.0
200	30	12,440	-53.3		65	15.7
175	30	13,286	-60.8		70	18.1
150	30	14,227	-68.5		76	18.3
125	30	15,300	-76.0		81	19.0
100	30	16,578	-76.9		76	14.9
80	30	17,877	-71.2		92	14.0
70	30	18,673	-67.6		93	14.4
60	27	19,606	-65.4		91	18.3
50	26	20,722	-62.6		89	31.5
40	26	22,108	-59.7		89	52.1
30	24	23,928	-54.5		90	63.9
25	23	25,105	-51.9		90	67.4
20	21	26,561	-47.7		91	70.5
15	8	28,498	-42.8			
10						
7						
5						

Standard pressure surface (mb.)	PORTLAND, ME. 1020 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	20	11.6	89	295	2.9
1000	30	186	13.4	72	294	2.9
950	30	620	13.1	62	290	4.7
900	30	1,072	11.2	60	291	7.9
850	30	1,549	9.7	52	286	9.3
800	30	2,051	8.1	47	279	13.0
750	30	2,579	5.8	43	277	15.7
700	30	3,145	3.4	37	279	19.8
650	30	3,738	.2	41	276	23.7
600	30	4,381	- 3.3	35	275	26.2
550	30	5,057	- 7.3	R32	273	28.6
500	30	5,802	-11.7	R29	274	32.1
450	30	6,596	-16.9	R27	274	35.9
400	30	7,478	-22.7	R28	272	39.4
350	30	8,444	-29.8	R27	274	42.0
300	30	9,524	-38.1	R28	276	46.2
250	30	10,754	-47.5		281	50.5
200	30	12,201	-55.6		282	55.0
175	30	13,046	-58.2		284	54.2
150	29	14,018	-61.0		284	45.8
125	29	15,145	-63.1		278	38.9
100	29	16,517	-62.6		277	28.2
80	29	17,900	-60.3		282	18.8
70	29	18,735	-58.4		283	12.6
60	28	19,710	-56.5		284	8.2
50	28	20,872	-54.9		285	4.7
40	28	22,305	-52.6		304	2.5
30	26	24,171	-50.1		313	1.7
25	24	25,362	-48.7		319	1.9
20	20	26,836	-46.5		35	2.1
15	11	28,777	-43.3		45	3.3
10	7	31,564	-39.6			
7						

Standard pressure surface (mb.)	RAPID CITY, S. DAK. 905 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	966	5.9	79	329	4.3
1000	30	137				
950	30	560				
900	30	1,010			331	4.1
850	30	1,478	6.4	64	313	9.0
800	30	1,972	4.2	65	300	10.1
750	30	2,493	2.8	58	286	12.8
700	30	3,053	.4	54	267	15.5
650	30	3,641	- 2.5	55	265	20.8
600	30	4,276	- 6.5	53	261	23.3
550	30	4,942	-11.1	51	257	27.8
500	30	5,676	-15.9	46	257	32.8
450	30	6,454	-21.1	39	254	37.5
400	30	7,322	-27.4	37	255	43.9
350	30	8,270	-34.0	R32	250	48.0
300	30	9,332	-41.8	R26	251	53.0
250	29	10,546	-49.5		252	58.7
200	28	11,991	-53.5		254	61.2
175	28	12,847	-55.1		254	58.5
150	28	13,827	-56.8		254	54.6
125	28	14,977	-58.4		258	45.8
100	28	16,378	-58.7		260	35.9
80	28	17,781	-57.8		262	23.7
70	28	18,624	-57.3		259	17.7
60	28	19,601	-55.8		262	14.4
50	27	20,768	-54.4		256	10.9
40	24	22,208	-52.1		264	8.4
30	21	24,080	-50.3		277	4.1
25	20	25,279	-49.4		275	2.9
20	20	26,746	-47.8		299	2.3
15	19	28,661	-45.0		18	4.5
10						
7						

Standard pressure surface (mb.)	ST. CLOUD, MINN. 978 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	316	8.0	90	92	.8
1000	30	133				
950	30	559	8.0	82	79	1.9
900	30	1,003	6.8	76	267	1.4
850	29	1,470	6.1	69	260	5.8
800	29	1,967	5.3	70	261	12.0
750	29	2,493	3.2	68	263	17.3
700	29	3,051	.5	67	263	23.7
650	29	3,640	- 2.7	52	261	27.6
600	29	4,274	- 6.5	49	260	32.2
550	29	4,943	-11.0	43	262	34.4
500	29	5,676	-15.6	39	258	37.1
450	29	6,458	-20.7	34	257	38.9
400	29	7,326	-26.6	35	256	43.9
350	29	8,277	-33.5	R33	257	51.3
300	29	9,342	-41.3	R30	255	59.2
250	29	10,560	-49.1		251	66.6
200	29	12,001	-55.1		252	72.5
175	29	12,852	-56.2		256	69.7
150	29	13,829	-57.0		259	60.6
125	29	14,978	-58.8		260	49.3
100	29	16,380	-58.4		262	35.9
80	29	17,785	-57.4		259	26.4
70	29	18,631	-56.1		260	22.5
60	29	19,614	-54.9		262	17.5
50	29	20,782	-53.8		267	15.2
40	29	22,222	-52.1		267	10.9
30	29	24,094	-50.2		273	9.1
25	28	25,289	-49.1		280	7.6
20	28	26,760	-47.3		266	7.0
15	26	28,676	-45.1		287	6.8
10	13	31,449	-39.8			
7						

Standard pressure surface (mb.)	ST. PAUL IS., ALASKA 1006 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	10	6.2	95	230	2.3
1000	30	59			208	3.9
950	30	475	4.1	90	226	3.9
900	30	916	1.8	88	213	5.6
850	30	1,376	- .5	80	210	7.0
800	30	1,859	- 2.5	75	207	8.0
750	30	2,371	- 4.9	69	214	10.1
700	30	2,910	- 7.8	62	220	11.5
650	30	3,480	-10.7	60	214	12.8
600	30	4,095	-14.2	59	212	15.2
550	30	4,746	-18.3	55	213	18.6
500	30	5,455	-22.7	54	210	22.5
450	30	6,216	-27.8	49	202	24.1
400	30	7,057	-33.8	45	202	27.6
350	30	7,981	-40.1	46	209	33.2
300	30	9,019	-46.5		202	40.8
250	30	10,217	-49.2		202	42.9
200	30	11,684	-48.5		205	35.9
175	30	12,562	-48.7		206	32.2
150	30	13,573	-49.6		207	25.6
125	30	14,764	-50.7		211	22.3
100	29	16,214	-51.1		213	18.5
80	29	17,663	-51.8		217	16.1
70	29	18,527	-52.0		215	14.4
60	29	19,526	-52.3		216	13.2
50	29	20,703	-52.9		218	10.7
40	29	22,141	-53.2		225	9.3
30	29	23,994	-52.9		238	9.1
25	29	25,170	-52.6		249	10.1
20	28	26,620	-51.4		254	11.5
15	25	28,499	-49.7		260	12.8
10	16	31,189	-47.2		249	14.4
7	8	33,539	-45.7			

Standard pressure surface (mb.)	SALEM, OREG. 1010 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	61	9.4	85	292	.8
1000	30	146	11.4	76	350	2.1
950	30	577	12.5	63	27	6.0
900	30	1,029	10.4	61	24	4.7
850	30	1,503	8.4	49	[illegible]	4.7
800	30	2,003	7.[illegible]	39	349	7.4
750	30	2,525	4.4	37	342	11.3
700	30	3,091	2.2	30	340	16.7
650	30	3,681	- .9	R28	338	20.6
600	30	4,321	- 4.7	R25	339	23.9
550	30	4,992	- 8.7	R27	337	25.8
500	30	5,733	-13.4	R27	334	29.9
450	30	6,521	-19.0	R26	335	31.7
400	30	7,395	-25.2	R24	336	35.5
350	30	8,350	-32.5	R22	336	36.7
300	30	9,417	-40.8	R24	338	39.8
250	30	10,632	-49.9		343	43.9
200	30	12,061	-57.6		337	40.2
175	30	12,900	-59.3		329	36.3
150	30	13,864	-59.7		320	32.8
125	30	15,001	-60.3		315	27.4
100	29	16,393	-60.1		311	21.8
80	29	17,786	-59.4		311	16.7
70	29	18,622	-58.7		311	13.6
60	29	19,593	-57.3		303	10.9
50	29	20,748	-55.9		294	9.1
40	29	22,171	-54.5		279	9.3
30	28	24,027	-51.1		271	11.5
25	27	25,221	-49.5		268	10.5
20	24	26,694	-47.9		256	10.1
15	18	28,609	-45.9		276	13.4
10	7	31,310	-42.3			
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SEPTEMBER 1965

SALT LAKE CITY, UTAH 870 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	1,288	9.4	67	152	5.1
1000	30	117				
950	30	549				
900	30	1,008				
850	30	1,485	12.7	49	167	7.0
800	30	1,992	10.2	45	213	5.4
750	30	2,524	6.5	46	252	7.8
700	30	3,088	2.5	49	260	11.1
650	30	3,679	- 1.7	50	261	14.6
600	30	4,316	- 5.8	49	257	18.5
550	30	4,987	- 9.9	44	253	20.2
500	30	5,722	-14.7	40	259	24.5
450	30	6,510	-20.0	R36	254	27.4
400	30	7,375	-26.2	R34	257	29.3
350	30	8,328	-33.3	R31	257	31.7
300	30	9,392	-41.4	R30	256	35.0
250	30	10,609	-49.1		262	39.4
200	30	12,057	-53.7		264	45.8
175	30	12,911	-56.1		267	41.4
150	30	13,887	-58.0		268	41.4
125	30	15,032	-59.5		266	34.2
100	29	16,423	-60.5		267	27.0
80	28	17,815	-59.9		263	18.8
70	28	18,649	-59.2		258	13.8
60	28	19,620	-57.0		261	10.7
50	28	20,779	-54.8		254	9.3
40	28	22,212	-53.1		249	6.6
30	27	24,074	-50.8		258	7.2
25	25	25,252	-50.2		255	4.1
20	23	26,710	-49.0		271	2.7
15	21	28,612	-47.1		255	2.9
10	9	31,307	-43.6			
7						
5						

SAN ANTONIO, TEXAS 986 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	243	21.8	87	123	2.1
1000	30	121				
950	30	569	21.0	84	164	8.7
900	30	1,037	19.7	71	167	14.8
850	29	1,529	17.2	66	163	12.2
800	29	2,045	14.4	64	158	8.0
750	29	2,588	11.7	58	135	4.9
700	29	3,164	8.9	48	116	3.1
650	29	3,772	5.8	44	155	2.5
600	29	4,426	2.2	37	189	3.7
550	29	5,117	- 1.6	29	204	3.7
500	29	5,877	- 6.2	24	201	3.7
450	29	6,690	-11.8	23	[illegible]	4.5
400	29	7,585	-18.5	25	215	4.9
350	29	8,567	-25.5	27	242	8.2
300	29	9,667	-33.7	30	241	10.3
250	29	10,922	-42.9		257	11.1
200	28	12,393	-53.4		261	14.6
175	28	13,240	-59.5		266	14.2
150	28	14,191	-65.8		269	13.8
125	27	15,283	-71.6		238	8.0
100	27	16,587	-74.2		219	7.6
80	27	17,901	-69.3		131	2.7
70	27	18,704	-65.8		98	6.4
60	27	19,652	-61.4		93	11.8
50	27	20,791	-58.2		92	16.3
40	27	22,205	-55.0		91	18.8
30	27	24,057	-51.8		89	23.5
25	27	25,245	-49.5		89	22.3
20	26	26,713	-47.7		88	23.1
15	23	28,637	-45.1		85	21.4
10						
7						
5						

SAN DIEGO, CALIF. 998 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	124	15.9	85	351	1.2
1000	30	[illegible]	15.2	85		
950	30	[illegible]	16.1	68	346	1.7
900	30	1,004	16.7	48	278	1.4
850	30	1,490	15.6	40	[illegible]	3.7
800	30	[illegible]	13.6	35	214	6.4
750	30	[illegible]	[illegible]	27	[illegible]	7.8
700	30	[illegible]	7.8	R23	[illegible]	10.3
650	30	[illegible]	[illegible]	[illegible]	251	13.4
600	30	4,372	1.0	R17	254	15.2
550	30	5,058	- 3.5	R14	257	17.7
500	30	5,813	- 8.6	R17	261	20.6
450	30	6,617	-14.5	R17	261	22.5
400	30	7,504	-21.1	R18	261	26.6
350	30	8,476	-28.5	R21	256	32.6
300	30	9,563	-36.9	R23	253	37.7
250	30	10,802	-45.5		252	44.7
200	30	12,263	-53.8		251	54.6
175	30	13,113	-57.7		252	57.3
150	30	14,076	-62.4		254	47.2
125	30	15,190	-66.4		255	35.9
100	30	16,534	-67.4		263	23.1
80	30	17,887	-64.7		270	7.4
70	30	[illegible]	[illegible]		296	2.9
60	30	19,663	-59.4		88	1.9
50	30	20,812	-56.2		109	6.2
40	30	22,235	-54.5		97	8.5
30	30	[illegible]	-51.9		89	11.5
25	30	25,273	-50.4		97	12.4
20	30	26,734	-48.5		96	14.8
15	30	28,635	-46.4		92	15.0
10	29	31,344	-43.4		91	17.9
7	27	33,758	-39.7		99	18.6
5	22	36,083	-35.0			

*** SAN JUAN, P. R.** 1014 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	6	25.9	86	152	2.5
1000	30	125	25.3	84	109	8.0
950	30	574	[illegible]	79	96	13.0
900	30	1,045	19.8	74	98	13.2
850	30	1,536	17.0	68	99	13.6
800	30	2,052	14.0	60	99	11.8
750	30	2,592	11.5	53	100	10.5
700	30	3,169	8.7	42	102	10.1
650	30	3,775	5.3	35	98	9.1
600	30	4,429	1.2	33	102	7.8
550	30	5,116	- 2.9	29	112	6.4
500	30	5,872	- 7.6	31	121	5.4
450	30	6,677	-13.0	27	139	3.3
400	30	7,574	[illegible]	27	57	.6
350	30	8,554	-25.8	23	4	2.7
300	30	[illegible]	-34.1	22	319	4.9
250	30	[illegible]	-43.8		341	8.2
200	30	12,363	-55.1		343	12.4
175	30	13,204	-61.1		354	13.4
150	29	14,146	-66.9		352	8.4
125	29	15,344	-71.3		356	6.0
100	29	16,544	-73.3		41	6.4
80	29	17,858	-69.5		76	15.0
70	28	18,662	-65.4		77	20.8
60	28	19,607	-62.2		85	25.6
50	28	20,740	-59.1		88	31.3
40	28	22,148	-56.0		90	36.1
30	28	23,992	-52.5		92	43.7
25	27	25,177	-50.0		93	48.8
20	27	26,643	-47.1		91	51.1
15	25	28,560	-43.7		89	52.4
10	12	31,277	-40.2		84	53.6
7	7	33,710	-38.4			
5						

SAN NICOLAS, CALIF. 992 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	29	174	14.4	85	310	7.6
1000	29	[illegible]			360	.2
950	29	544	15.9	65	314	5.8
900	29	1,004	16.4	46	307	2.5
850	29	1,489	15.2	40	247	1.2
800	29	[illegible]	13.4	31	259	2.7
750	29	2,541	10.7	25	265	5.1
700	29	[illegible]	8.1	23	265	8.4
650	29	[illegible]	4.6	20	263	11.7
600	29	4,367	.5	22	263	15.0
550	29	[illegible]	- 4.6	22	259	16.7
500	29	[illegible]	- 9.9	20	[illegible]	18.8
450	29	6,605	-16.0	21	263	21.2
400	29	7,482	-21.7	20	257	26.6
350	29	8,450	-29.3	24	258	29.7
300	29	[illegible]	-37.7	[illegible]	256	35.9
250	29	10,766	-46.4	27	251	41.0
200	29	12,220	-54.3	26	251	47.4
175	29	13,067	[illegible]	23	250	51.9
150	29	14,026	-62.9	24	253	46.2
125	28	15,136	-66.3		254	33.8
100	27	16,481	-67.5		261	21.0
80	27	17,831	-65.2		247	8.4
70	27	18,648	-62.9		277	4.1
60	27	19,604	-59.7		187	1.7
50	27	20,752	-56.8		113	4.3
40	27	22,173	-54.8		[illegible]	6.4
30	27	24,024	-52.0		86	9.5
25	25	25,210	-50.6		96	11.8
20	24	26,667	-49.3		90	14.8
15	24	28,565	-46.6		86	11.8
10	23	31,276	-42.8		76	17.7
7	9	33,689	-39.2			
5						

*** SAULT STE. MARIE, MICH.** 990 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	221	9.6	93	130	2.1
1000	30	140				
950	30	565	9.7	85	212	6.0
900	30	1,015	8.5	81	245	11.7
850	30	1,487	6.7	79	250	17.7
800	30	1,984	4.7	73	253	21.6
750	30	2,506	2.4	66	255	24.9
700	30	3,065	.1	60	253	28.6
650	30	3,651	- 2.9	59	252	29.7
600	30	4,286	- 6.6	55	255	33.2
550	30	4,954	-10.6	49	256	38.3
500	30	5,689	-14.8	42	258	42.3
450	30	6,472	-20.2	[illegible]	256	46.8
400	30	7,342	-25.5	40	258	53.6
350	30	8,297	-32.0	38	257	60.2
300	30	9,368	-39.6	34	256	67.4
250	30	10,592	-48.3		258	75.8
200	30	12,036	-54.8		262	79.1
175	30	12,887	-56.3		266	77.3
150	30	13,861	-58.3		267	66.2
125	30	15,005	-59.2		264	54.0
100	30	16,400	-59.4		263	43.7
80	30	17,802	-57.8		264	28.9
70	30	18,647	-56.0		265	23.1
60	30	19,631	-54.9		266	17.3
50	30	20,800	-53.8		269	14.2
40	30	22,240	-51.9		266	10.3
30	28	24,114	-49.8		266	7.2
25	28	25,310	-48.8		279	4.9
20	26	26,778	-47.2		308	3.7
15	22	28,696	-44.2		290	4.1
10	20	31,443	-40.5		276	3.5
7	6	34,001	-35.2			

SHEMYA, ALASKA 1006 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	38	7.4	88	355	5.4
1000	30	91			332	3.9
950	30	507	3.9	86	346	7.0
900	30	949	1.3	86	344	7.2
850	30	1,407	- 1.0	79	339	7.0
800	30	1,890	- 3.0	75	335	7.4
750	30	2,400	- 5.3	72	323	8.9
700	29	2,938	- 7.7	65	315	11.1
650	29	3,508	-10.3	60	310	13.0
600	29	4,125	-13.5	54	308	12.8
550	29	4,778	-17.4	56	307	13.4
500	29	5,490	-22.2	55	304	14.8
450	29	6,249	-27.6	51	298	15.9
400	29	7,095	-33.6	45	300	19.6
350	29	8,019	-39.8	46	293	24.9
300	29	9,057	-46.1		291	32.2
250	28	10,252	-51.2		290	36.5
200	28	11,706	-50.0		294	36.5
175	28	12,579	-50.1		292	33.6
150	28	13,585	-50.7		294	29.5
125	28	14,770	-51.6		293	24.7
100	28	16,214	-52.4		292	18.6
80	28	17,654	-53.1		289	13.8
70	28	18,514	-53.3		286	12.2
60	27	19,503	-53.4		286	8.4
50	27	20,676	-53.4		282	6.6
40	27	22,111	-53.1		270	6.0
30	27	23,968	-52.3		268	7.8
25	27	25,149	-51.4		273	8.2
20	27	26,602	-50.1		286	9.3
15	24	28,483	-48.6		274	11.5
10	11	31,146	-46.5			
7						

*** SHREVEPORT, LA.** 1006 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	79	21.1	95	149	1.4
1000	30	129	21.1	92	149	3.1
950	30	579	20.8	76	170	8.2
900	30	1,043	18.7	70	176	7.4
850	30	1,533	16.2	66	192	5.2
800	30	2,047	13.4	59	221	3.1
750	30	2,587	10.7	49	232	2.1
700	30	3,162	7.9	43	210	2.5
650	30	3,771	4.8	38	193	2.7
600	30	4,418	1.4	35	218	3.3
550	30	5,112	- 2.4	33	219	5.2
500	30	5,864	- 7.0	32	234	5.4
450	30	6,680	-12.5	31	247	7.2
400	30	7,568	-18.7	30	271	7.4
350	30	8,548	-25.8	32	264	9.9
300	29	9,647	-34.0	32	267	14.4
250	29	10,899	-43.1		269	16.5
200	29	12,365	-53.8		265	22.5
175	29	13,211	-59.7		268	21.6
150	29	14,161	-65.3		264	20.2
125	29	15,255	-70.6		252	19.6
100	29	16,564	-73.3		247	14.2
80	28	17,886	-68.5		196	3.5
70	28	18,694	-63.9		149	3.5
60	28	19,647	-60.3		92	5.4
50	28	20,790	-57.4		88	9.9
40	28	22,208	-54.7		85	13.0
30	28	24,061	-51.4		85	16.1
25	28	25,249	-49.2		87	16.5
20	26	26,716	-47.4		86	17.1
15	26	28,625	-45.3		84	17.9
10	22	31,352	-41.6		86	18.5
7						

SPOKANE, WASH. [illegible] MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	722	7.0	74	101	2.7
1000	30	140				
950	30	565				
900	30	1,015	9.9	57	110	2.5
850	30	1,488	7.6	55	[illegible]	.6
800	30	1,985	4.5	57	354	2.7
750	30	2,501	.8	60	325	5.2
700	30	3,059	- 2.8	55	321	8.9
650	30	3,639	- 6.1	44	322	12.8
600	30	4,267	- 9.4	39	321	16.1
550	30	4,928	-13.0	39	321	19.6
500	30	5,656	-17.6	35	323	22.9
450	30	6,426	-22.7	R34	324	27.6
400	30	7,292	-28.6	R30	323	31.9
350	30	8,235	-35.2	R29	321	34.0
300	30	9,292	-42.7	R29	322	38.9
250	30	10,502	-50.2		323	43.1
200	30	11,940	-54.9		316	38.9
175	30	12,792	-55.5		314	35.2
150	30	13,774	-56.0		307	30.9
125	30	14,932	-56.8		306	25.6
100	30	16,341	-57.9		299	21.4
80	29	17,751	-56.7		296	16.9
70	29	18,597	-56.4		293	14.4
60	29	19,577	-55.3		291	12.2
50	29	20,741	-54.8		285	10.9
40	28	22,170	-53.6		277	10.7
30	28	24,031	-51.0		266	[illegible]
25	27	25,223	-49.4		280	10.3
20	26	26,697	-47.2		271	11.3
15	23	28,609	-45.5		271	7.6
10						
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SWAN ISLAND, W. I. 1010 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	10	27.0	84	115	6.2
1000	30	94	26.3	84	113	7.2
950	30	541	23.2	80	[illegible]	11.1
900	30	1,017	20.4	74	[illegible]	12.8
850	30	1,510	17.5	70	120	12.6
800	30	2,027	14.7	66	128	11.8
750	30	[illegible]	11.9	59	129	11.1
700	30	[illegible]	8.9	55	129	11.7
650	30	[illegible]	5.6	[illegible]	[illegible]	11.7
600	30	4,408	2.3	44	[illegible]	8.5
550	30	5,097	- 1.7	42	[illegible]	7.0
500	30	5,858	- 6.3	41	122	5.8
450	30	6,658	-11.3	40	119	4.7
400	30	7,569	-17.0	39	66	3.7
350	30	8,558	-23.6	33	50	2.9
300	29	9,666	-32.0	[illegible]	355	2.1
250	29	10,927	-42.1		6	5.1
200	28	12,399	-54.2		23	6.0
175	28	13,242	-61.0		19	8.0
150	28	14,183	-68.0		35	10.1
125	27	15,261	-73.2		49	15.3
100	26	16,562	-74.3		67	20.0
80	26	17,871	-70.8		82	22.0
70	25	18,667	-68.3		87	23.9
60	24	[illegible]	-63.7		88	26.8
50	24	20,730	-60.0		90	32.2
40	23	22,131	-57.2		92	37.9
30	20	[illegible]	-53.1		94	47.0
25	19	[illegible]	-51.2		91	52.1
20	17	26,599	-49.0		90	55.4
15	14	28,504	-45.5		91	58.1
10						
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TAMPA, FLA. 1015 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	8	23.3	94	66	4.9
1000	30	140	23.6	87	81	8.4
950	30	588	22.0	77	111	13.8
900	30	1,058	19.4	71	111	13.0
850	30	1,548	16.8	64	107	11.8
800	30	2,063	14.1	61	103	10.9
750	30	2,605	11.4	54	109	10.5
700	30	3,180	8.4	50	107	9.5
650	30	3,788	5.0	43	102	8.7
600	30	4,440	1.6	38	94	8.5
550	30	5,128	- 2.3	36	98	9.1
500	30	5,888	- 6.7	32	93	10.1
450	30	6,699	-12.0	R28	94	10.1
400	30	7,597	-17.8	R28	80	9.3
350	30	8,581	-24.9	R29	59	7.8
300	30	9,683	-33.1	R26	35	6.8
250	30	10,941	-42.4		359	8.4
200	30	12,413	-53.4		351	7.8
175	30	13,261	-59.2		1	9.3
150	30	14,213	-65.0		11	13.0
125	30	15,309	-70.7		26	15.2
100	30	16,619	-73.5		48	16.1
80	30	17,935	-69.3		69	[illegible]
70	30	18,739	-65.2		80	16.1
60	30	19,688	-61.1		83	17.5
50	30	20,831	-57.7		87	[illegible]
40	30	22,248	-54.9		91	24.3
30	29	24,104	-50.6		90	24.5
25	29	25,298	-48.8		91	22.7
20	27	26,772	-46.9		86	26.0
15	19	28,700	-44.3		80	26.0
10	14	31,460	-40.4		86	32.8
7	8	33,920	-37.3			

*** TATOOSH IS., WASH** 1014 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	31	10.6	93	[illegible]	3.7
1000	30	148	11.0	85	124	3.5
950	30	576	11.1	70	167	.6
900	30	1,028	10.3	61	337	3.5
850	30	1,502	8.4	51	329	5.2
800	30	2,001	5.8	47	335	7.2
750	30	2,515	3.5	44	333	12.0
700	30	3,084	.6	38	333	16.5
650	30	3,669	- 2.4	38	331	20.2
600	30	4,308	- 5.9	35	333	25.3
550	30	4,975	-10.0	35	332	29.5
500	30	5,713	-14.9	37	330	31.9
450	30	6,492	-20.3	39	330	35.9
400	30	7,366	-26.3	35	326	40.0
350	30	8,317	-33.5	34	328	43.3
300	30	9,381	-41.6	32	325	45.1
250	30	10,594	-50.5		326	48.2
200	30	12,020	-58.2		328	42.5
175	30	12,857	-59.3		326	39.8
150	29	13,817	-59.6		325	29.5
125	29	14,957	-59.8		324	27.6
100	29	16,350	-59.7		323	24.1
80	28	17,747	-58.7		319	17.5
70	28	18,586	-58.3		314	14.4
60	28	19,558	-57.6		315	13.0
50	27	20,711	-56.1		305	11.8
40	26	22,136	-54.8		309	11.3
30	24	23,988	-52.4		284	10.3
25	24	25,171	-50.4		264	9.7
20	22	26,645	-48.4		272	10.3
15	18	28,571	-46.1		274	8.5
10	14	31,310	-43.9		288	6.0
7	7	33,694	-39.6			

TOPEKA, KANS. 984 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	269	15.3	91	132	1.0
1000	30	127				
950	30	564	16.3	79	192	6.6
900	30	1,025	16.0	68	214	13.0
850	30	1,510	14.2	65	224	15.2
800	30	2,020	11.7	58	233	15.2
750	30	2,553	8.9	49	238	16.7
700	30	3,127	5.5	47	243	17.9
650	30	3,726	1.9	48	246	20.0
600	30	4,371	- 2.2	46	251	23.5
550	30	5,052	- 6.4	44	255	25.6
500	30	5,797	-10.4	34	253	31.3
450	30	6,596	-15.4	34	252	36.1
400	30	7,482	-21.9	32	249	39.8
350	30	8,452	-28.8	34	247	43.7
300	30	9,537	-36.7	[illegible]	248	[illegible]
250	30	10,776	-45.5		253	51.5
200	30	12,234	-54.5		[illegible]	57.1
175	30	13,081	-58.5		254	57.7
150	30	14,040	-62.5		255	54.6
125	29	15,155	-65.9		254	45.6
100	29	16,504	-66.5		254	30.3
80	29	17,965	-63.3		[illegible]	15.7
70	29	18,691	-60.2		253	11.3
60	29	19,662	-57.3		251	6.0
50	29	20,821	-55.2		236	2.1
40	29	22,252	-53.3		289	1.0
30	28	24,117	[illegible]		72	1.2
25	[illegible]	[illegible]	-49.4		118	1.6
20	25	26,776	-47.8		102	2.9
15	22	28,680	-45.4		261	1.4
10	11	31,390	-42.0			
7						

TRUK, CAROLINE IS. + 1010 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	2	28.0	81	266	2.7
1000	30	88	27.0	79	266	3.3
950	30	534	23.2	76	[illegible]	5.4
900	30	1,012	20.5	72	275	7.0
850	30	1,505	18.0	71	281	[illegible]
800	30	2,023	15.2	69	289	2.9
750	30	2,571	12.5	66	253	1.2
700	30	3,145	9.4	64	132	1.6
650	30	3,757	6.1	63	115	4.7
600	30	4,410	2.2	64	112	5.4
550	30	5,106	- 1.7	63	114	8.7
500	30	5,863	- 5.6	[illegible]	119	[illegible]
450	30	6,681	-10.2	48	117	11.1
400	30	7,583	-15.9	44	107	12.4
350	30	8,578	-22.3	40	101	13.8
300	30	9,693	-30.4	35	90	14.4
250	30	10,963	-40.6	36	80	17.9
200	30	12,444	-52.9		68	23.5
175	30	13,292	-60.3		66	23.7
150	30	14,236	-68.0		68	25.6
125	30	15,311	-75.5		75	24.9
100	29	16,594	-76.4		87	19.8
80	29	17,997	-70.8		92	17.5
70	29	18,692	-68.1		94	16.9
60	29	19,627	-65.3		95	21.4
50	28	20,743	-62.8		94	32.2
40	28	22,129	-59.5		94	50.7
30	26	23,952	-54.4		95	63.9
25	26	25,128	-51.5		[illegible]	66.8
20	22	26,591	-48.0		95	71.5
15	14	28,508	-45.2		[illegible]	[illegible]
10	8	31,233	-41.2			
7						

*** TUCSON, ARIZ.** [illegible] MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	789	19.2	57	142	5.4
1000	30	83				
950	30	526				
900	30	999	22.1	44	[illegible]	4.7
850	30	1,494	19.7	44	203	3.3
800	30	2,013	16.0	[illegible]	215	3.9
750	30	2,552	12.4	48	209	7.0
700	30	3,133	8.4	46	221	9.3
650	30	[illegible]	4.4	47	225	12.0
600	30	4,388	.1	43	237	14.8
550	30	5,075	- 4.1	[illegible]	243	[illegible]
500	30	5,827	- 8.4	29	249	19.6
450	30	6,631	-13.6	25	252	22.0
400	[illegible]	[illegible]	-19.8	26	[illegible]	26.2
350	30	8,499	-26.9	26	249	31.3
300	30	9,592	-35.2	27	248	35.5
250	30	10,837	-44.3		248	40.0
200	30	12,301	-53.5		250	49.0
175	30	13,150	-58.5		250	[illegible]
150	30	14,106	-64.2		[illegible]	41.8
125	30	15,207	-69.0		251	35.7
100	30	16,535	-70.0		253	21.2
80	30	17,874	-65.9		246	8.5
70	30	18,690	-63.0		240	3.3
60	30	19,646	-59.8		113	4.1
50	30	[illegible]	-57.1		113	6.4
40	29	22,211	-54.8		96	11.5
30	29	24,060	-52.2		90	14.6
25	29	25,244	-50.7		[illegible]	14.7
20	28	26,700	-49.1		87	18.5
15	27	28,600	-46.8		86	18.3
10	26	[illegible]	-43.0		[illegible]	20.4
7	13	33,740	-38.2		88	26.4

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SEPTEMBER 1965

Standard pressure surface (mb.)	* VANDENBERG AFB, CALIF. 1000 MB						* WAKE IS., PACIFIC AREA 1013 MB					
					Wind						Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	30	113	12.2	96	23	1.0	30	5	26.8	80	76	10.3
1000	30	113			9	2.1	30	119	26.0	81	81	12.2
950	30	548	13.9	76	358	7.0	30	572	22.9	87	86	14.6
900	30	1,004	15.9	48	24	5.8	30	1,042	19.9	84	87	14.0
850	30	1,488	14.5	41	50	3.1	30	1,534	16.9	83	88	12.6
800	30	1,999	12.7	35	289	.6	30	2,050	14.2	79	86	12.2
750	30	2,536	10.3	32	270	4.3	30	2,594	12.0	62	84	11.3
700	30	3,109	7.7	25	284	7.4	30	3,170	9.3	50	77	10.7
650	30	3,713	4.1	24	286	9.9	30	3,780	6.1	42	75	10.9
600	30	4,362		25	281	13.0	30	4,434	2.4	35	80	11.7
550	30	5,045	- 4.6	24	283	16.3	30	5,131	- 1.9	34	82	11.5
500	30	5,797	- 9.7	24	278	18.6	30	5,885	- 6.4	29	80	11.7
450	30	6,596	-15.7	26	272	20.8	30	6,698	-11.2	27	80	11.1
400	30	7,479	-22.5	26	274	23.5	30	7,597	-17.3	28	79	9.7
350	30	8,445	-30.0	28	272	28.2	30	8,583	-24.5	28	90	6.4
300	30	9,524	-38.1	28	267	34.6	30	9,687	-33.1	28	74	3.3
250	30	10,756	-46.7		262	40.2	30	10,942	-43.1		290	1.7
200	30	12,210	-54.0		258	44.5	30	12,408	-54.8		269	5.6
175	30	13,060	-57.6		258	45.1	30	13,249	-61.2		286	4.3
150	29	14,023	-60.9		256	45.1	30	14,191	-67.8		43	3.5
125	29	15,147	-63.7		261	36.5	29	15,271	-73.5		66	12.8
100	29	16,508	-65.3		264	27.8	29	16,560	-76.9		75	21.2
80	28	17,870	-63.8		269	14.2	29	17,858	-71.3		81	23.1
70	27	18,691	-62.1		277	7.6	28	18,654	-67.3		87	24.7
60	26	19,647	-59.2		272	2.7	28	19,591	-63.7		88	28.4
50	25	20,796	-56.1		68	1.6	27	20,717	-60.8		90	30.7
40	24	22,220	-53.9		106	5.6	27	22,114	-58.0		86	36.5
30	22	24,075	-51.6		97	9.3	27	23,941	-54.4		87	42.7
25	22	25,261	-50.3		91	10.3	27	25,117	-51.8		89	48.4
20	21	26,722	-48.7		96	13.4	26	26,575	-48.5		88	50.1
15	21	28,620	-47.0		85	12.2	25	28,481	-46.2		91	49.5
10	15	31,328	-43.4		86	18.5	24	31,195	-43.5		89	49.9
7	5	33,708	-40.9				21	33,615	-39.5		87	50.5
5							10	35,938	-35.1			

Standard pressure surface (mb.)	WASHINGTON, D. C. 1012 MB						WINNEMUCCA, NEV. 869 MB					
					Wind						Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	30	84	14.8	92	347	.4	30	1,310	5.8	48	52	1.9
1000	30	183	16.6	86	356	1.0	30	138				
950	30	624	17.3	74	272	1.2	30	568				
900	30	1,082	15.1	72	267	3.9	30	1,022				
850	30	1,565	13.5	60	254	6.0	30	1,493	11.9	37	35	1.6
800	30	2,074	11.1	53	257	8.0	30	1,999	9.8	38	323	3.7
750	30	2,609	8.4	50	262	8.9	30	2,529	6.1	41	309	6.2
700	30	3,178	5.8	41	261	10.1	30	3,093	1.9	43	295	8.4
650	30	3,777	2.6	39	259	13.0	30	3,684	- 1.7	42	275	12.2
600	30	4,425	- 1.0	34	258	14.8	30	4,320	- 5.7	40	276	14.6
550	30	5,107	- 5.0	31	256	16.5	30	4,992	- 9.7	32	283	16.9
500	30	5,857	- 9.3	26	261	19.2	30	5,727	-14.3	R28	288	18.3
450	30	6,661	-14.4	23	261	21.6	30	6,512	-19.7	R29	294	18.[illegible]
400	30	7,548	-20.7	25	264	22.5	30	7,383	-26.0	R26	292	18.3
350	30	8,521	-27.9	25	268	26.0	30	8,336	-33.2	R24	301	18.6
300	30	9,611	-36.0	27	269	30.5	30	9,402	-41.1	R24	304	19.0
250	30	10,853	-45.2		279	37.7	30	10,620	-49.0		307	21.8
200	29	12,320	-53.8		284	39.4	30	12,066	-54.1		285	28.0
175	29	13,168	-58.7		285	37.3	30	12,918	-56.3		281	31.3
150	29	14,126	-63.5		283	33.4	30	13,893	-58.0		278	30.5
125	29	15,233	-67.7		280	30.1	30	15,036	-60.0		277	27.2
100	29	16,574	-67.6		282	19.6	30	16,427	-60.5		276	22.3
80	28	17,929	-64.3		281	8.2	30	17,819	-59.8		275	15.0
70	28	18,750	-61.6		295	4.9	30	18,653	-59.1		273	12.4
60	28	19,710	-59.0		304	1.7	30	19,622	-57.3		270	8.9
50	28	20,860	-56.1		41	2.1	29	20,783	-55.4		258	8.0
40	27	22,285	-53.3		64	3.1	29	22,216	-52.6		252	8.0
30	27	24,148	-50.2		87	2.9	26	24,079	-50.5		261	7.4
25	25	25,342	-48.4		60	3.5	25	25,274	-49.2		258	5.8
20	24	26,816	-46.2		32	1.4	24	26,741	-48.2		260	3.1
15	12	28,730	-44.1		22	2.7	18	28,661	-45.8		80	1.7
10	5	31,486	-39.1				5	31,457	-40.7			
7												
5												

Standard pressure surface (mb.)	WINSLOW, ARIZ. 851 MB					
					Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	30	1,492	11.8	66	168	2.3
1000	30	111				
950	30	551				
900	30	1,015				
850	30	1,499			156	2.1
800	30	2,012	14.4	44	233	9.5
750	30	2,556	10.6	46	232	12.0
700	30	3,125	6.1	51	233	15.7
650	30	3,722	1.8	48	236	17.1
600	30	4,368	- 2.5	42	241	19.0
550	30	5,048	- 6.5	R29	250	22.1
500	30	5,794	-11.0	R24	255	26.6
450	30	6,589	-16.3	R22	254	31.9
400	30	7,472	-22.7	R22	251	36.3
350	30	8,438	-29.3	R23	252	43.3
300	30	9,522	-36.8	R22	249	49.7
250	30	10,762	-45.1		249	52.8
200	30	12,225	-53.5		252	52.6
175	30	13,074	-58.2		254	55.0
150	30	14,034	-62.6		256	48.4
125	30	15,146	-66.7		261	38.7
100	30	16,493	-66.8		257	22.3
80	30	17,847	-64.9		267	11.8
70	30	18,667	-62.0		261	5.2
60	30	19,626	-59.1		190	1.4
50	30	20,777	-56.4		102	3.1
40	30	22,202	-54.1		99	6.0
30	30	24,057	-51.8		92	7.4
25	29	25,241	-50.5		92	9.3
20	29	26,702	-48.9		82	10.3
15	22	28,602	-47.4		84	10.5
10	5	31,347	-44.1			
7						
5						

Standard pressure surface (mb.)	YAKUTAT, ALASKA 1018 MB						+ YAP, CAROLINE IS. 1007 MB						YUCCA FLAT, NEV. 880 MB					
SURFACE	30	12	7.1	99	110	2.9	30	17	27.9	83	243	3.9	30	1,196	8.7	34	307	1.0
1000	30	161	8.9	94	147	3.3	30	81	27.3	81	241	5.1	30	128				
950	30	584	7.4	90	200	3.9	30	527	23.5	78	250	9.7	30	544				
900	30	1,030	5.7	81	225	5.4	30	1,006	20.7	73	253	10.3	30	1,002				
850	30	1,497	3.9	77	244	7.8	30	1,500	18.2	67	262	9.5	30	1,484	16.0	25	280	2.3
800	30	1,988	1.9	64	258	11.3	30	2,018	15.4	63	261	8.0	30	1,996	13.0	28	229	5.4
750	30	2,507	- .1	52	268	15.7	30	2,563	12.6	61	257	8.0	30	2,530	9.4	30	234	5.6
700	30	3,057	- 2.7	53	268	20.0	30	3,141	9.6	59	264	5.2	30	3,102	5.2	34	219	6.6
650	30	3,640	- 6.0	51	270	24.7	30	3,753	6.2	58	257	4.1	30	3,699	1.0	36	233	6.8
600	30	4,265	- 9.7	52	274	28.2	30	4,406	2.4	56	218	2.7	30	4,341	- 2.6	R28	247	9.7
550	30	4,928	-13.5	49	277	31.7	30	5,099	- 1.7	54	118	2.7	30	5,018	- 6.8	R23	262	15.2
500	30	5,652	-18.0	49	278	34.4	30	5,859	- 5.9	49	101	4.9	30	5,763	-11.9	R24	260	19.4
450	30	6,428	-22.8	46	277	38.5	30	6,679	-10.6	42	96	7.4	30	6,553	-17.7	R23	260	24.5
400	30	7,287	-28.5	42	275	41.2	30	7,576	-16.1	37	102	10.1	30	7,431	-24.1	R25	262	28.6
350	30	8,230	-35.3	40	280	41.6	30	8,568	-22.7	36	96	10.5	30	8,391	-31.3	R21	254	33.0
300	30	9,288	-42.6	38	287	49.5	30	9,680	-30.8	31	78	14.8	30	9,465	-39.2	R23	255	38.3
250	30	10,497	-50.7		291	52.4	30	10,946	-40.9	33	79	17.5	30	10,693	-47.0		252	44.7
200	30	11,928	-56.8		290	47.2	30	12,422	-53.5		66	24.7	30	12,147	-53.8		257	48.0
175	30	12,771	-58.0		288	40.2	29	13,266	-60.8		63	27.2	30	12,999	-57.0		255	48.8
150	30	13,743	-57.5		284	32.4	29	14,205	-68.4		65	33.2	29	13,968	-60.1		260	38.9
125	30	14,897	-57.0		287	26.2	29	15,277	-75.8		65	33.6	28	15,100	-62.4		266	32.4
100	30	16,312	-56.0		289	20.2	28	16,553	-77.6		72	24.5	28	16,472	-63.6		267	26.0
80	30	17,730	-56.5		291	19.0	28	17,853	-71.7		85	22.3	27	17,845	-62.5		274	14.8
70	30	18,577	-56.1		296	14.8	28	18,645	-68.9		88	21.8	26	18,672	-60.6		273	9.1
60	30	19,557	-56.2		299	13.8	27	19,573	-65.6		87	25.4	26	19,635	-57.9		279	6.6
50	30	20,716	-56.0		311	10.5	27	20,688	-63.0		88	34.0	26	20,791	-55.4		257	5.1
40	30	22,135	-55.7		313	11.1	27	22,072	-59.9		87	48.6	26	22,221	-53.3		241	3.5
30	29	23,965	-55.2		311	11.3	26	23,886	-55.2		86	62.9	26	24,081	-51.3		100	1.0
25	27	25,129	-54.3		305	11.3	25	25,058	-52.5		87	67.0	25	25,268	-50.0		127	3.7
20	26	26,575	-52.5		300	12.8	23	26,508	-49.1		88	70.3	22	26,730	-48.1		94	4.3
15	21	28,415	-50.8		284	16.7	10	28,386	-45.2				20	28,637	-46.4		102	8.2
10	13	31,111	-46.9		286	32.4	5	31,139	-39.4				13	31,326	-44.1		84	9.3
7													5	33,742	-41.4			

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Relative humidity averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Relative humidity data are not published for standard pressure surfaces for which less than 5 observations are available.

Relative humidity data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from lithium chloride hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature in degrees Celsius, relative humidity in percent, and resultant winds in degrees and knots.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. They were also equipped with carbon hygristors. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.C.T.

R More than half of the observations are from statistical values.

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun. SEPTEMBER 1965

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	ALBUQUERQUE, N. MEX.								
	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Sep.									
1-----	0.75	0.85	0.96	1.11	----	----	----	----	----
2-----	----	----	----	.92	1.22	----	----	----	----
4-----	.70	.83	.97	1.14	1.35	----	----	----	----
5-----	----	----	----	----	1.36	----	1.01	0.93	0.80
6-----	.86	.96	1.07	1.20	1.38	----	----	----	----
7-----	----	----	----	----	1.30	1.15	----	.85	----
9-----	----	----	----	1.18	1.34	1.20	1.06	.94	.84
10----	.87	.96	1.08	1.23	----	----	----	----	----
12----	.68	.80	.92	1.14	----	----	----	----	----
13----	.76	.88	.97	1.13	1.30	1.11	(.89)	(.76)	(.62)
14----	(.81)	----	(1.14)	1.25	1.42	1.28	1.14	1.04	.92
15----	.95	1.05	1.15	1.30	1.42	1.27	(1.09)	----	----
16----	----	----	(.95)	1.25	1.37	1.17	.98	.83	----
17----	----	----	----	----	----	1.16	----	.83	.74
18----	.84	.94	1.08	1.21	1.26	----	----	----	----
19----	----	----	1.01	1.13	1.32	----	----	----	----
20----	----	----	----	1.25	----	----	----	----	----
21----	.90	1.00	1.10	1.24	1.43	1.26	----	----	----
22----	.92	1.11	1.12	1.26	1.22	1.26	1.12	.99	.90
23----	.89	1.00	1.10	1.26	1.39	1.25	1.07	.94	.85
24----	.81	.91	1.04	1.17	1.30	1.13	.93	.81	.68
25----	----	----	.88	1.05	1.27	----	----	----	----
26----	----	----	----	----	1.27	1.03	----	----	----
28----	.71	.82	.96	----	1.30	----	----	----	.79
29----	.92	1.02	1.13	1.30	1.42	1.22	1.04	.90	.77
30----	.82	.93	1.04	1.17	----	1.21	1.03	----	----
Averages	0.83	0.94	1.03	1.19	1.33	1.19	1.04	0.91	0.81
	TUCSON, ARIZ.								
	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Sep.									
1-----	0.59	0.70	0.82	----	----	----	----	----	----
4-----	.69	.79	----	----	----	----	----	----	----
5-----	.76	.84	.96	----	----	----	----	----	0.76
6-----	.75	----	1.00	----	----	1.21	----	0.93	.83
9-----	.80	.89	1.00	----	----	----	----	----	.72
10----	.71	.80	----	----	----	----	----	----	----
12----	.65	.77	.90	----	----	----	----	.85	.74
13----	.72	.82	.93	----	----	----	----	----	----
14----	----	----	----	----	----	----	0.93	.81	.72
15----	.61	.71	.86	----	----	----	----	----	.73
16----	.74	.83	----	----	----	----	----	----	----
22----	.82	----	----	----	----	----	.98	.88	----
23----	.71	.82	----	----	----	----	.91	.74	----
25----	.54	.63	----	----	----	----	----	----	.56
26----	.57	.68	----	----	----	----	.62	----	.40
27----	----	----	----	----	----	----	----	----	.39
28----	----	----	----	----	----	----	----	----	.85
29----	.76	----	----	----	----	----	----	----	----
30----	.82	----	----	----	----	----	----	----	----
Averages	0.70	0.77	0.92	----	----	----	0.86	0.84	0.67
	OMAHA, NEBR.								
	Air mass								
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Sep.									
1-----	HM0.82	HM0.92	HS1.00	HS1.36	HS1.35	HS1.16	HS1.04	HS0.97	HS0.79
2-----	----	HM .92	----	----	----	----	----	----	----
3-----	----	----	HM .81	HS1.01	----	----	----	----	----
10----	----	----	----	----	HS1.33	HS1.26	HS .95	HS .84	HS .71
11----	----	----	----	HS1.16	HS1.29	HM1.10	HM .93	HM .78	----
15----	HS .68	HS .79	HS .91	----	----	----	----	----	----
22----	----	----	----	HM1.15	----	----	----	----	----
24----	HS .87	HS .96	HS1.10	HS1.28	HS1.44	HS1.27	HS1.09	HS .92	HS .84
25----	HS .93	HS .99	HS1.11	HS1.24	HS1.31	----	----	----	----
Averages	0.81	0.92	0.99	1.20	1.34	1.20	1.00	0.88	0.78

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	MADISON, WIS.								
	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Sep.									
1-----	----	S 0.86	S 0.98	----	----	----	----	----	----
2-----	S 1.02	S 1.10	S 1.15	----	S 1.29	----	----	----	----
5-----	----	----	----	----	S 1.08	----	----	----	----
Averages	1.02	0.98	1.07	----	1.19	----	----	----	----
	BLUE HILL OBS., MASS.								
	Air mass								
	4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
Sep.									
2-----	0.77	0.87	0.94	1.13	1.37	1.17	0.95	0.81	0.72
3-----	.79	.94	1.00	1.17	1.30	1.10	.96	.79	.76
4-----	.87	.95	1.04	1.22	1.35	1.21	1.05	.91	.81
5-----	----	----	----	----	1.37	1.16	1.03	----	----
9-----	.72	.83	.96	1.11	1.34	1.06	.87	.76	.59
16----	----	.70	.84	1.13	----	1.08	.89	.75	.62
26----	.91	.99	1.11	1.25	1.35	1.18	1.01	.84	.75
27----	.77	.87	1.01	1.16	1.35	1.21	1.06	.91	.79
28----	.82	.91	1.06	1.21	1.33	1.16	.94	.77	.65
30----	.70	.84	.99	1.21	1.35	1.21	1.01	.87	.75
Averages	0.79	0.88	0.99	1.18	1.35	1.15	0.98	0.82	0.72
	MAUNA LOA OBS., HAWAII								
	Air mass								
	3.36	2.69	2.01	1.34	*	1.34	2.01	2.69	3.36
Sep.									
1-----	1.11	1.19	1.28	1.39	1.53	----	----	----	----
2-----	1.08	1.17	1.27	1.38	1.52	----	----	----	----
3-----	1.07	1.15	1.25	1.38	(1.50)	----	----	----	----
4-----	----	1.16	1.26	1.38	(1.50)	----	----	----	----
5-----	1.06	1.15	1.26	1.39	----	----	----	----	----
6-----	1.05	1.16	1.25	1.38	----	----	----	----	----
8-----	1.08	1.17	1.27	1.39	----	----	----	----	----
9-----	----	----	----	1.38	----	----	----	----	----
10----	(1.06)	(1.16)	1.25	(1.35)	----	----	----	----	----
14----	1.09	1.17	1.26	1.38	1.54	1.38	1.24	1.16	1.08
15----	1.11	1.18	1.29	1.42	----	1.40	1.27	1.18	1.10
16----	1.11	1.19	1.29	1.41	1.55	(1.37)	(1.26)	1.17	1.08
17----	1.10	1.19	1.28	1.40	----	----	----	----	----
18----	1.08	1.17	1.27	1.39	(1.52)	----	----	----	----
19-21-	Instruments inoperable due to lightning strike during thunderstorm								
22----	1.02	1.10	1.21	1.33	----	----	----	----	----
23----	1.09	1.16	1.28	1.39	----	----	----	----	----
24----	1.11	1.19	1.30	1.41	----	----	----	----	----
25----	1.11	1.19	1.29	1.39	----	----	----	----	----
26----	1.13	1.22	1.32	1.44	1.57	1.43	1.28	1.20	1.12
27----	1.15	1.24	1.34	1.45	1.55	----	1.27	1.19	1.09
28----	1.16	1.24	1.34	1.46	1.55	----	----	1.17	1.08
29----	1.16	1.24	1.34	1.46	1.57	----	----	----	----
Averages	1.10	1.18	1.28	1.40	1.55	1.40	1.27	1.18	1.09
	GUAM, M. I.								
	Air mass								
	4.92	3.93	2.95	1.97	*	1.97	2.95	3.93	4.92
	No observation due to cloudiness								

HS Slight haze
HM Moderate haze
( ) Clouds present
S Slight haze - indeterminable
* Values corresponding to true solar noon

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

SEPTEMBER 1965

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	515	381	442	558	487	487	541	338	577	584	390	503	593	572	598	550	452	540	374	442	613	565	538	530	500	500	514	445	524	492		505
AMES IOWA	573	534	375	176	443	126	129	121	418	504	512	89	247	143	306	40	189	124	126	128	166	315	293	399	458	221	28	307	347	139		266
APALACHICOLA FLORIDA	198	438	---	593	590	598	523	553	401	476	577	570	575	531	408	486	541	363	489	470	531	499	145	307	499	423	69	55	67	457		429
ARGONNE NAT. LAB.	538	508	428	149	515	277	114	152	454	333	395	476	355	196	378	77	407	359	376	255	255	81	444	194	435	86	244	351	326	78		308
ASTORIA OREGON	274	174	484	456	465	523	523	175	196	302	94	172	251	130	128	493	468	466	452	380	111	396	---	438	258	69	338	191	201	383		310
ATLANTA GEORGIA	527	119	147	487	477	566	568	615	325	285	460	286	522	433	---	---	---	433	481	490	487	379	330	276	562	381	337	173	124	70		383
BARROW ALASKA	196	251	333	213	133	113	132	228	92	245	259	118	216	213	227	66	71	119	83	47	121	79	52	42	60	106	75	45	63	49		135
BETHEL ALASKA	133	150	143	84	90	169	72	67	108	151	137	212	107	127	94	224	187	110	65	280	32	87	43	123	54	212	189	176	98	243		132
BISMARCK N.DAK.	540	393	418	315	300	104	478	386	244	363	131	174	332	148	167	103	310	254	292	457	343	179	173	405	---	310	54	67	63	405		273
BLUE HILL MASS.	204	567	591	598	579	546	522	223	549	438	278	208	93	235	129	506	237	359	128	325	388	405	391	109	290	486	436	462	284	454		367
BOISE IDAHO	557	573	591	571	180	554	422	382	536	531	518	517	325	459	191	415	568	519	509	443	424	420	468	477	470	436	416	305	450	450		456
BOSTON MASSACHUSETTS	174	541	562	571	527	503	470	219	529	425	265	212	122	198	164	490	238	363	120	362	390	384	376	---	286	467	436	443	249	449		363
BROWNSVILLE TEXAS	686	539	601	615	669	607	652	669	590	608	577	626	641	647	645	595	608	444	615	497	540	561	213	440	356	396	175	592	543	467		547
BURLINGTON VERMONT	0	358	540	489	519	356	458	201	509	308	454	470	142	128	78	207	224	78	94	334	372	410	336	147	350	392	373	379	50	458		307
CAPE HATTERAS N.C.	524	437	223	355	563	415	601	538	507	558	514	370	429	439	544	526	216	492	482	401	405	482	524	453	291	479	379	97	410	438		436
CARIBOU MAINE	51	321	535	497	503	438	516	399	533	45	530	527	370	213	143	436	445	504	484	255	187	317	385	134	131	389	365	442	212	428		358
CHARLESTON S.C.	580	465	332	356	494	450	598	581	382	481	---	347	407	147	487	317	339	246	377	496	468	456	273	321	419	353	163	75	391	363		385
CLEVELAND OHIO	257	557	479	514	140	411	43	19	387	395	184	222	111	291	345	204	378	411	406	423	442	446	272	130	484	415	444	356	369	323		329
COLUMBIA MISSOURI	568	555	211	227	304	238	420	455	491	350	443	338	450	439	377	396	406	429	376	203	107	336	313	494	445	228	332	437	414	86		362
DODGE CITY KANSAS	568	521	509	530	134	470	520	475	448	424	465	361	492	498	481	256	91	277	90	137	489	480	119	433	336	62	423	420	261	378		372
E. LANSING MICHIGAN	446	465	433	266	459	353	172	96	227	209	417	501	392	245	238	128	334	391	387	352	279*	51*	308*	144*	439*	80	383	244	322	58		294*
EL PASO TEXAS	618	372*	391	606	660	311*	615	626	637	639	346	540*	632	602	632	612	534	605	642	640	641	629	610	394	451	589	587	528	611	596		563*
ELY NEVADA	431	490	542	518	449	153	374	589	592	602	545	599	592	570	497	338	569	472	569	375*	482	531	519	524	413	501	441	209	511	513		484*
FORT WORTH TEXAS	446	647	591	614	631	570	581	593	578	602	612	584	523	572	599	583	436	396	423	232	162	386	422	545	401	573*	556*	532	554	225		506*
FRESNO CALIFORNIA	572	574	536	458	565	390	535	548	538	529	520	526	519	534	516	485	485	471	510	510	500	487	480	458	462	453	240	464	466	475		494
GAINESVILLE FLORIDA	550	542	528	---	---	387	410	290	356	418	472	443	398	175	504	422	356	393	510	472	521	475	298	312	---	---	113	94	265	401		389
GLASGOW MONTANA	577	469	245	308	311	421	542	419	386	288	279	187	327	267	166	316	359	482	437	232	100	451	455	438	218	96	117	139	423	329		326
GRAND JUNCTION COLO.	458	505	597	561	274	537	334	509	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		---
GREAT FALLS MONTANA	484	437	174	302	240	245	460	404	109	64	99	152	139	218	107	227	261	299	304	273	51	104	385	406	76	91	49	189	363	334		235
GREENSBORO N.C.	404	411	350	332	460	467	592	550	565	490	393	170	337	451	378	441	344	470	443	395	448	308	416	138	521	423	300	273	491	407		406
GRIFFIN EXP.STA.GA.	593	88	177	539	499	653	677	684	407	333	543	474	519	519	551	426	482	516	586	---	496	396	486	257	616	466	392	128	118	84		489
INDIANAPOLIS INDIANA	640	622	460	200	465	484	446	337	392	490	---	124	---	397	557	116	474	519	469	400	281	212	470	268	575	390	---	488	467	---		413
LAKE CHARLES LA.	547	559	550	494	359	462	560	585	586	229	460	521	517	533	562	454	431	441	194	177	---	192	396	308	383	127	445	423	136	197		408
LAKELAND FLORIDA	554	585	517	536	513	510	479	227	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		---
LANDER WYOMING	616	590	424	607	526	107	215	567	578	511	536	483	545	576	291	269	310	561	461	345	245	78	339	521	514	396	448	78	210	485		414
LARAMIE WYOMING	534	447	268	534	283	408	304	449	536	479	331	428	537	490	165	223	396	377	341	134	356	43	226	476	455	366	414	331	153	465		365
LAS VEGAS NEVADA	633	629	640	581	568	567	621	621	621	580	609	613	586	608	554	559	564	320	556	573	531	545	542	537	525	537	535.	451	527	529		562
LITTLE ROCK ARKANSAS	465	637	571	520	406	525	501	540	568	72	89	491	512	534	466	526	444	521	467	361	100	51	320	323	527	488	530	479	100	243		413
LOS ANGELES CALIF.U	584	566	567	567	172	139	591	562	549	533	540	566	551	569	526	135	200	284	420	645	227	473	439	457	248	321	279	455	487	473		437
LOS ANGELES CALIF.WB	592	583	579	581	170	246	562	584	556	553*	576	580	573	574	488	119	340	390	483	549	544	518	465	464	283	359	360	519	519	520		474*
MADISON WISCONSIN	589	562	320	97	550	115	168	119	216	414	533	421	273	103	251	151	269	273	370	132	228	223	339	223	470	399	142	244	294	140		288
MANHATTAN KANSAS	515	466	431	487	283	334	426	415	414	346	436	229	216	162	357	301	112	169	114	110	378	430	92	493	211	200	320	430	381	193		315
MATANUSKA ALASKA	224	419	222	253	68	119	254	68	270	298	222	354	70	67	144	174	43	109	45	144	59	82	45	64	224	33	91	259	77	93		153
MAUNA LOA OB.HAWAII	665	666	616	753	602	484	420	---	453	654	592	197	567	776	776	781	585	---	---	---	---	705	604	447	539	757	736	671	626	410		603
MEDFORD OREGON	514	563	547	556	452	565	567	545	533	534	523	529	520	498	470	554	533	526	525	495	431	474	457	454	455	478	391	450	437	448		501
MIAMI FLORIDA	613	451	446	509	529	441	261	29	---	---	---	---	---	---	---	---	---	---	---	---	---	427	400	375	465	57	270	458	439	475		---
MIDLAND TEXAS	407	526	442	623	531	604	568	608	601	500	334	588	615	587	581	526	77	333	465	407	409	---	430	416	---	---	---	553	453	537		489
NASHVILLE TENNESSEE	231	626	424	330	285	463	516	487	582	321	115	182	394	403	416	487	506	396	392	440	498	473	155	433	562	360	524	507	344	112		399
NEW YORK N.Y.U	209	590	431	447	527	529	480	249	188	449	253	133	41	324	64	453	178	393	299	314	360	366	399	174	481	458	471	303	367	81		334
NORTH OMAHA NEBRASKA	640	526	575	350	399	228	140	233	482	582	578	139	256	190	396	---	162	108	121	86	204	456	302	556	508	282	66	177	228	126		314
OAK RIDGE TENNESSEE	134	297	406	426	257	343	387	423	434	278	347	103	181	364	288	311	381	366	375	365	343	333	145	203	255	---	340	362	353	72		306
OKLAHOMA CITY OKLA.	561	512	364	520	460	453	465	451	489	404	489	419	463	477	464	460	329	336	191	236	364	471	408	184	214	391	441	447	440	305		406
PHOENIX ARIZONA	519	424	292	484	517	549	488	515	516	481	490	504	491	506	516	500	445	293	388	518	509	498	488	469	477	472	450	477	493	483		475
PORTLAND MAINE	82	512	559	557	560	510	507	231	520	246	380	352	238	255	101	471	208	282	108	383	401	420	368	331	160	462	481	429	216	456		360

Note. --Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

SEPTEMBER 1965

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
PROSSER WASHINGTON	560	573	579	497	401	570	549	488	498	520	491	506	418	269	174	511	489	469	429	464	400	403	462	452	448	434	266	425	418	416		453
RAPID CITY S.DAK.	517	501	400	515	306	371	242	422	450	209	456	401	402	387	227	176	271	---	161	250	331	398	447	333	322	113	77	57	88	396		318
RICHLAND 25 NW WASH.	508	526	512	484	397	529	515	434	419	485	446	469	366	209	137	490	395	441	376	432	389	394	428	427	422	412	293	399	387	392		417
RIVERSIDE CALIFORNIA	719	638	641	628	477	223	552	640	627	598	568	644	606	605	609	156	324	248	428	603	597	584	546	530	459	367	371	513	584	576		522
SAINT CLOUD MINN.	384	496	570	220	472	64	219	353	347	563	306	50	204	35	328	73	115	88	154	149	62	142	71	434	169	457	37	59	21	65		224
SALT LAKE CITY UTAH	597	477	567	622	221	142	512	636	580	635	505	591	601	569	438	145	193	536	478	587	160	414	517	491	505	440	476	106	189	506		448
SAN ANTONIO TEXAS	490	556	587	578	553	295	539	569	560	574	583	572	593	605	596	584	496	501	506	---	460	284	283	511	147	72	547	555	506	138		477
SANTA MARIA CALIF.	564	509	425	468	524	166	554	545	546	411	453	467	393	514	460	269	444	436	495	521	518	474	412	355	392	361	194	490	473	476		444
SAULT STE MARIE MICH	462	484	347	471	406	227	66	542	57	458	482	446	290	412	88	492	54	108	89	79	---	78	358	164	---	425	200	24	155	35		268
SEATTLE TACOMA WASH.	270	211	454	391	409	537	512	407	349	451	68	300	111	82	103	497	308	456	402	345	244	212	431	414	342	79	383	197	225	376		319
SPOKANE WASHINGTON	533	555	303	533	559	590	591	440	352	555	363	479	127	179	163	541	426	344	237	450	307	397	470	472	465	408	227	406	426	443		411
STATE COLLEGE PENN.	66	555	569	467	454	490	491	254	219	480	224	64	105	451	313	495	431	388	334	448	469	481	348	46	366	460	400	399	382	238		363
STERLING VIRGINA	310	551	485	381	446	415	472	506	467	490	150	53	126	383	355	379	256	396	444	381	467	417	437	178	448	447	407	406	417	---		382
STILLWATER OKLAHOMA	616*	560	317	502	533	536	520	473	527	468	527	483	436	418	502	506	310	430	173	270	469	521	306	202	147	365	473*	485	462	259		427*
SWAN ISLAND W.I.	654	623	655	671	580	660	675	655	644	640	445	533	610	597	603	551	169	455	414	385	553	336	371	185	368	123	503	606	574	636		516
TAMPA FLORIDA	590	628	595	615	537	571	754	286	434	643	473	499	592	397	575	615	296	497	527	537	496	496	310	465	578	358	187	222	155	570		483
TUCSON ARIZONA	581	494	438	296	484	608	499	402	575	541	508	495	537	515	562	545	510	506	525	572	567	552	539	530	512	499	503	528	544	534		517
WAKE ISLAND,PACIFIC	490	539	501	535	558	556	500	559	557	511	507	520	553	448	399	400	437	482	547	522	505	525	539	527	503	520	519	549	475	516		510

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (midnight to midnight) at Huntley, Mont.

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	282	296	116	163	151	153	255	184	-70	101	95	-41	166	65	-85	98	158	216	185	141	-64	58	233	170	94	158	40	21	236	130		124

The measurement is made with a Beckman and Whitley net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Huntley Exp. Station. The instrument with which they were measured has not been checked by the Weather Bureau.

TOTAL OZONE DATA

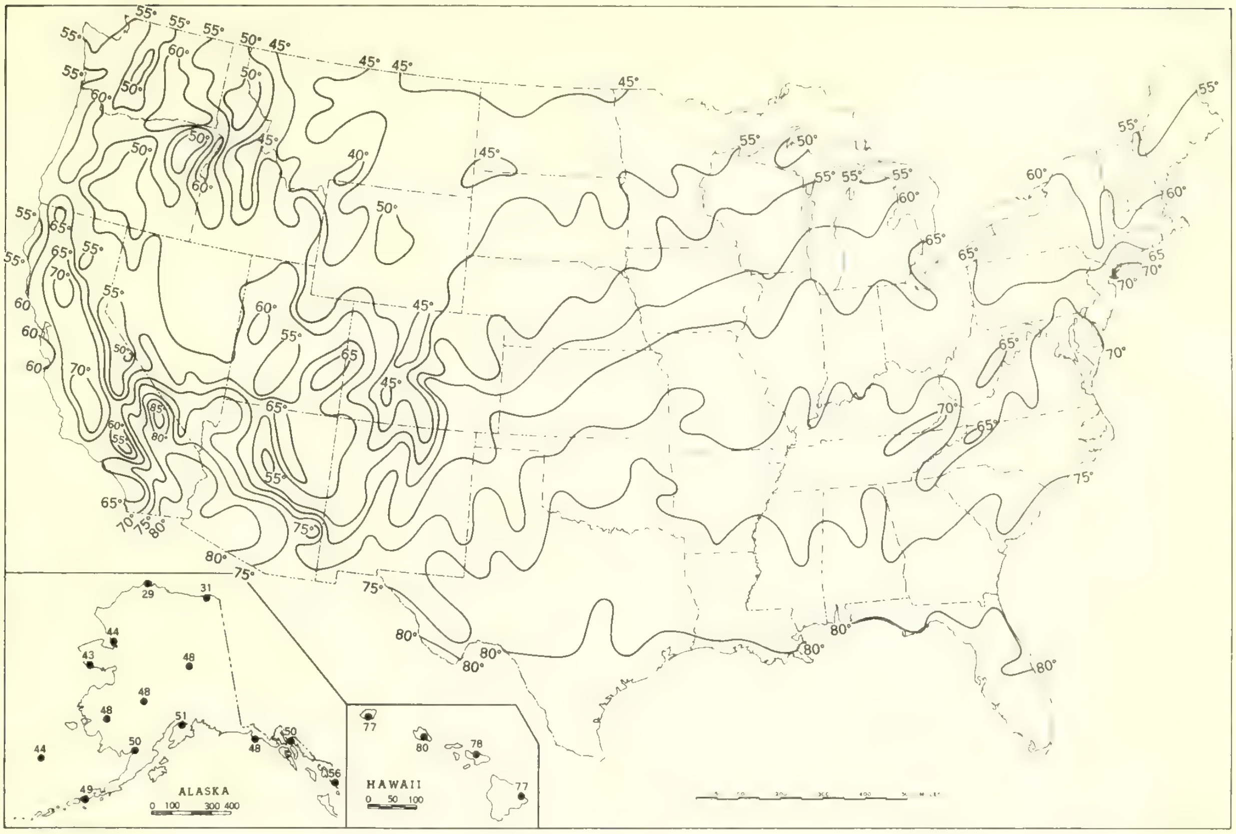
These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λ s Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

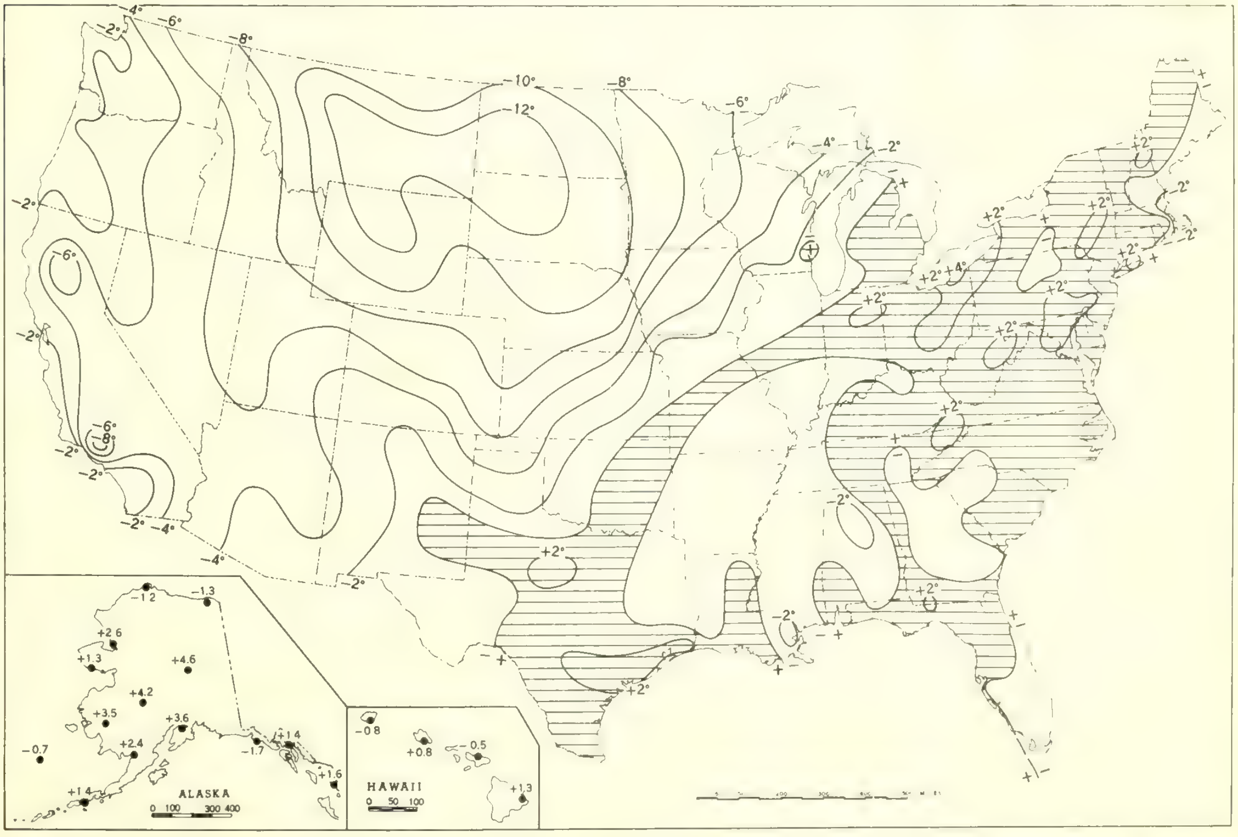
Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3
															Data will be delayed																

The spectrophotometer measures the total amount of ozone in the atmosphere, i e , the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e. g., 350 milli-atmo-cm ozone implies an ozone layer 0.350 centimeter thick The code λ s designates the type of measurement made

Chart I. A. Average Temperature (°F.) at Surface, September 1965.



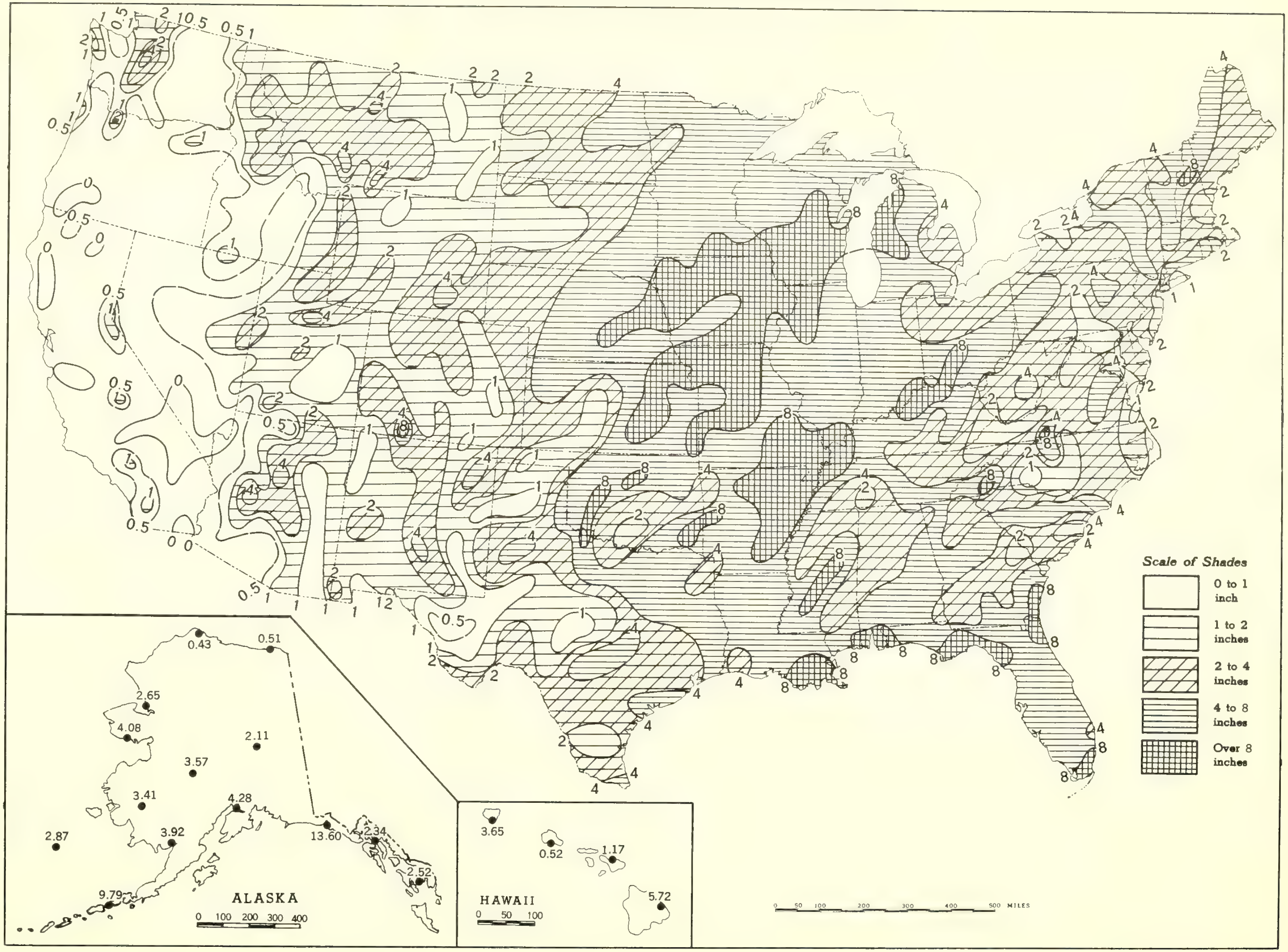
B. Departure of Average Temperature from Normal (°F.), September 1965.



A. Based on reports from over 870 Weather Bureau and cooperative stations. The monthly average is half the sum of the monthly average maximum and monthly average minimum, which are the average of the daily maxima and daily minima, respectively.

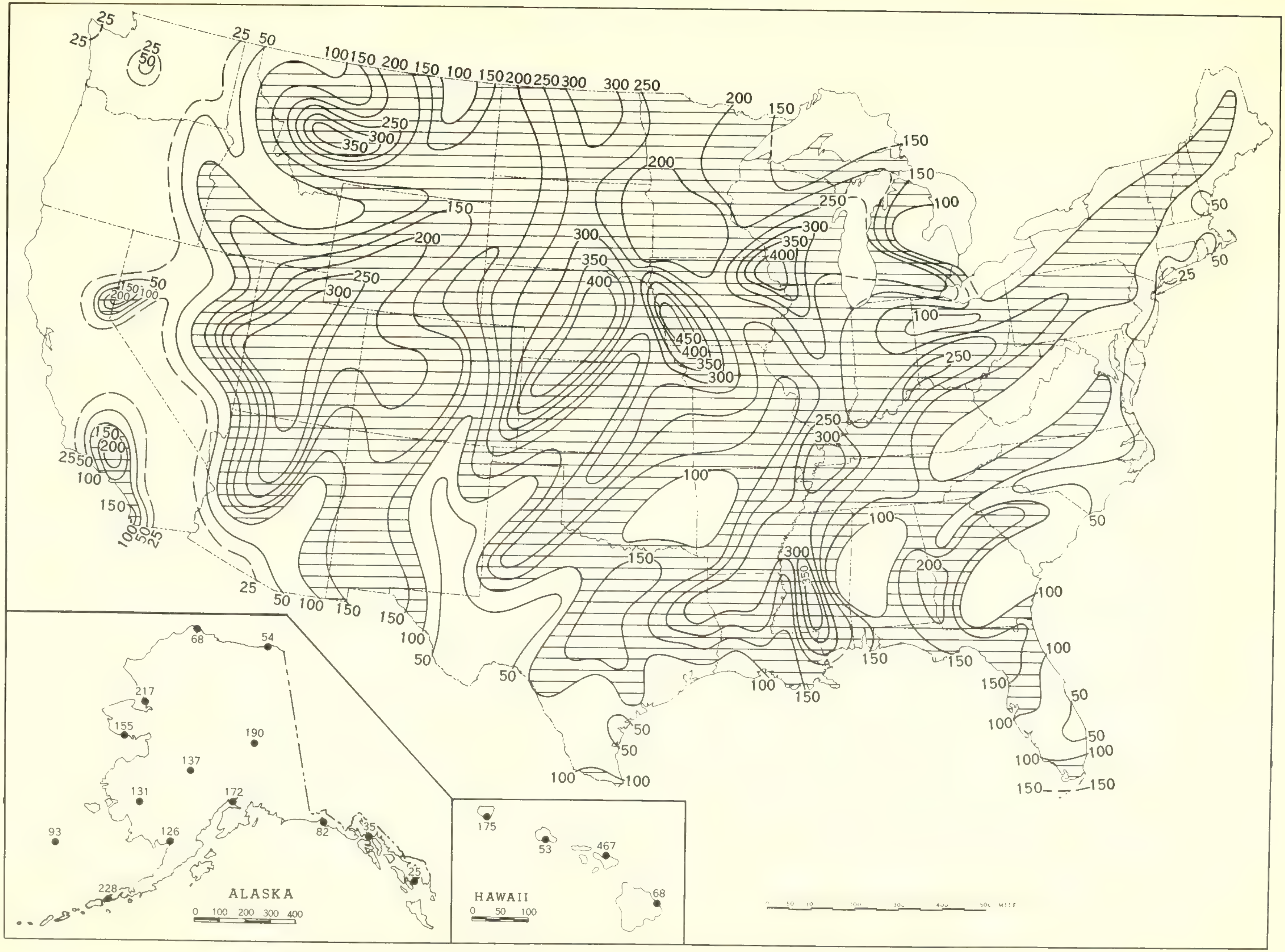
B. Departures from normal are based on the 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart II. Total Precipitation (Inches), September 1965.



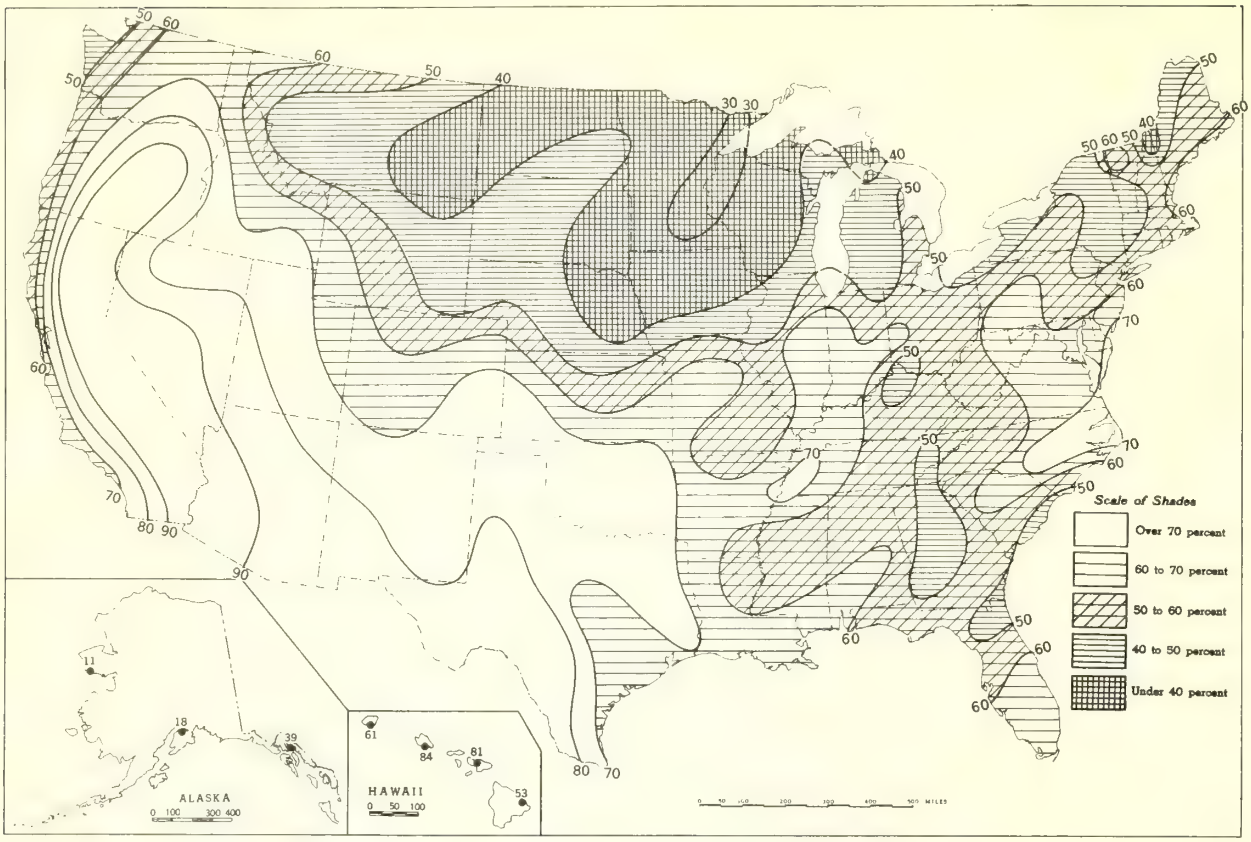
Based on daily precipitation records at about 870 Weather Bureau and cooperative stations.

Chart III. Percentage of Normal Precipitation, September 1965.

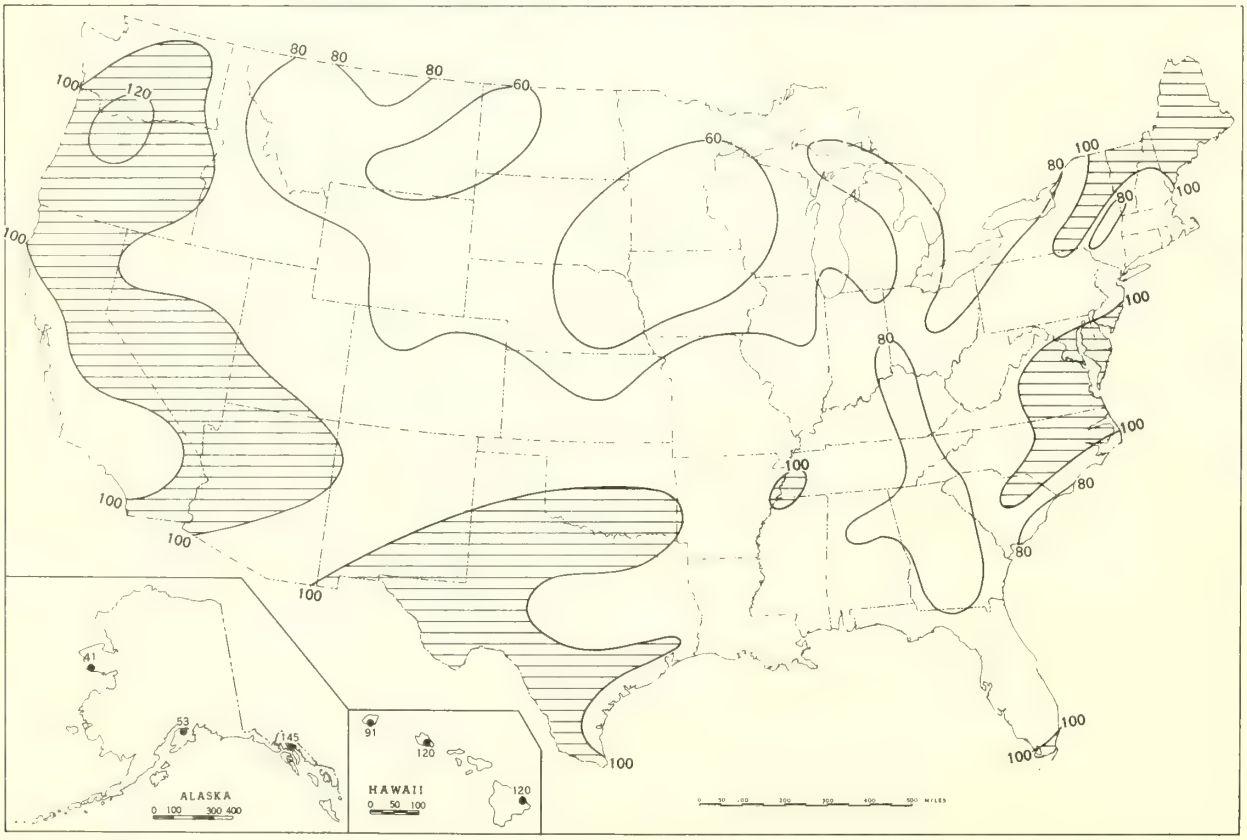


Normal monthly precipitation amounts are computed from 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart VI. A. Percentage of Possible Sunshine, September 1965.

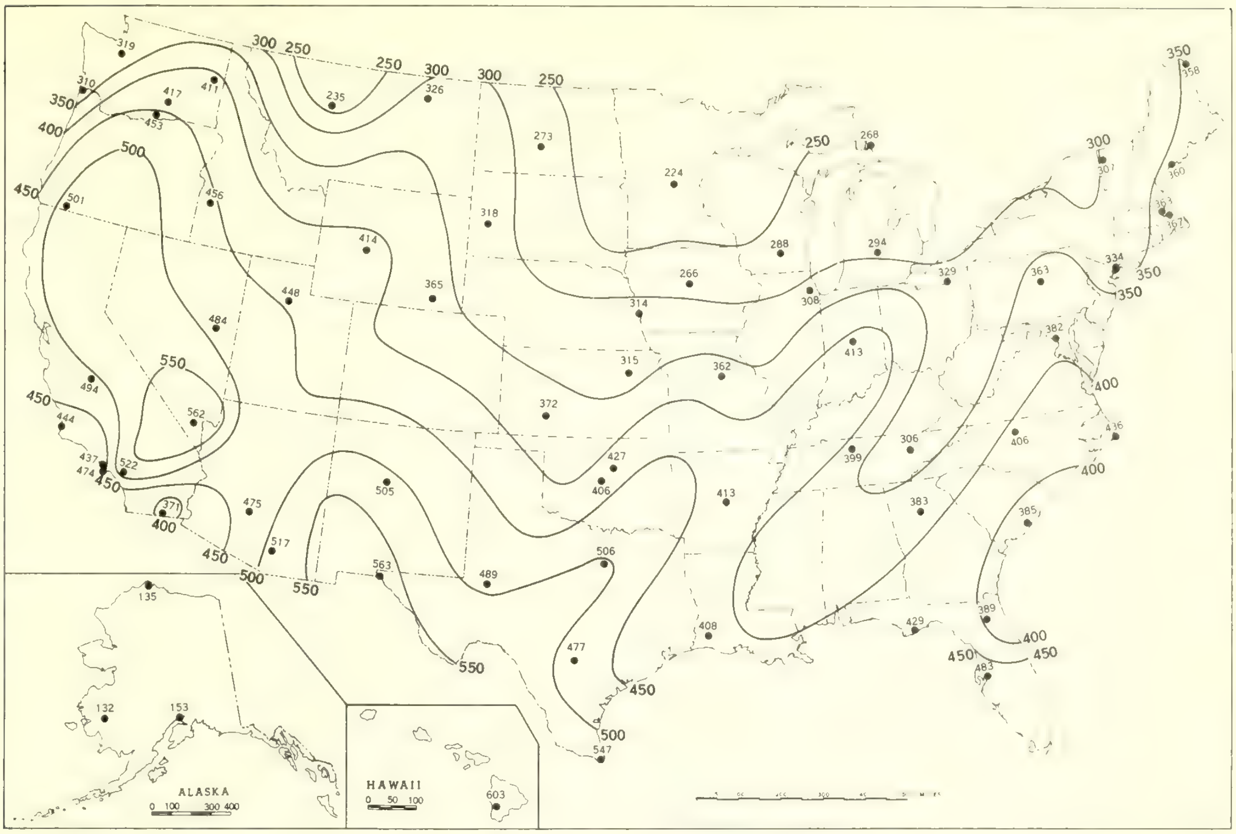


B. Percentage of Mean Monthly Sunshine, September 1965.

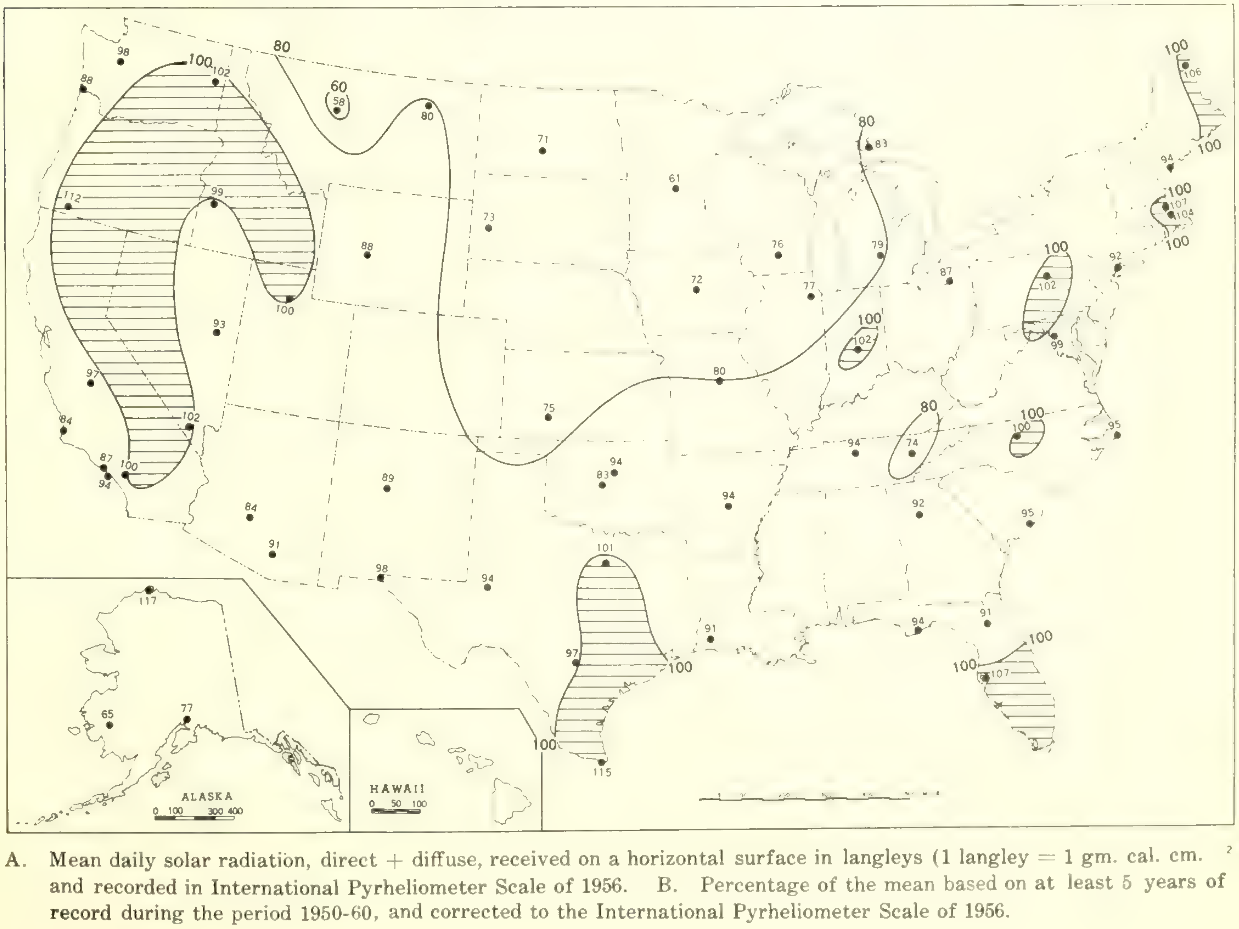


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, September 1965.

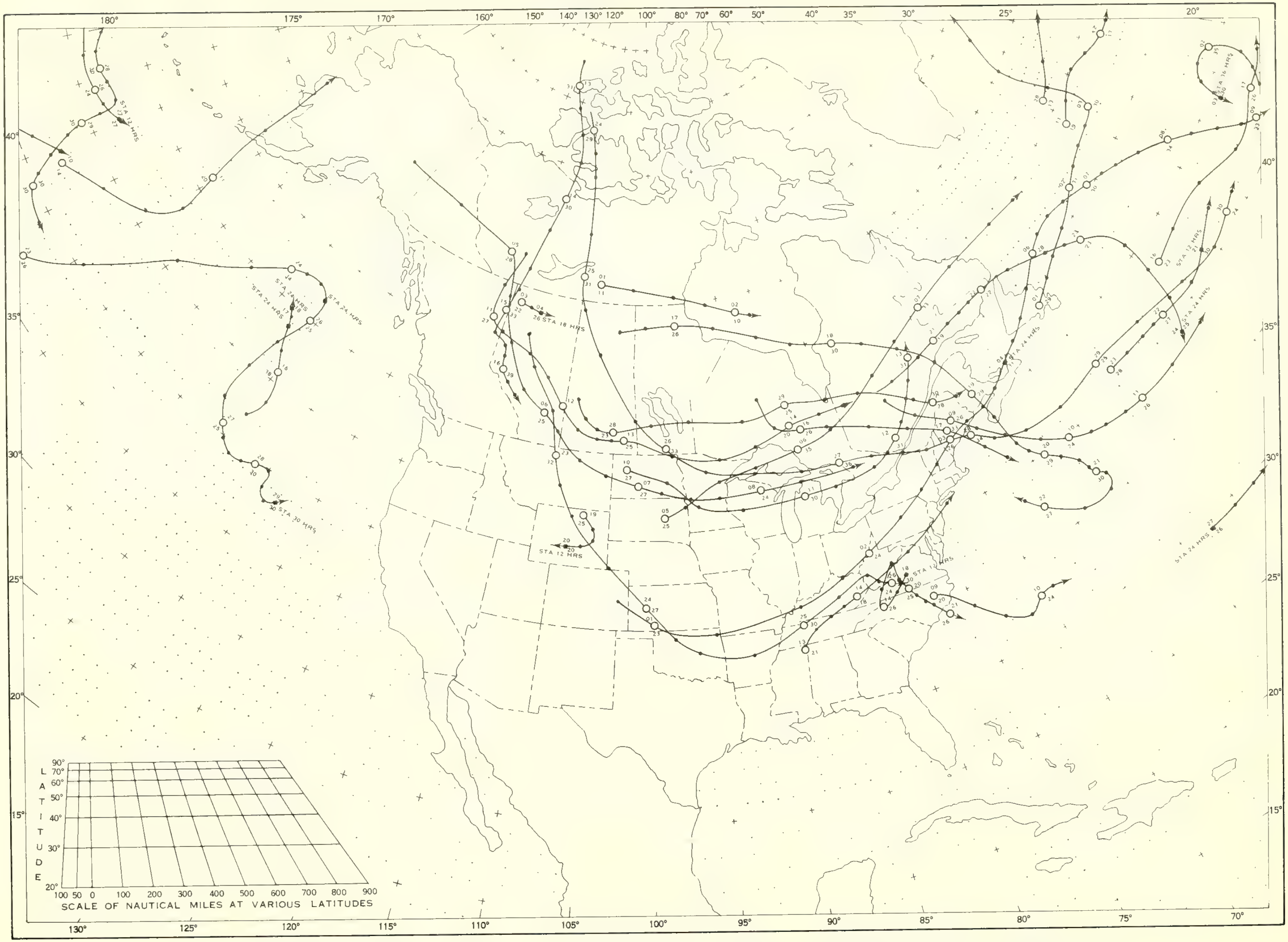


B. Percentage of Mean Daily Solar Radiation, September 1965.



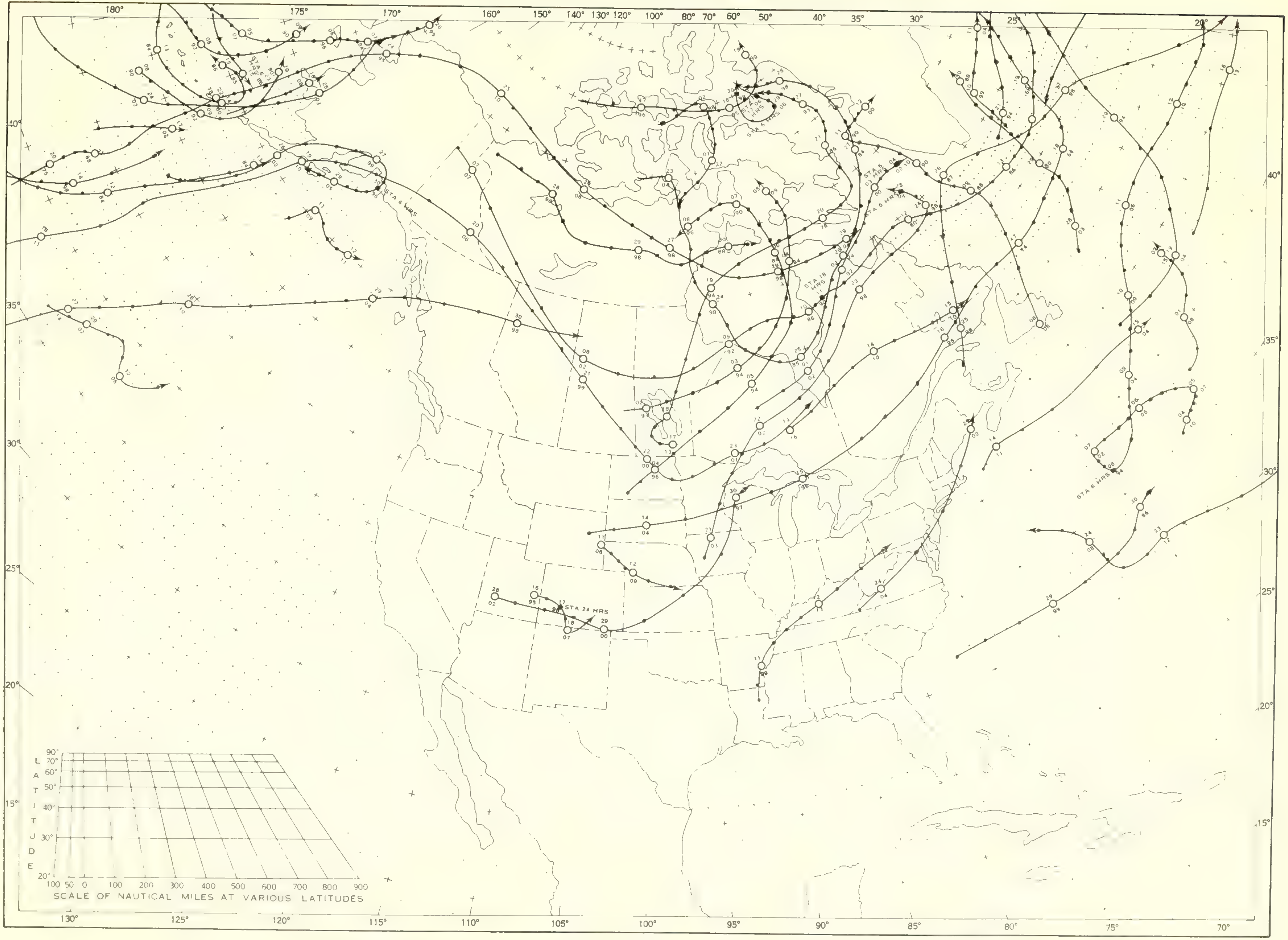
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.^{2}) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, September 1965.



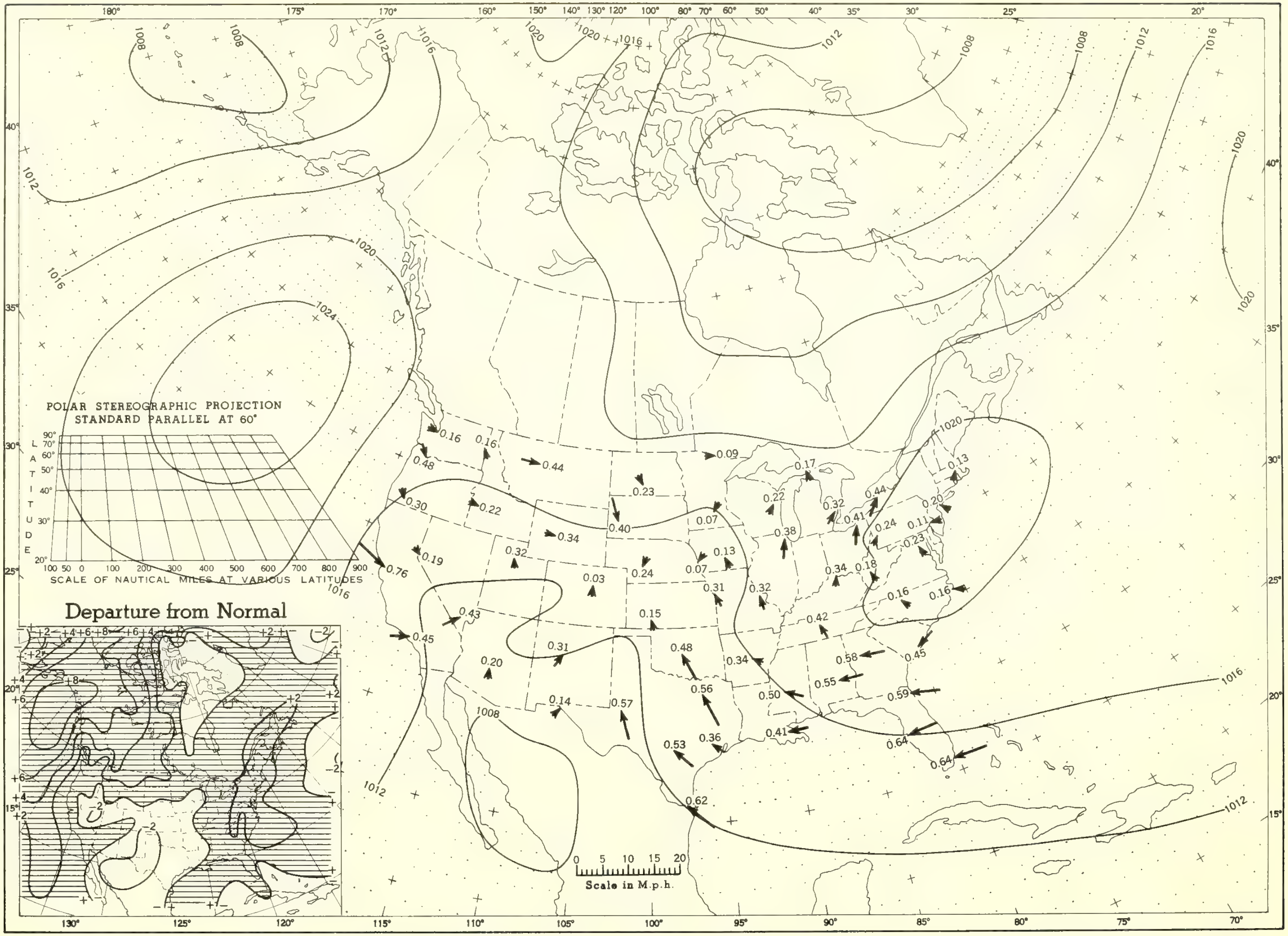
Circle indicates position of center at 7:00 a. m. E. S. T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, September 1965.



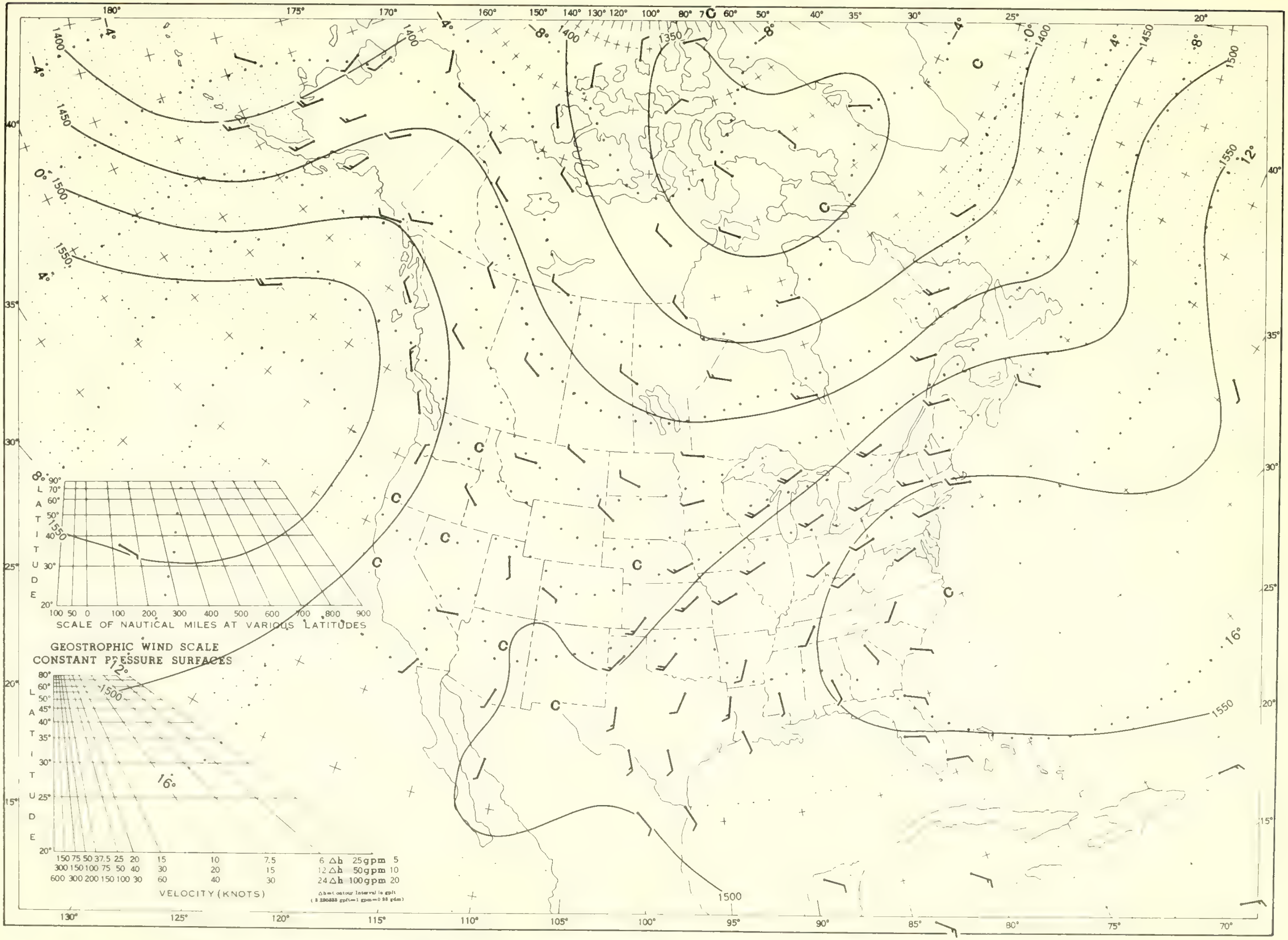
Circle indicates position of center at 7:00 a. m. E. S. T. See Chart VIII for explanation of symbols.

Chart X. Average Sea Level Pressure (mb) and Resultant Surface Wind, September 1965. Inset: Departure of Average Pressure (mb) from Normal, September 1965.



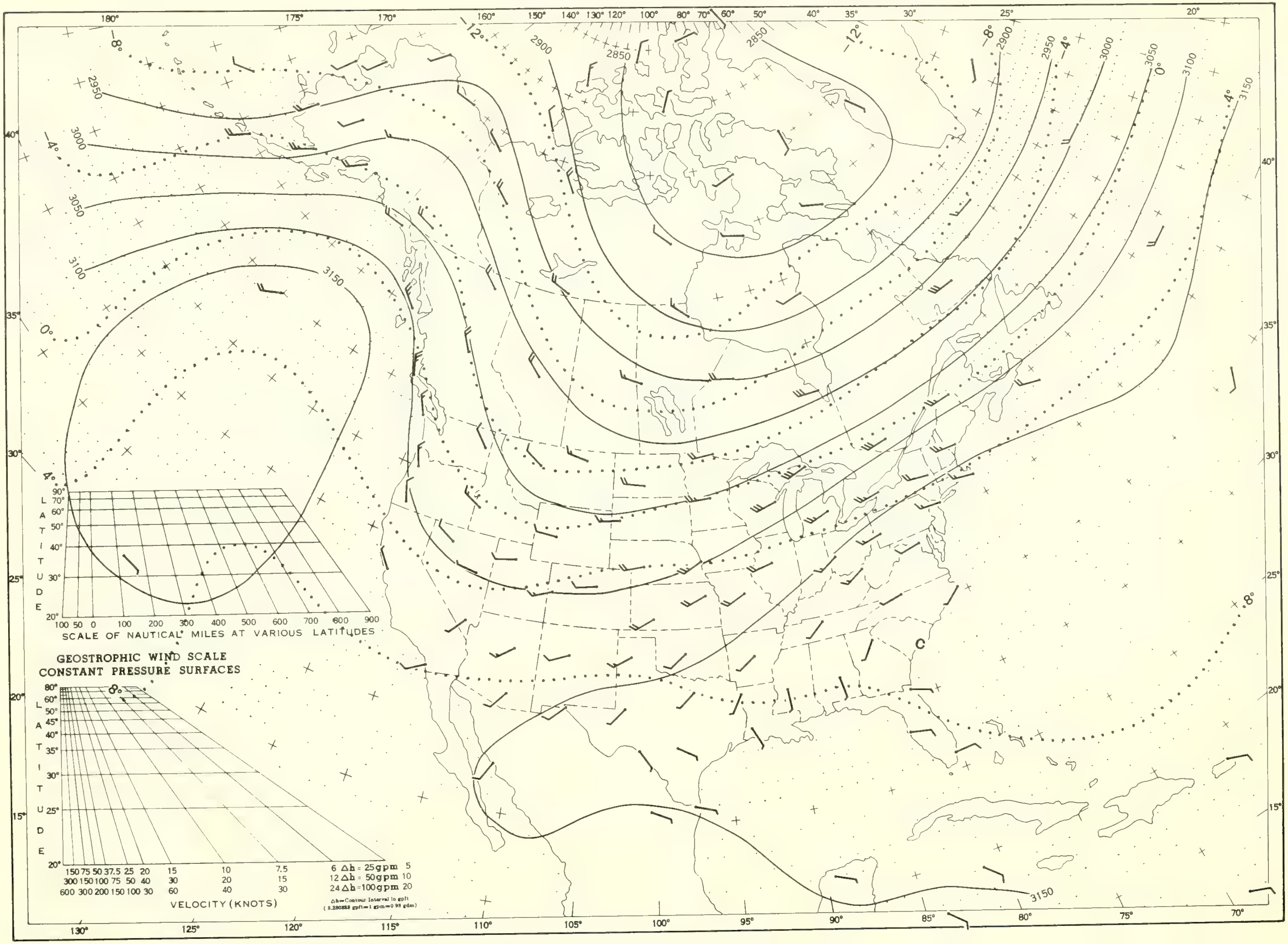
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb. Surface, 1200 GMT, September 1965. Average Height and Temperature, and Resultant Winds.



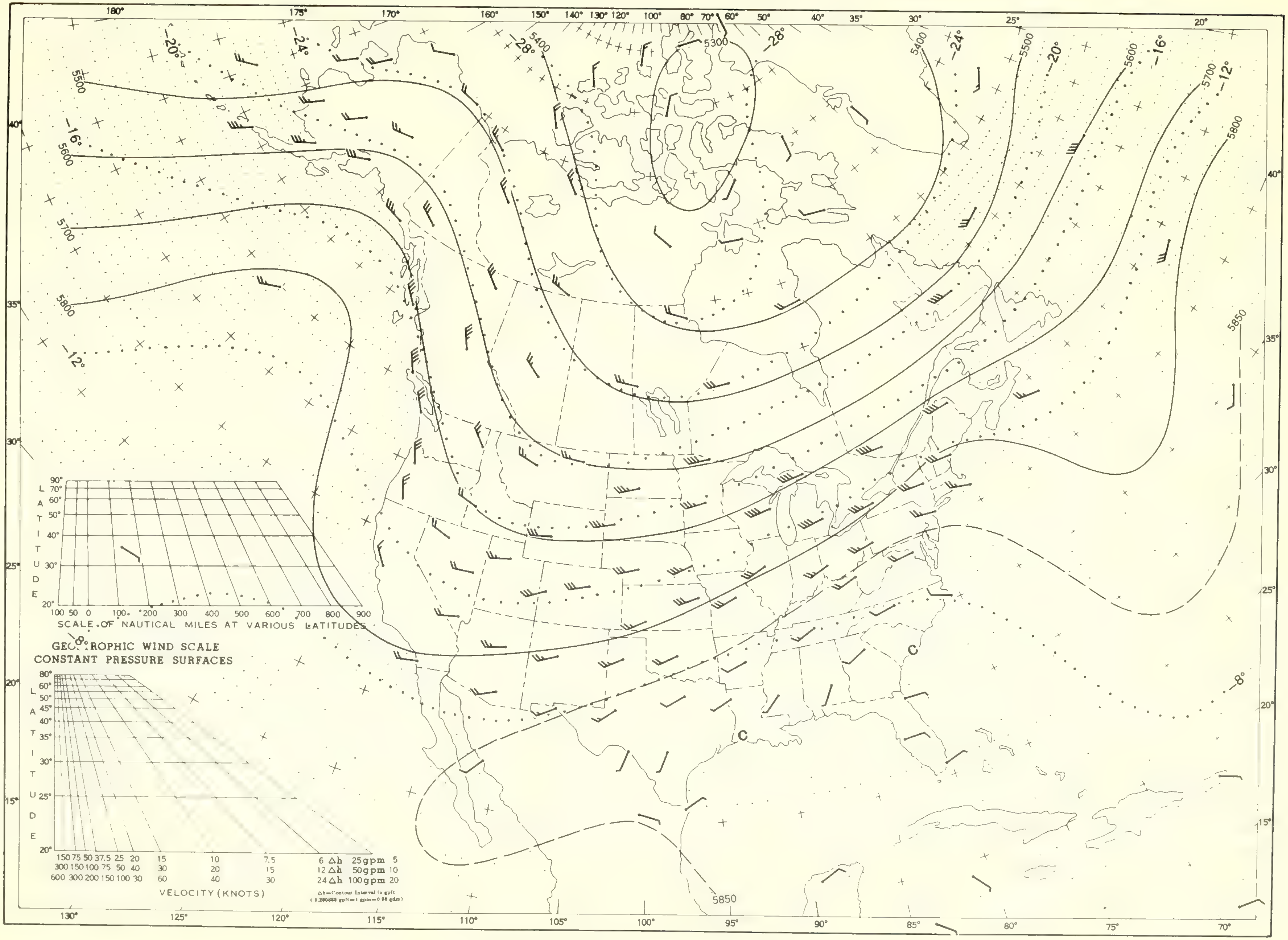
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in knots; flag represents 50 knots, full feather 10 knots, and half feather 5 knots. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, September 1965. Average Height and Temperature, and Resultant Winds.



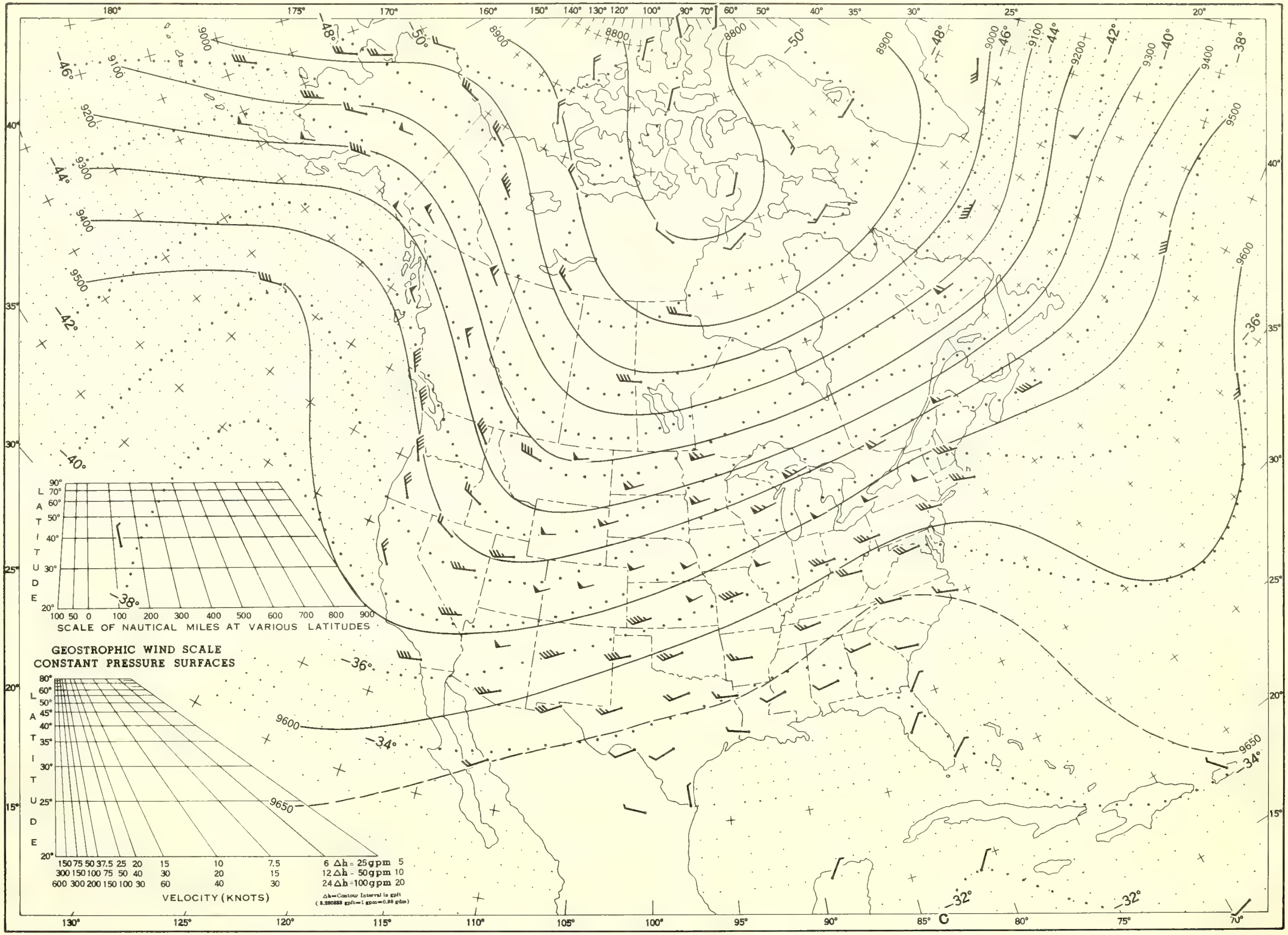
See Chart XI for explanation of map.

Chart XIII. 500-mb. Surface, 1200 GMT, September 1965. Average Height and Temperature, and Resultant Winds.



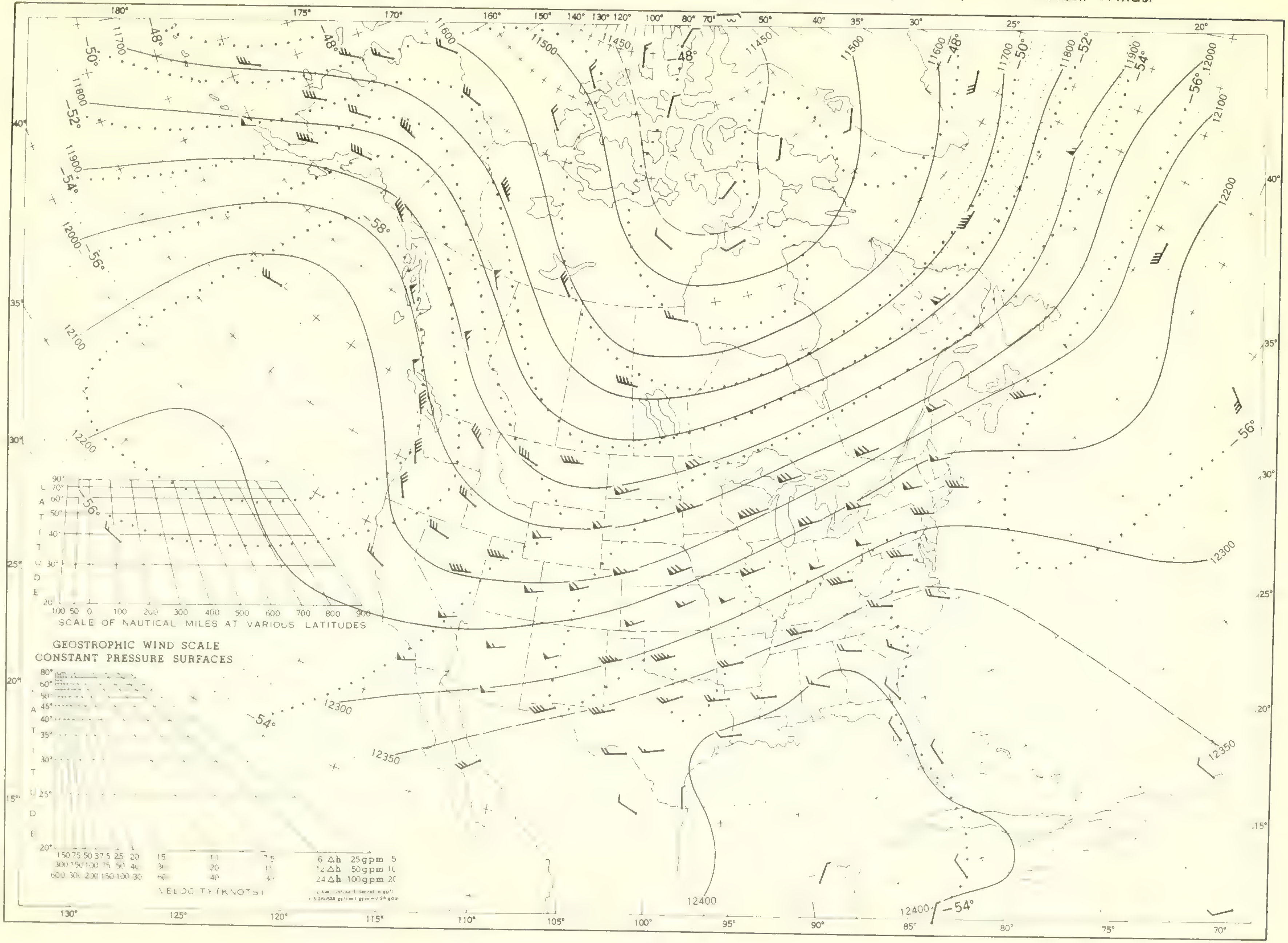
See Chart XI for explanation of map.

Chart XIV. 300-mb. Surface, 1200 GMT, September 1965. Average Height and Temperature, and Resultant Winds.



See Chart XI for explanation of map.

Chart XV. 200-mb. Surface, 1200 GMT, September 1965. Average Height and Temperature, and Resultant Winds.



See Chart XI for explanation of map.

Chart XVI. 100-mb. Surface, 1200 GMT, September 1965. Average Height and Temperature, and Resultant Winds.

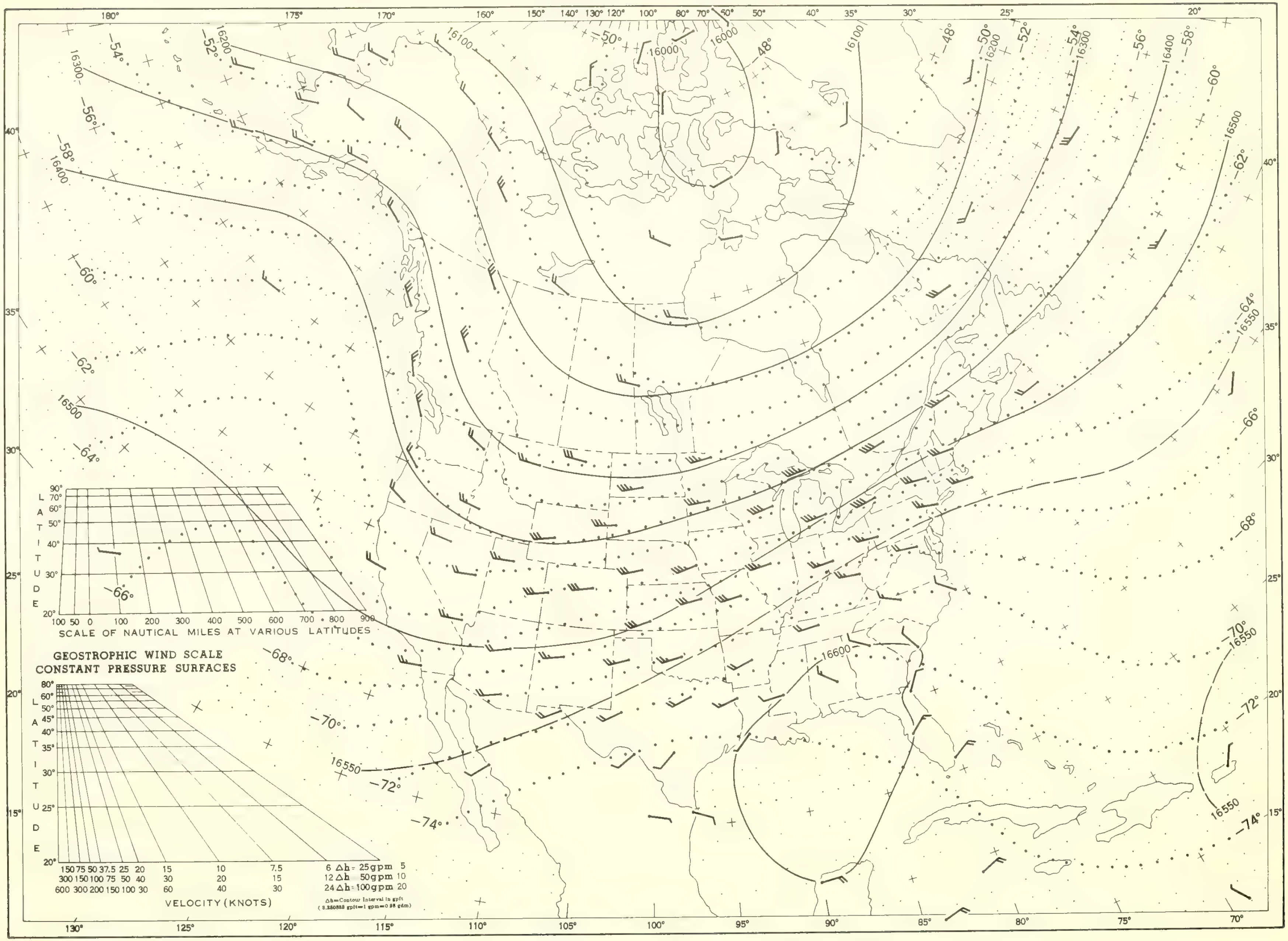
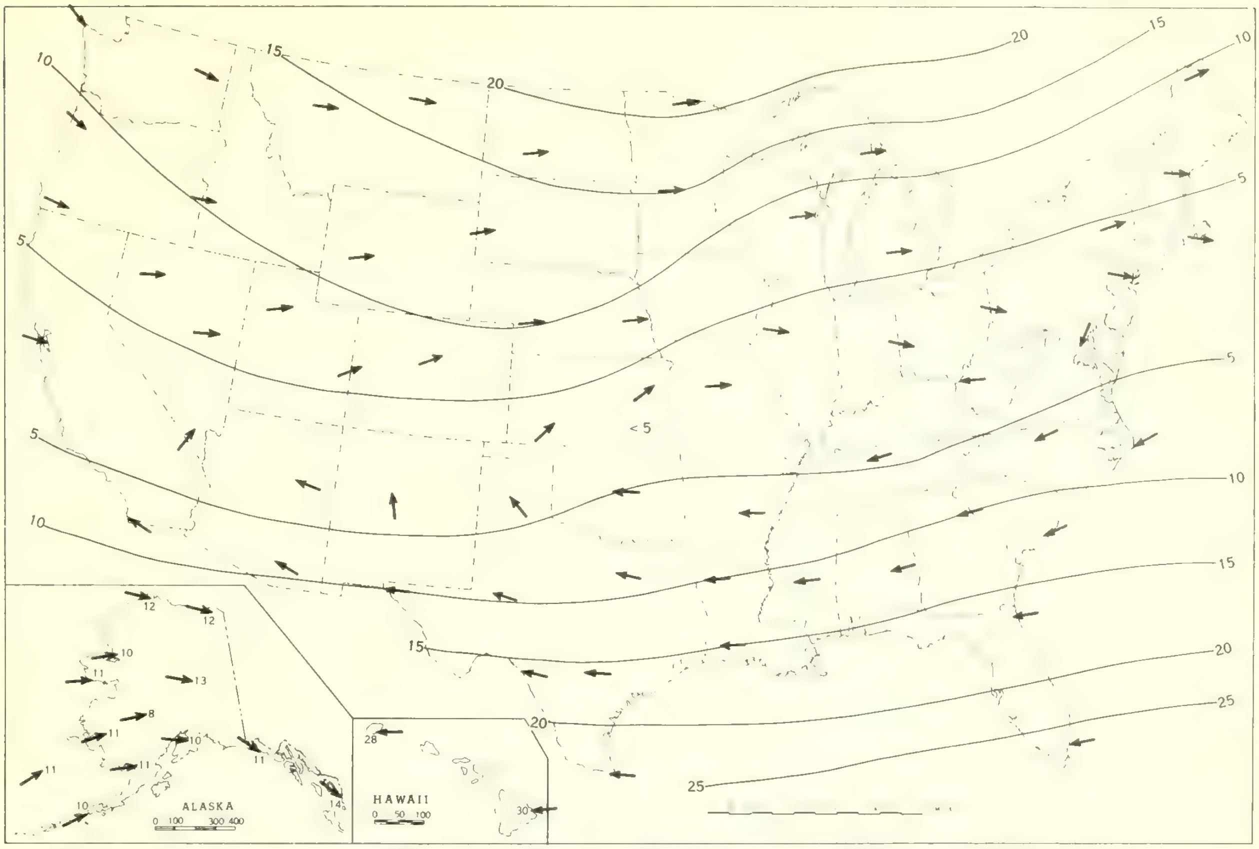
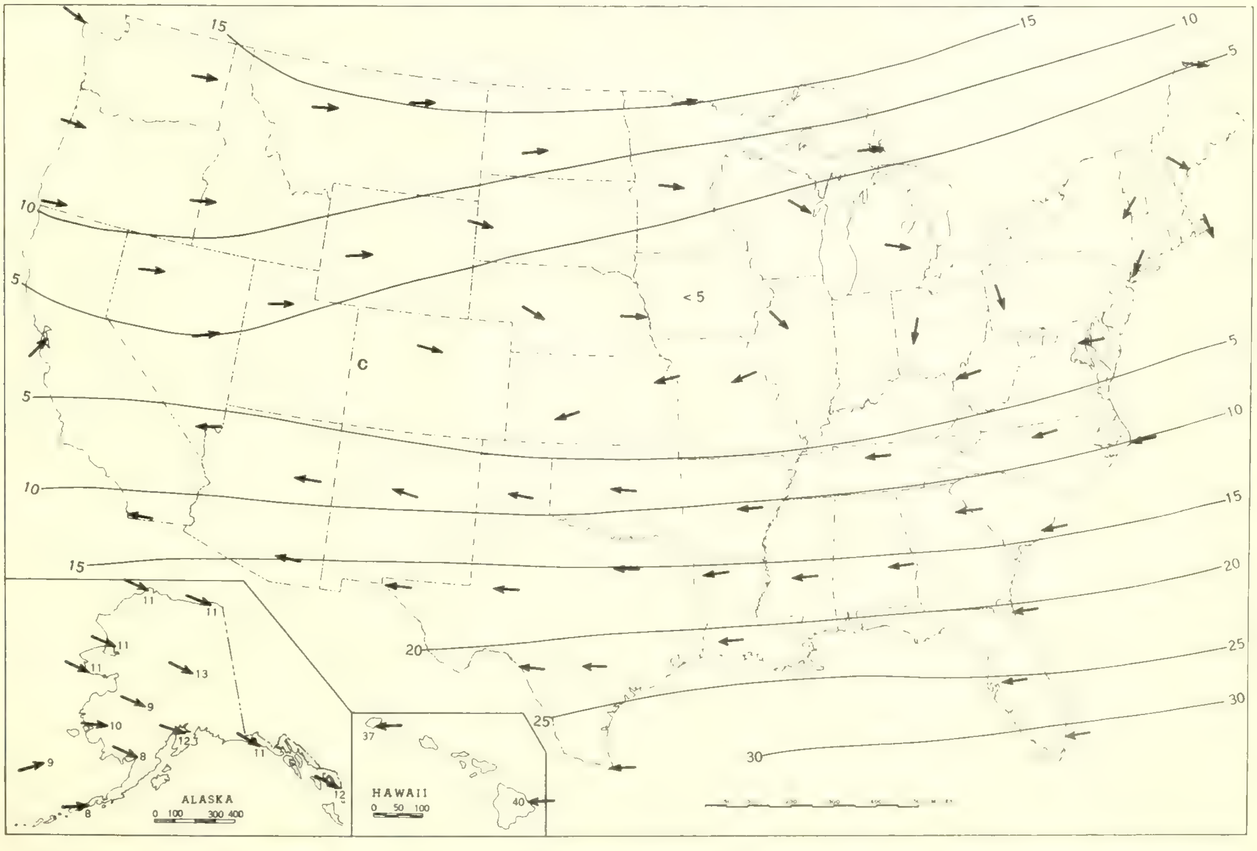


Chart XVII. A. 50-mb. Surface, 1200 GMT, September 1965. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, September 1965. Resultant Winds.



Wind speed (isotachs) in knots. Arrows show resultant wind direction. All wind data are based on rawin observations.

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OCTOBER 1965
Volume 16 No. 10

ASHEVILLE: 1966

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NOTE: Delayed data and corrections will be carried in the June and December issues of this publication.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 16 No. 10

OCTOBER 1965

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. Early freezes in East.
2. Record heat and severe smog Los Angeles.
3. Record rainfall southeast Florida coast.
4. Drought persisted in Northeast.

TEMPERATURE.--The month, relative to normal, was warm in the upper Great Plains and Far West and cool in the East. This temperature pattern was a reversal from September which was cold in the West and warm in the East. The change was quite remarkable in the northern Great Plains where September was 9° to 12° colder than normal and October was 2° to 5° warmer than normal. In a large portion of the northern Great Plains, October was warmer than September for the first time on record.

This was the warmest October during an 89-year record at Sacramento, Calif., and among the warmest throughout central and southern portions of the State. Rather persistent high pressure over the Great Basin and Rocky Mountain region brought a westward flow of air into southern California. The result was a record number of days with temperatures 80° and above and 90° and above. Downtown Los Angeles had 13 days with 90° or above, 4 more than the previous record.

The coldest weather in the East occurred during the first and last weeks of the month. An outbreak of cold air from Canada covered much of the East on the 5th and 6th, bringing minimum temperatures to record low levels for so early in the season at scattered stations in Michigan and from Maine to Virginia. Freezing from the upper Ohio Valley to Virginia was several days earlier than usual. A few stations in Michigan, New York, and New England reported lows in the teens.

With the cold air outbreak near the end of the month, freezing occurred over the Deep South almost to the Gulf. This freeze was 2 to 3 weeks earlier than usual in many sections of the lower Mississippi Valley and Southeast.

PRECIPITATION.--October was an abnormally dry month in about 80 to 85 percent of the conterminous United States. Precipitation was less than 50 percent of normal in the lower Mississippi Valley, small areas along the Atlantic coast, and nearly all the Far West. Large areas in both the Mississippi Valley and Far West had less than 25 percent of normal. Above normal amounts were limited to small areas in the Great Plains, the Ohio Valley, and portions of the Atlantic Coastal States. Cloudy, damp weather at intervals during the first 3 weeks, following a wet September, slowed harvesting activities, particularly of corn which had a high moisture content.

The last week was one of the driest and sunniest for the 48 States in recent years. Measurable precipitation was limited to the north Pacific coast, northeastern border areas, and Florida. In Oklahoma it was the first week in 23 months when no station reported even a trace. Harvesting was progressing rapidly by the end of the month.

In contrast to the generally below normal rainfall, remarkable rainfalls occurred along the southeastern Florida coast during storms on the 14th and 15th and 30th and 31st. Fort Lauderdale measured 25.28 inches during the first storm and 13.81 inches during the second. A large portion of the rainfall in each storm fell in a 24-hour period. Rainfall for the month at Fort Lauderdale totaled 42.43 inches, much more than the previous highest total there for October.

In the Northeast drought area substantial rainfall early in the month improved the water supply situation, but the rest of the month was dry and the drought situation deteriorated further. At the end of the month the severe drought area extended in a narrow band from Washington, D. C., to New York City, and on up the Hudson Valley to Albany, N. Y., thence northeast to the southern coast of Maine, covering an area of perhaps 60,000 square miles.

SNOWFALL.--Unlike September, there were no outstanding snowstorms in October. Some light snow fell in the upper Great Lakes region and extreme northern areas of the Northeast early in the month. During the week ending the 17th, snow fell in the Rockies with 10 inches reported at Santa Fe, N. Mex., and 4- to 8- inch accumulations in the Arizona Mountains. During the last week measurable snowfall was rather widespread in much of the Appalachian region and Northeast, with amounts ranging from flurries in western North Carolina up to 3 inches in northeast Pennsylvania, 3 to 5 inches in northern New York State, and over 5 inches in northern New England. In many sections of the East this was the first snowfall of the season and was 2 to 3 weeks early.

STORMS AND OTHER UNUSUAL PHENOMENA.--As a storm moved eastward through southern Canada, gales occurred over the Great Lakes on the 2d and 3d and the Northeast on the 4th. Winds gusted to 63 m.p.h. over Lake Huron and 12-foot waves were reported on Lake Michigan. Another stormy period occurred in the Northeast as LOWS from western Canada and the Gulf converged there on the 7th and 8th, and damaging squalls occurred in the Ohio Valley. Gales also occurred in the Pacific Northwest on the 5th, and 15th and 16th. A weak LOW off the southeast Atlantic coast caused gales along the Florida - Georgia coast on the 18th. Strong winds in the Northeast again on the 23d and 31st reached gale force on the latter date and Syracuse, N. Y., recorded 70 m.p.h.

Severe smog occurred in Los Angeles, Calif., from about the 20th through the 29th. Persistent high pressure over the Great Basin sent a light flow of air across southern California with just sufficient force to neutralize the onshore coastal winds. This lack of wind movement and an inversion aloft prevented dispersion of the usual pollutants. The smog was of near record intensity and duration, and the worst since 1955.

CONDENSED CLIMATOLOGICAL SUMMARY

OCTOBER 1965

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	2 Stations	90	17+	Double Springs	21	25	Frisco City	8.70	Calera 2SW	0.00
Alaska	Data will be delayed									
Arizona	4 Stations	105	13+	Heber Ranger Station	6	19	Pinetop Fish Hatchery	1.83	46 Stations	.00
Arkansas	2 Stations	94	9	Evening Shade 1NE	19	25	Waldron	1.97	Mountain View 2ESE	.00
California	Palm Springs	107	12	Bodie	8	25	Gasquet Ranger Station	3.24	236 Stations	.00
Colorado	4 Stations	92	9	Fraser	4	27	Stonington	4.93	3 Stations	.00
Connecticut	2 Stations	81	20+	Coventry	18	6	Wolcott Reservoir	6.07	Bridgeport WBAP	1.72
Delaware	Georgetown 5SW	79	15	Georgetown 5SW	23	30	Newark University Farm	2.76	Bridgeville 1NW	.84
Florida	Ocala	98	4	De Funiak Springs	28	28	Ft Lauderdale Baha Mar	42.33	St. Petersburg	.68
Georgia	Quitman	92	3	Blairsville Exp Sta	20	25	Greenville 2W	8.93	Cartersville	.55
Hawaii	Data will be delayed									
Idaho	Slate Creek RS	92	8	Dubois 34W	10	30+	Pierce	2.09	17 Stations	.00
Illinois	2 Stations	87	17+	Marshall 1E	20	29	Antioch	4.10	Kewanee	.13
Indiana	3 Stations	87	18+	2 Stations	17	30+	Monroeville 3ENE	5.33	Sullivan 1SSE	.93
Iowa	do	86	10	Milford 4NW	20	24	Dubuque WBAP	3.83	Mason City FAA AP	.23
Kansas	Ellsworth	96	10	Abilene 2S	25	24	Lenora	6.29	2 Stations	.00
Kentucky	Owensboro 2W	88	17	2 Stations	19	31+	Maysville Fire Station	4.56	Paducah	1.19
Louisiana	4 Stations	92	11+	Chatham	27	25	Pearl River Lock No. 1	3.28	3 Stations	.00
Maine	Saco	83	19	Haynesville	11	7	Belfast	6.13	Clayton Lake 2	2.26
Maryland	4 Stations	80	16+	Oakland 1SE	12	29	Dalecarlia Resvr. D.C.	5.99	Crisfield Somers Cove	.73
Massachusetts	Fitchburg 2S	86	20	South Egremont	19	30	Beechwood	3.99	Salem CG Air Station	.74
Michigan	E. Lansing Hort Farm	88	18	Kincheloe AF Base	12	28	Monroe Sewage Plant	4.71	Iron Mt Wtr Wks	.64
Minnesota	Winona	84	19	2 Stations	11	28+	Virginia	3.62	Wheaton	.24
Mississippi	Waynesboro 2W	95	9	do	24	25	Edinburg	4.53	Waynesboro 2W	.20
Missouri	St Joseph 4WNW	91	10	3 Stations	21	29+	Cole Camp 7S	7.20	3 Stations	.00
Montana	2 Stations	90	9	Wisdom	10	27	Big Timber	1.01	77 Stations	.00
Nebraska	do	92	10+	Nenzel 20S	19	21	Beaver City	5.23	Harrison	.10
Nevada	Sunrise Manor Las Vegas	100	8+	Charleston	7	21	Lamoille Power House	.97	18 Stations	.00
New Hampshire	2 Stations	84	19	Fabyan	16	30	First Conn Lake	5.83	Nashua 2NNW	2.12
New Jersey	do	80	21+	High Point Park	18	29	Greenwood Lake	5.18	Belmar 2SW	.20
New Mexico	Jal	98	10	Reserve Ranger Station	12	26	Clayton WBAP	3.91	13 Stations	.00
New York	Little Falls Mill St	82	20	Franklinville	6	29	Hooker 4N	9.06	Bridgehampton	1.31
North Carolina	Pinehurst	87	1	2 Stations	16	30	Lake Toxaway 2SW	13.32	Enfield	.53
North Dakota	3 Stations	83	16+	Medora 22NNW	12	19	2 Stations	1.68	41 Stations	.00
Ohio	Carpenter	88	20	Tom Jenkins Dam	12	29	Cooperdale	6.23	Marietta Sewage TMT Pl	1.58
Oklahoma	Jefferson	99	10	4 Stations	26	25	Kenton	6.37	2 Stations	.00
Oregon	3 Stations	91	9+	Fremont	9	16	Valsetz	5.30	2 Stations	.00
Pennsylvania	Newell	88	1	Clermont 4NW	9	29	Long Pond 2W	6.71	Breezewood	1.23
Puerto Rico	Guayama	95	16	Cayey 1E	58	29+	Rio Blanco Upper	14.30	Ponce	.27
Rhode Island	Greenville	81	19	Kingston	21	6	Greenville	3.18	Block Island WBAP	1.14
South Carolina	3 Stations	90	2	Chester 2WSW	16	30	Sullivans Island	12.50	Pee Dee	1.38
South Dakota	2 Stations	91	15	4 Stations	17	31+	Milbank	2.02	8 Stations	.00
Tennessee	do	89	18+	Mountain City No 2	15	29	Lebanon 7N	4.06	Dyersburg FAA AP	.43
Texas	Presidio	102	10	Rockland 1N	27	26+	Spring Branch 2SE	8.33	13 Stations	.00
Utah	Zion National Park	92	7	Hardware Ranch	10	26	Castleton	2.73	6 Stations	.00
Vermont	2 Stations	82	20	Cavendish	16	6	Somerset	5.65	Montpelier FAA AP	2.00
Virginia	Grundy 3NW	86	15	Burkes Garden	12	30	Peaks of Otter	7.18	Chincoteague WL Ref.	.51
Washington	Pleasant View	90	3	Davenport	14	16	Noah Bay 1E	12.75	Wellpinit	.00
West Virginia	Hogsett Gallipolis Dam	88	20	2 Stations	8	30+	Buckeye	5.05	2 Stations	1.32
Wisconsin	Rice Lake	85	19+	Gordon 2ESE	10	28	Kenosha	7.00	Ladysmith	.49
Wyoming	Lance Creek 3WNW	90	10	Bondurant 3NW	7	26	Hecla	1.21	34 Stations	.00

+ And also on an earlier date or dates.

NOTE: Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)				
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	995.9	1018.5	73	47	60.0	- 5.7	83	17	28	25	0	3	50	74	0.67	- 2.28	0.38	5	0	0.0	0	1.7	2	23	W	8	16	8	7	3.9	74
HUNTSVILLE	600	995.6	1018.5	75	49	61.9	- 1.3	87	17	32	25	0	1	46	60	0.65	- 2.07	0.34	5	0	0.0	0	0.6	5	24	28	23	17	5	9	4.1	
MOBILE	211	1009.8	1017.5	80	58	68.7	- 1.2	88	10+	39	25	0	0	55	67	1.59	- 1.44	1.54	3	0	0.0	0	4.3	4	21	10	6	15	8	8	3.8	
MONTGOMERY	194	1010.8	1018.0	75	53	63.8	- 2.8	84	17	33	26	0	0	55	76	1.14	- 1.14	0.78	5	1	0.0	0	2.0	2	20	W	7	11	11	9	4.6	64
ALASKA												B																				
ANCHORAGE PRK STRIP	85			35	23	29.0	- 6.0	53	3	6	18	0	25			1.44	- 0.43	0.55	10		16.4	7										
ANCHORAGE	141	993.6	998.6	38	23	30.7		56	5	9	21+	0	26	20	64	1.44		0.44	11	0	16.7	6	3.8	1	26	36	13	7	5	19	7.2	44
ANNETTE	110	1003.7	1007.7	51	42	46.9	0.2	58	27+	33	18	0	0	42	83	27.15	10.27	3.34	25	1	T	0	10.5	14	39	16	16	0	1	30	9.4	
BARROW	22	1007.1	1007.7	16	2	9.3	- 7.3	30	23	-16	14	0	31	5	81	0.68	0.18	0.14	18	0	9.0	4	3.5	16	33	19	25	3	9	19	7.7	
BARTER ISLAND	39	1006.4	1008.2	15	3	9.1	- 8.1	27	9	-21	17	0	31	7	89	0.39	- 0.45	0.08	11	0	5.1	3	4.5	26	39	27	23+	3	4	24	8.4	
BETHEL	125	998.3	1003.9	31	18	24.2	- 7.2	40	4	8	31	0	31	19	81	0.11	- 1.43	0.06	7	0	2.6	1	4.8	2	33	2	2	4	7	20	7.7	
COLD BAY	94	997.6	1001.4	41	33	36.7	- 3.4	49	11+	23	25+	0	14	31	80	2.75	- 1.84	0.47	21	0	7.7	1	5.6	33	43	15	26+	0	3	28	8.7	
FAIRBANKS	436	987.8	1005.5	22	6	13.9	-12.3	45	2	-15	20	0	31	7	75	0.74	- 0.11	0.27	10	0	15.7	7	1.4	34	21	36	4	6	6	19	7.5	
JUNEAU	12	1002.4	1003.2	49	39	43.7	2.1	57	4	29	25	0	5	42	94	7.99	- 0.34	0.95	29	0	0.3	T	12.4	12	49	12	28	0	1	30	9.7	11
KING SALMON	43	997.6	999.7	35	16	25.6	-10.1	51	3	4	25+	0	29	20	79	0.39	- 1.76	0.16	9	0	2.8	1	6.0	1	33	4	2	11	8	12	5.6	
KOTZEBUE	10	1005.4	1005.9	22	11	16.6	- 8.1	34	3	- 3	28+	0	31	11	78	0.30	- 0.29	0.09	7	0	16.0	11	7.7	10	43	12	22+	11	2	18	6.0	
MC GRATH	334	991.9	1005.1	23	6	14.2	-12.6	39	2	-13	16	0	31	7	71	0.14	- 1.18	0.05	7	0	5.5	3	3.4	36	21	4	4	3	10	18	7.8	
NOME	13	1003.4	1004.3	29	17	23.1	- 6.6	42	3	3	30	0	31	17	75	0.61	- 1.10	0.12	11	0	5.9	4	2.9	4	47	16	23	11	2	18	6.2	32
ST. PAUL ISLAND	22	1003.7	1004.8	39	32	35.5	- 1.7	44	13	23	24	0	20	31	83	1.45	- 1.70	0.23	24	0	3.7	1	6.7	34	55	14	25	0	4	27	8.9	
SHEMYA	122	1006.4	1010.3	45	38	41.4	1.7	49	16	31	22	0	2	36	82	3.65	0.89	1.08	22	0	1.0	0	6.8	25	55	13	30	2	10	19	7.7	
YAKUTAT	28		998.1	46	34	39.8	- 2.1	58	4	19	19	0	9	37	89	36.89	17.30	5.38	28	0	0.8	0	7.2	11	37	14	28	2	0	29	9.1	
ARIZONA																																
FLAGSTAFF	6993	791.7	1020.3	69	31	49.7	2.7	80	11+	22	29	0	20	26	48	0.27	- 1.25	0.25	3	1	2.2	T	0.7	5	20	20	15	23	4	4	2.0	
PHOENIX	1117	974.9	1013.3	92	56	73.8	3.1	99	11+	47	19+	26	0	39	33	0.20	- 0.26	0.20	2	2	0.0	0	2.5	11	24Y	ENE	21+	24	4	3	2.1	92
TUCSON	2584	926.5	1013.5	87	56	71.9	1.9	98	12	41	18	15	0	28	23	0.07	- 0.57	0.07	1	0	0.0	0	5.6	13	30	E	22+	26	1	4	1.6	92
WINSLOW	4895	855.4	1019.4	77	38	57.2	- 0.2	89	9	29	29	0	6	28	39	0.16	- 0.50	0.13	2	0	T	0	1.8	22	25	19	15+	24	4	3	2.0	
YUMA	194	1005.4	1012.7	95	61	77.6	1.3	104	12	52	18	26	0	40	29	0.00	- 0.38	0.00	0	0	0.0	0	2.0	2	29	NW	15	24	4	3	1.6	96
ARKANSAS																																
FORT SMITH	449	1002.4	1018.9	78	46	61.7	- 2.1	94	9	30	25	2	1	47	67	0.90	- 2.55	0.45	2	1	0.0	0	1.3	2	23	N	11	16	7	8	4.0	71
LITTLE ROCK	257	1009.5	1019.1	75	48	61.6	- 1.5	87	9	31	25	0	1	49	69	0.21	- 2.67	0.21	1	0	0.0	0	1.4	30	26	N	23	17	4	10	3.9	67
TEXARKANA	372	1005.8	1018.8	78	51	64.5	- 1.6	92	9	29	25	1	1	51	68	0.40	- 2.58	0.35	2	2	0.0	0	0.8	14				19	3	9	3.7	
CALIFORNIA																																
BAKERSFIELD	494	999.3	1016.8	84	55	69.6	2.8	97	2	46	16	9	0	43	43	0.00	- 0.32	0.00	0	0	0.0	0	1.3	1	21	33	15	25	5	1	1.8	
BISHOP	4108			83	39	60.9	3.5	94	7	33	18+	6	0			0.00	- 0.43	0.00	0		0.0	0						25	5	1	2.0	
BLUE CANYON	5280			70	51	60.4	6.6	85	7	31	15	0	1			0.84	- 2.57	0.84	2		T	0			20	19	4	20	6	5	2.9	
BURBANK	724	989.2	1014.7	87	56	71.6	5.3	99	22	45	17	14	0	43	45	T	- 0.49	T	0	0	0.0	0	0.8	19	21	32	15	21	5	5	2.7	
EUREKA U	43			62	50	55.7	1.3	80	23	42	16	0	0			0.70	- 2.49	0.25	7		0.0	0			28	SE	4	3	11	17	7.2	47
FRESNO	328	1005.1	1016.8	83	48	65.8	1.2	96	2	37	16	7	0	45	54	0.30	- 0.13	0.30	1	0	0.0	0	0.9	32	23	NW	15	25	4	2	2.0	97
LONG BEACH	34	1013.9	1015.4	83	57	70.0	3.5	101	22	49	17	9	0	48	55	0.00	- 0.17	0.00	0	0	0.0	0	2.0	27	21	8	21+	19	8	4	3.1	
LOS ANGELES	97	1011.5	1015.1	79	60	69.5	4.6	101	22	50	17	7	0	51	61	T	- 0.39	T	0	0	0.0	0	2.2	26	37Y	N	15	18	5	8	3.5	
LOS ANGELES U	270			85	62	73.1	5.7	100	22	52	17	13	0			0.00	- 0.41	0.00	0		0.0	0			25	N	15	22	7	2	2.3	77
MT SHASTA R	3544			74	40	56.7	4.8	85	8	31	19	0	1			0.05	- 2.39	0.05	2		T	T										
OAKLAND	6	1017.3	1017.3	73	56	64.2	3.1	87	23+	51	27+	0	0	54	74	0.07	- 0.71	0.07	1	0	0.0	0	4.3	28	24	27	15	16	7	8	4.3	
RED BLUFF	341	1004.1	1016.9	83	50	66.4	0.8	102	7	44	18	5	0	40	44	0.01	- 1.36	0.01	1	0	0.0	0	2.5	33	22	N	16+	17	8	6	3.6	89
SACRAMENTO	17	1016.3	1016.9	82	50	65.9	2.4	92	7	42	15	2	0	46	56	0.11	- 0.66	0.11	1	0	0.0	0	1.3	25	27	N	16	21	7	3	2.5	97
SANDBERG R	4517			74	57	65.6	6.9	88	8	33	16	0	0			0.00	- 0.49	0.00	0		0.0	0			33	34	16	21	7	3	2.5	
SAN DIEGO	13	1013.9	1014.9	80	59	69.4	3.3	104	22	51	17	6	0	51	59	T	- 0.49	T	0	0	0.0	0	2.2	29	18	NW	23+	20	4	7	2.9	77
SAN FRANCISCO	8	1017.3	1018.0	73	52	62.5	2.0	88	24	45	17	0	0	49	69	T	- 0.74	T	0	0	0.0	0	5.2	29	33	WNW	15	15	10	6	3.9	
SAN FRANCISCO U	52			73	57	65.0	3.6	90	24	51	31	1	0			0.01	- 0.88	0.01	1		0.0	0			24	W	15					73
SANTA CATALINA	1568			79	66	72.4	7.1	98	22	54	18+	6	0			T	- 0.94	T	0	0	0.0	0						21	6	4	2.5	
SANTA MARIA	236			81	48	64.2	3.8	100	22	36	16	8	0			0.01	- 0.59	0.01	1		0.0	0						20	8	3	3.0	
STOCKTON	22	1016.6	1017.6	82	50	65.5	1.5	91	7	41	17	2	0	46	56	0.16	- 0.47	0.16	1	0	0.0	0	3.4	31	23	32	16	18	9	4	2.7	
COLORADO																																
ALAMOSA	7536			65	25	45.2	0.8	76	7	17	1	0	29			1.08	0.48	1.00	3		0.5	T						20	8	3	2.7	
COLORADO SPRINGS	6145	815.1	1019.2	68	38	52.9	2.6	79	10+	29	21	0	1	28	44	0.49	- 0.20	0.24	3	0	T	0	3.6	4	24	19	15	16	7	8	3.6	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

OCTOBER 1965

State and Station	Elevation (ground)	Pressure		Temperature										Average dew point	Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90° F. or above	Min. 32° F. or below			Total	Departure from normal	Greatest in 24 hours	01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
COLORADO	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
DENVER	5283	840.2	1017.9	72	38	55.1	3.7	84	9	29	31	0	2	30	44	0.45	- 0.56	0.41	2	0	0.0	0	3.3	18	25	N	18	18	6	7	3.5	89
GRAND JUNCTION	4855	856.4	1019.0	73	44	58.1	3.1	82	11	37	28	0	0	34	46	1.40	0.66	0.92	3	1	0.0	0	2.2	11	27	S	15	22	4	5	2.7	86
PUEBLO	4684	859.5	1018.4	76	36	56.0	1.2	89	10	30	21	0	6	31	44	0.38	- 0.61	0.28	3	0	0.0	0	0.7	6	34	N	6	16	8	7	3.5	90
CONNECTICUT																																
BRIDGEPORT	7	1015.6	1016.2	64	46	55.0	- 0.4	73	15	33	29+	0	0	44	67	1.72	- 1.66	0.76	5	1	0.0	0	8.0	27	40	31	31	14	10	7	4.2	
HARTFORD	169	1008.5	1015.0	63	39	51.1	- 1.9	79	20+	26	6	0	7	39	68	4.97	1.79	1.66	8	3	0.0	0	3.7	26	33	NW	4	11	11	9	5.3	64
NEW HAVEN	6			62	43	52.6	- 1.4	71	20	31	29	0	2			2.88	- 0.57	0.98	7		0.0	0			32	NW	4+	13	12	6	4.1	78
DELAWARE																																
WILMINGTON	78	1013.9	1017.0	65	42	53.6	- 3.0	77	15	27	30+	0	3	43	70	1.59	- 1.32	0.96	6	0	0.0	0	4.2	27	25	31	3	17	8	6	3.6	
DIST.OF COLUMBIA																																
WASH NATL AP	14	1014.9	1017.2	68	47	57.5	- 1.5	78	16+	30	29	0	2	45	66	2.32	- 0.75	1.60	5	2	0.0	0	2.8	27	35	W	8	15	9	7	3.9	68
FLORIDA																																
APALACHICOLA U	13			77	63	70.0	- 1.2	88	2	44	25	0	0			6.93	4.49	6.32	5	1	0.0	0			33	E	14+	15	7	9	4.4	67
DAYTONA BEACH	31	1014.9	1016.4	80	63	71.6	- 1.8	91	2	50	25	1	0	63	78	3.65	- 1.96	1.05	8	1	0.0	0	2.6	3	25	2	17	10	7	14	5.9	
FORT MYERS	15	1015.2	1015.5	84	69	76.1	0.0	91	5	57	25	1	0	67	76	4.42	0.33	1.80	9	2	0.0	0	3.4	3	26	27	7	12	11	8	5.1	
JACKSONVILLE	24	1015.6	1016.7	80	61	70.4	- 0.6	91	2+	43	27	2	0	61	76	1.75	- 3.41	1.15	8	2	0.0	0	3.1	1	42	NE	17	12	9	10	5.2	61
KEY WEST	4	1013.9	1014.7	84	76	80.2	1.2	89	2	71	26+	0	0	71	74	6.47	0.65	2.28	9	6	0.0	0	4.0	6	28	NW	23+	10	12	9	5.6	63
LAKELAND U	214			82	65	73.2	- 1.3	92	1	50	25	5	0			2.24	- 0.69	0.91	8		0.0	0						13	8	10	5.0	68
MIAMI	7	1014.6	1014.9	85	72	78.1	0.3	90	8+	62	25	2	0	69	77	16.79	8.58	5.68	14	3	0.0	0	2.1	5	29	10	30	7	12	12	6.1	
ORLANDO	108	1011.9	1016.1	82	67	74.2	0.2	92	2	53	25	3	0	62	71	4.06	0.10	1.20	8	2	0.0	0	2.8	1	22	29	23	10	9	12	5.3	
PENSACOLA	112	1013.5	1017.6	78	59	68.4	- 2.0	86	10+	40	26	0	0	57	70	2.82	- 0.16	2.43	3		0.0	0	3.1	1	29	N	24+					73
TALLAHASSEE	55	1014.6	1017.1	81	58	69.3	- 0.3	92	2	36	27+	3	0	56	68	3.49	1.06	2.78	5	1	0.0	0	3.2	1	21	2	18+	13	7	11	4.5	
TAMPA	19	1015.9	1016.0	82	64	72.5	- 2.2	89	3	50	28+	0	0	62	75	1.43	- 1.35	0.99	7	3	0.0	0	3.1	2	23	9	30	13	9	9	5.1	58
WEST PALM BEACH	15	1014.2	1014.9	85	70	77.2	- 1.0	91	3	58	24	3	0	68	76	18.74	10.78	9.58	12	3	0.0	0	2.6	6	32	8	14	9	12	10	5.6	
GEORGIA																																
ATHENS	802	989.2	1018.1	72	49	60.2	- 2.8	86	1	30	25	0	2	49	71	2.90	0.04	2.89	6	0	0.0	0	1.8	34	20	22	1	18	6	7	3.9	
ATLANTA	1010	981.4	1018.3	71	50	60.3	- 2.1	84	1	29	25	0	1	48	69	2.35	- 0.09	0.39	6	0	0.0	0	1.8	34	29	NE	19	15	6	10	4.3	69
AUGUSTA	143	1012.2	1017.3	77	50	63.1	- 2.1	90	2	29	26	1	3	51	72	2.62	0.61	2.36	7	1	0.0	0	1.8	34	21	26	23+	15	7	9	4.7	
COLUMBUS	385			75	52	63.7	- 1.7	84	2+	32	26	0	1	53	74	2.99	1.22	2.43	4		0.0	0	1.7	3	23	7	29	13	8	10	5.0	
MACON	354	1005.4	1018.5	75	50	62.4	- 3.8	86	2	29	26+	0	2	52	75	1.69	- 0.32	1.08	5	0	0.0	0	2.4	1	22	N	24+	16	7	8	4.5	68
ROME	637			73	45	59.0	- 2.2	84	17+	26	25	0	5			1.32	- 1.61	0.67	6		0.0	0										
SAVANNAH	46	1015.2	1017.1	78	54	66.2	- 1.0	89	3+	33	25	0	0	55	73	1.33	- 1.25	0.61	8	2	0.0	0	2.2	1	26	SW	7	12	8	11	5.1	64
HAWAII																																
HILO	31	1013.2	1014.4	84	67	75.4	0.3	91	13	63	6	1	0	67	77	5.80	- 5.00	2.95	22	2	0.0	0	0.4	25	28	12	13+	2	16	13	6.9	36
HONOLULU	7	1013.9	1014.3	86	71	78.2	0.0	91	7	65	25+	2	0	66	67	3.56	1.72	1.78	10	2	0.0	0	5.6	4	23	SE	13	5	18	8	6.2	75
KAHULUI	48	1011.9	1014.1	84	69	76.4	- 0.9	90	14	62	5	1	0			1.93	1.06	0.62	8	0	0.0	0	6.1	6	29	NE	29+	6	17	8	5.7	75
LIHUE	103	1010.2	1015.2	81	69	74.9	- 2.0	85	20+	63	25+	0	0	68	81	6.68	2.65	1.67	24	0	0.0	0	6.7	4	21	E	31+	4	18	9	6.5	48
IDAHO																																
BOISE	2838	920.1	1020.5	71	42	56.4	4.8	87	4+	30	16	0	1	34	49	0.28	- 0.56	0.24	3	0	T	0	1.6	15	23	SE	14	14	13	4	4.1	85
IDAHO FALLS 42NW R	4790			68	23	45.1	1.0	82	9	13	26+	0	29			0.00	- 0.41	0.00	0			0	0.8	31	23	NNW	16+					
IDAHO FALLS 46W R	4932			68	26	47.0	2.1	79	9+	17	26+	0	27			0.03	- 0.63	0.03	1		0.0	0	2.9	23	34	WSW	5					
LEWISTON	1413			69	43	56.3	4.3	82	2	32	16	0	1			0.34	- 0.87	0.22	4		0.0	0						6	9	16	6.5	
POCATELLO	4454	867.9	1021.3	69	32	50.6	1.5	82	9+	22	21+	0	16	28	48	0.02	- 0.87	0.01	2	0	0.0	0	4.7	22	36	W	5	17	11	3	3.6	89
ILLINOIS																																
CAIRO U	314			70	49	59.6	- 2.3	84	17	38	29+	0	0			0.92	- 1.96	0.79	5		0.0	0			28	SW	7	20	4	7	3.5	77
CHICAGO O HARE	658	991.9	1016.3	64	43	53.2	0.1	82	17	22	29	0	4	42	69	1.57	- 1.18	0.98	6	0	T	T	3.6	26	28	1	21	12	7	12	5.0	
CHICAGO MIDWAY	607	993.9		63	45	54.0	- 1.1	84	17	30	29	0	1	40	63	1.06	- 1.72	0.45	6	0	0.0	0	4.3	25	30	NW	23	13	7	11	4.9	62
MOLINE	582	994.9	1016.6	65	43	53.6	- 1.2	82	18	28	28	0	3	42	69	0.88	- 1.58	0.38	5	2	0.0	0	4.3	25	38	W	7	13	8	10	4.7	62
PEORIA	652	993.6	1017.6	64	42	52.5	- 2.8	80	18	28	29+	0	5	43	74	0.69	- 1.84	0.30	6	3	0.0	0	2.4	24	34	NW	7	13	8	10	4.5	66
ROCKFORD	724	988.8	1016.0	63	42	52.4	- 0.1	79	18+	26	29	0	2	42	70	2.91	0.21	0.97	9	3	0.0	0	3.9	26	24	31	31	16	3	12	4.6	
SPRINGFIELD	588	995.6	1017.7	67	44	55.1	- 1.6	83	18	27	29	0	2	43	68	0.85	- 2.06	0.65	7	3	0.0	0	3.7	23	35	NW	7	17	6	8	3.9	75

See footnotes at end of table

CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
INDIANA	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
EVANSVILLE	381	1004.4	1018.5	70	42	55.9	- 3.2	84	16	26	30	0	4	43	68	1.07	- 1.50	1.03	4	1	0.0	0	2.5	28	27	SW	7	18	6	7	3.6	80
FORT WAYNE	791	986.5	1016.7	63	42	52.5	- 0.5	80	17	23	29	0	6	43	73	4.62	1.76	2.92	9	1	0.0	0	5.2	25	31	NW	31+	11	7	13	5.5	61
INDIANAPOLIS	793	988.5	1017.7	65	43	53.7	- 1.7	81	17+	26	29	0	4	43	70	1.05	- 1.57	0.45	5	2	0.0	0	3.6	25	30	NW	23	14	6	11	4.7	65
SOUTH BEND	773	988.2	1016.3	61	43	51.6	- 1.8	79	18+	26	29	0	4	43	75	2.53	- 0.64	0.72	10	1	2.4	1	4.4	25	25	24	25+	6	13	12	6.1	
IOWA																																
BURLINGTON	694			66	44	54.8	- 0.6	82	18	29	24	0	2	43	66	0.57	- 2.13		6	1	0.0		3.0	27	29	30	7	16	4	11	4.2	
DES MOINES	938	982.4	1017.4	67	44	55.3	1.1	82	17	28	24	0	3	41	62	0.79	- 1.27	0.76	4	0	0.0	0	2.4	27	33	NW	7	13	8	10	4.5	68
DUBUQUE	1065			61	41	50.9	0.2	78	17	28	28+	0	4			3.83	1.09	2.24	6		0.0	0						12	8	11	5.2	
SIOUX CITY	1095	977.0	1017.1	70	42	55.6	1.6	80	17	28	24	0	4	40	59	0.47	- 0.95	0.47	2	1	0.0	0	1.8	28	40	NW	7	16	6	9	3.9	81
WATERLOO	868	984.4	1016.5	64	40	51.8	0.1	82	17	26	28+	0	6	41	70	1.93	- 0.19	1.41	5	1	0.0	0	3.0	27	28	30	8+	11	10	10	5.0	
KANSAS																																
CONCORDIA	1470	964.8	1017.6	73	45	59.0	1.3	92	10	29	24	1	2	42	59	0.22	- 1.46	0.22	1	0	0.0	0	3.0	22	36	S	17	18	4	9	3.9	75
DODGE CITY	2582	927.5	1018.2	74	47	60.0	1.7	92	10	36	22	2	0	43	62	3.04	1.62	2.85	3	2	0.0	0	2.6	23	35	SF	17	15	8	8	4.1	87
GOODLAND	3645	891.6	1018.5	70	40	55.1	2.0	87	9	29	21	0	2	38	59	3.06	2.30	2.40	3	2	0.0	0	3.7	24	26	12	17+	22	5	4	2.9	
TOPEKA	876	986.1	1018.0	71	43	57.3	- 0.9	88	10	28	12	0	2	44	66	0.92	- 1.42	0.64	3	1	0.0	0	1.7	24	34	NW	8	17	7	7	3.9	79
WICHITA	1321	970.5	1018.2	73	47	60.4	0.5	94	10	32	24	1	1	46	63	0.32	- 2.08	0.32	2	0	0.0	0	2.7	21	32	SE	18	16	7	8	3.9	75
KENTUCKY																																
COVINGTON	869	986.1	1017.9	62	45	53.4	- 2.7	78	16	27	29	0	3	42	68	3.81	1.55	1.71	6	1	0.0	0	3.4	25	24	30	31+	15	5	11	4.6	
LEXINGTON	966	982.7	1018.6	65	43	53.9	- 4.2	82	16	27	29	0	4	43	70	2.44	0.16	1.38	7	1	0.0	0	3.1	20	32	26	8	16	7	8	4.0	
LOUISVILLE	474	1000.3	1018.1	67	44	55.7	- 2.2	87	17	27	30	0	3	44	70	2.54	0.29	1.38	8	2	0.0	0	2.1	26	35	W	8	16	8	7	4.1	69
LOUISIANA																																
ALEXANDRIA	92	1014.6	1018.7	77	51	63.5	- 3.6	88	9	31	25	0	2	54	78	0.29	- 3.24	0.28	2	0	0.0	0	1.8	1	23	5	24	17	3	11	4.1	
BATON ROUGE	64	1015.6	1018.1	78	55	66.7	- 2.4	86	16+	38	26+	0	0	54	71	0.92	- 1.53	0.90	2	0	0.0	0	2.8	35	20	33	21	18	5	8	3.8	
LAKE CHARLES	14	1017.3	1018.2	80	56	67.8	- 2.7	89	16	40	26	0	0	56	73	0.32	- 2.74	0.31	2	0	0.0	0	3.0	4	22	12	18	16	7	8	4.3	
NEW ORLEANS	3	1016.6	1017.6	78	56	66.7	- 3.7	85	11+	37	27	0	0	56	71	1.03	- 1.81	0.70	3	0	0.0	0	3.4	1	18	3	24+	20	5	6	3.5	
SHREVEPORT	252	1009.1	1018.5	78	55	66.1	- 2.2	92	9	36	25	1	0	54	71	0.36	- 2.45	0.35	3	1	0.0	0	0.9	6	26	17	15	17	6	8	3.5	71
MAINE																																
CARIBOU	624			49	33	41.0	- 2.0	68	19	21	28+	0	15			4.14	0.78	0.79	15		1.2	1						2	6	23	8.1	
PORTLAND	61	1011.2	1013.6	59	37	47.6	- 1.0	79	19	23	6	0	9	38	72	2.49	- 0.71	1.09	10	1	T	0	3.6	26	34	E	8	10	10	11	5.5	57
MARYLAND																																
BALTIMORE	148	1011.9	1017.4	66	42	53.9	- 3.1	78	15	26	30	0	3	41	67	1.90	- 1.28	1.18	7	1	0.0	0	5.0	27	35	SW	8	16	8	7	3.7	68
MASSACHUSETTS																																
BLUE HILL OBS R	629			61	42	51.2	- 1.5	80	19	26	6	0	4			2.88	- 0.87	0.97	7		0.0	0			48	SSW	15					68
BOSTON	15	1013.2	1014.3	61	44	52.8	- 2.2	76	19	32	29	0	1	40	65	1.59	- 1.55	0.90	8	2	0.0	0	6.5	26	34	NW	4+	11	10	10	4.8	67
NANTUCKET	43	1014.6	1015.0	59	42	50.8	- 3.5	69	21	29	18	0	3	45	78	0.88	- 2.82	0.53	9	1	T	T	6.1	25	35	SE	8	13	7	11	5.0	62
PITTSFIELD	1170			57	35	46.3	- 1.8	78	20	21	30+	0	11			1.92	- 1.33	0.77	10		T	T										
WORCESTER	986	977.3	1014.6	59	39	49.1	- 1.4	80	19	26	29	0	7	37	66	3.02	- 0.45	1.29	10	3	T	T	7.3	27	37	30	4	13	10	8	4.7	
MICHIGAN																																
ALPENA	689			55	35	44.8	- 1.5	82	18	16	29+	0	12			1.37	- 1.05	0.36	13		1.0	1			29	NW	31+	4	8	19	7.6	43
DETROIT	619	992.6	1015.5	60	43	51.3	- 2.5	80	18	24	29	0	3	41	71	2.88	0.25	1.34	8	0	T	T	5.2	27	45	NW	31	5	12	14	6.6	50
DETROIT M WAYNE CO	633	991.2	1015.6	58	38	48.2	- 5.8	78	18	18	29	0	9	40	73	3.89	1.32	1.69	8	0	T	0	5.0	25				8	8	15	6.3	
DETROIT WILLOW RUN	711	987.8	1016.1	58	38	48.2	- 5.7	77	18	20	29	0	8	38	69	2.68	0.15	1.33	7	0	T	T	5.4	25	33	29	31	6	11	14	6.2	
FLINT	770	987.1	1015.3	59	40	49.4	- 0.6	80	18	20	29	0	7	40	72	1.06	- 1.31	0.53	9	3	T	T	4.8	25	28	29	31	4	11	16	6.7	
GRAND RAPIDS	784	986.1	1015.6	59	41	50.0	- 1.1	80	18	22	29	0	6	41	76	2.10	- 0.51	0.78	9	3	0.0	0	4.3	25	35	NW	31	7	9	15	6.3	51
HOUGHTON LAKE	1150	972.6	1014.9	55	37	45.7		76	18	17	29+	0	10	38	76	1.97		0.46	14	5	0.3	T	3.7	27	23	29	31+	6	9	16	6.7	
LANSING	841	983.7	1015.6	59	39	48.9	- 2.4	80	18	19	28	0	7	43	81	0.99	- 1.51	0.40	8	1	T	T	4.6	26	38	NW	31	6	12	13	6.4	48
MARQUETTE U	677			55	40	47.4	- 0.6	80	18	26	28	0	6			2.23	- 0.10	0.75	13		0.1	T			36	NW	23	3	10	18	7.5	48
MUSKEGON	627	992.2	1015.2	60	44	51.9	- 0.6	75	18+	23	29	0	3	43	71	2.81	0.26	1.20	12	3	T	T	3.6	28	30	31	31	7	11	13	6.1	
SAULT STE MARIE	721	986.5	1013.5	50	36	43.2	- 3.1	75	18	19	28	0	10	37	79	3.21	0.39	0.59	19	0	1.7	1	2.9	31	43	30	3	3	4	24	8.3	34

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MINNESOTA																																
DULUTH	1428	963.1	1015.0	55	35	44.8	0.2	74	18	20	24	0	13	34	69	3.30	1.13	1.76	6	3	T	T	3.9	29	42	NW	2	9	10	12	6.0	52
INTERNATIONAL FALLS	1179	970.9	1014.3	54	35	44.0	1.6	67	1	22	28	0	13	34	71	3.32	1.58	2.16	11	1	T	T	3.4	26	28	36	22	7	10	14	6.7	
MINNEAPOLIS	834	985.1	1015.8	62	39	50.7	1.8	81	18	23	28	0	9	38	64	0.90	- 0.69	0.57	6	3	0.0	0	2.6	30	35	NW	2	12	7	12	5.3	60
ROCHESTER	1297	968.2	1016.4	60	40	50.0	0.1	77	18+	24	28	0	6	38	66	0.27	- 1.43	0.17	5	1	0.0	0	4.6	27	33	32	31	12	5	14	5.3	
ST CLOUD	1034	977.3	1015.6	60	38	48.7	1.4	77	18	23	28+	0	13		66	0.94	- 0.70	0.45	4		0.0	0						10	9	12	5.7	
MISSISSIPPI																																
JACKSON	310	1006.8	1018.6	76	49	62.6	- 4.4	86	9	31	30+	0	3	53	77	0.84	- 1.20	0.83	2	0	0.0	0	1.9	5	18	N	24	18	4	9	3.7	72
MERIDIAN	290	1007.8	1018.9	77	47	62.3	- 3.3	87	17+	29	26+	0	3	52	76	1.45	- 0.77	1.45	1	1	0.0	0	1.8	1	20	11	19	18	3	10	4.0	
VICKSBURG U	234			75	56	65.3	- 2.2	85	17+	40	25	0	0			1.06	- 0.98	1.00	3		0.0	0			17	N	24	19	3	9	3.5	69
MISSOURI																																
COLUMBIA	778	989.5	1017.7	69	47	58.1	- 0.6	84	18	33	24	0	0	42	61	2.28	- 0.84	1.20	8	4	0.0	0	2.5	24	34	NW	8	19	2	10	3.9	78
KANSAS CITY	742	990.5	1017.6	72	49	60.5	0.3	89	10	35	24	0	0	43	56	1.83	- 1.03	1.32	2	2	0.0	0	2.0	22	28	NW	7	16	7	8	4.0	74
SAINT JOSEPH	811			75	44	59.6	2.2	91	10	27	24	1	3	41	58	0.16	- 2.02	0.13	3	0	0.0	0	1.2	22	37	31	7	19	4	8	3.7	
ST LOUIS	535	998.0	1018.5	68	45	56.4	- 2.0	83	17	30	29	0	2	43	64	0.46	- 2.40	0.18	6	3	0.0	0	3.3	25	33	NW	8	17	7	7	3.7	71
SPRINGFIELD	1268	973.2	1018.9	70	43	56.7	- 3.0	85	10	28	24+	0	3	43	67	0.90	- 2.86	0.56	6	3	0.0	0	2.4	21	29	NW	8	15	7	9	4.1	65
MONTANA																																
BILLINGS	3567	893.7	1017.8	69	41	54.4	4.9	85	9	32	31+	0	2	33	50	0.09	- 1.00	0.06	2	0	0.0	0	7.3	25	52	NW	5	11	8	12	5.6	69
GLASGOW	2284			68	37	52.2	6.8	81	1	27	11	0	8			T	- 0.64	T	0		0.0	0						9	12	10	5.6	
GREAT FALLS	3662	890.3	1017.8	66	41	53.4	5.9	80	4	27	16	0	5	31	46	T	- 0.73	T	0	0	0.0	0	9.5	23	56	W	6	5	12	14	6.6	71
HAVRE	2582			66	35	50.5	4.7	82	8	21	11	0	14			0.06	- 0.73	0.06	1		0.0	0			47	W	6	10	8	13	6.0	70
HELENA	3828	884.5	1020.6	65	34	49.3	3.7	81	8	26	27	0	13	32	58	0.13	- 0.53	0.13	1	0	0.0	0	3.8	26	42	W	5	10	6	15	5.8	69
KALISPELL	2965	914.7	1020.6	60	31	45.3	1.4	75	8	24	16	0	22	36	77	0.11	- 1.13	0.10	3	0	0.0	0	2.7	20	23	21	6+	6	7	18	6.9	
MILES CITY	2629	924.1	1017.5	68	37	52.7	3.7	82	1	27	20	0	5	31	47	T	- 0.87		0	0	0.0		2.8	26								
MISSOULA	3190	908.9	1022.4	61	33	47.0	3.0	76	1	22	27	0	16	35	71	0.17	- 0.82	0.09	3	0	0.0	0	2.0	30	36	27	6	10	6	15	6.3	62
NEBRASKA																																
GRAND ISLAND	1841	951.6	1017.9	71	41	55.8	2.4	85	9	27	24	0	2	39	61	0.37	- 0.59	0.27	3	1	0.0	0	2.6	26	24	21	12+	16	6	9	4.4	
LINCOLN U	1150			70	45	57.8	1.1	82	10	30	24	0	1			0.41	- 1.17	0.41	2		0.0	0			36	W	7	14	8	9	4.4	75
NORFOLK	1544			69	40	54.3	1.4	80	30	27	24	0	5			0.52	- 0.66	0.52	2		0.0	0						15	8	8	4.2	
NORTH PLATTE	2775	919.4	1017.5	71	37	54.0	3.0	89	9	24	21	0	5	39	65	0.73	- 0.18	0.61	2	0	0.0	0	1.1	30	33	S	5	16	7	8	4.0	83
OMAHA	978	982.1	1017.5	71	44	57.2	1.5	83	17	26	24	0	2	44	64	0.76	- 0.97	0.76	2	0	0.0	0	0.8	29	35	NW	7	13	10	8	4.2	80
SCOTTSBLUFF	3957	882.5	1018.5	70	37	53.4	3.0	85	9	28	21	0	4	36	58	0.98	0.29	0.96	3	0	0.0	0	2.4	34	35	36	5	18	6	7	3.7	
VALENTINE	2587			69	38	53.3	4.0	85	9+	22	21	0	5			0.78	- 0.10	0.78	2		0.0	0			38	N	7	16	8	7	3.8	80
NEVADA																																
ELKO	5050	850.3	1022.5	73	27	50.2	3.3	86	9	19	31	0	27	24	47	0.63	- 0.12	0.63	1	0	0.8	1	0.6	29	23	24	6+	20	8	3	2.8	
ELY	6253	813.8	1020.9	70	28	49.2	3.3	81	9	23	31+	0	27	19	39	0.27	- 0.46	0.26	2	0	2.0	T	3.9	20	28	NE	16	21	7	3	2.6	92
LAS VEGAS	2162	939.7	1015.7	86	54	69.8	3.2	95	7	48	18	13	0	22	19	T	- 0.20	T	0	0	0.0	0	2.8	26	36	NW	16	24	4	3	1.9	92
RENO	4404	870.3	1020.7	77	28	52.4	3.2	91	8	18	16	1	28	29	50	0.02	- 0.49	0.02	1	0	T	0	0.2	24	26	NW	15	20	6	5	2.9	99
WINNEMUCCA	4299	872.3	1021.2	75	28	51.4	3.7	86	9+	20	17	0	26	19	35	0.17	- 0.64	0.17	2	0	0.0	0	0.6	19	31	NW	14	20	7	4	3.0	84
NEW HAMPSHIRE																																
CONCORD	342	1001.4	1014.2	60	34	46.8	- 1.9	81	19	21	7+	0	17	36	71	2.71	0.05	1.16	9	1	T	0	2.8	28	36	NW	4	8	14	9	5.5	56
MT WASHINGTON OBS	6262			33	22	27.2	- 3.7	53	19	2	29	0	26			7.88	1.69	1.63	19	0	28.2	9			110Y	W	4	3	4	24	8.1	24
NEW JERSEY																																
ATLANTIC CITY	64	1014.9	1017.3	64	42	53.1	- 4.1	75	20+	26	30	0	5	42	68	1.18	- 2.02	0.64	5	0	0.0	0	5.3	27	32	14	7	19	7	5	3.4	73
ATLANTIC CITY U	11			63	49	55.8	- 2.9	73	16+	30	29	0	1			0.61	- 2.78	0.28	5						48	SE	7					
NEWARK	11	1015.2	1016.2	64	44	54.0	- 3.6	77	19	30	29	0	2	40	63	2.31	- 0.80	1.37	8	1	T	T	6.7	25	33	31	3	14	11	6	3.9	
TRENTON U	56			63	45	54.3	- 2.5	76	20+	29	29	0	1			1.33	- 1.51	0.51	7		T	T			38	SE	7	18	9	4	3.7	72
NEW MEXICO																																
ALBUQUERQUE	5310	841.9	1018.0	73	43	58.0	0.0	85	10	33	18	0	0	30	42	0.89	0.14	0.89	2	0	0.0	0	1.2	9	38	SW	16	22	6	3	2.2	87
CLAYTON	4969			70	41	55.6	0.3	85	9	34	21	0	0			3.91	2.91	3.90	3		0.0	0						19	7	5	3.3	
RATON	6379			70	32	51.3	0.2	83	9	26	1	0	18			0.49	- 0.55	0.49	2		0.0	0						18	9	4	3.3	
ROSWELL	3617			79	39	59.0	0.0	93	10+	30	28	5	4			0.05	- 1.02	0.05	1	0	0.0	0			31	SW	17	22	7	2	2.2	83
SILVER CITY	5373			75	44	59.3	- 0.4	87	11+	30	18	0	2			T	- 0.81	T	0		0.0	0						25	6	0	1.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station ∅	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90° F. or above	Min. 32° F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	F.	F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW YORK																																
ALBANY	275	1004.4	1015.1	63	40	51.2	0.4	80	20	24	6	0	6	37	63	2.37	- 0.40	1.37	10	1	T	0	4.9	25	40	NW	31	4	13	14	6.7	49
BINGHAMTON	1590	956.3	1015.5	55	39	46.8	- 3.0	70	20+	22	29	0	8	38	75	3.02	- 0.07	0.90	15	0	1.3	1	5.8	25	39	W	31	3	10	18	7.4	47
BUFFALO	705	988.8	1014.8	56	40	47.8	- 3.0	72	18	20	29	0	4	40	76	5.07	2.07	2.27	14	3	1.2	1	6.0	25	47	W	31	5	5	21	7.7	37
NEW YORK U	132	1013.2	1016.5	66	49	57.3	- 1.0	81	19	32	29	0	1	42	62	2.16	- 0.98	1.15	7	1	T	0	5.3	25	32	W	31	19	6	6	3.3	69
J.F. KENNEDY	15	1015.2	1016.1	64	47	55.6	- 2.0	75	19	32	29	0	1	43	65	1.85	- 1.36	1.04	7	2	T	0	5.8	27	35	31	31	16	10	5	3.8	
NEW YORK LA GUARDIA	11	1014.2	1016.1	63	49	55.9	- 2.7	75	19	33	29	0	0	41	60	1.44	- 1.93	0.54	7	1	T	0	5.7	27	37	W	31+	14	12	5	4.0	
ROCHESTER	547	995.3	1015.5	59	39	48.8	- 3.0	75	20+	22	29	0	5	38	70	2.82	0.24	1.00	13	2	0.9	T	6.2	25	49	W	31	4	9	18	7.2	37
SYRACUSE	410	999.3	1014.5	57	39	47.9	- 3.9	75	19	20	29	0	7	39	74	2.70	- 0.48	0.78	16	0	1.8	2	4.5	26	49	W	31	3	7	21	7.6	39
NORTH CAROLINA																																
ASHEVILLE	2140	941.8	1018.4	67	41	53.8	- 2.0	79	16	24	30	0	5	44	77	2.92	- 0.21	2.35	9	1	0.0	0	3.4	36	28	35	24	16	7	8	4.2	71
CAPE HATTERAS R	7	1016.9	1017.2	71	55	63.1	- 2.3	82	1	35	6	0	0	54	72	3.19	- 1.05	1.93	5	2	0.0	0	1.9	1	42	ESE	7	11	8	12	5.3	64
CHARLOTTE	735	990.2	1017.6	72	48	59.6	- 2.9	84	16	26	30	0	3	46	66	1.76	- 1.20	1.27	4	1	0.0	0	1.4	35	23	S	9+	19	4	8	3.8	79
GREENSBORO	897	986.5	1018.1	70	46	57.9	- 1.4	82	16	25	30	0	3	46	69	3.72	1.01	1.88	6	2	0.0	0	1.3	30	21	W	8	15	10	6	3.9	72
RALEIGH	434	1001.7	1017.7	72	46	58.8	- 1.7	82	16	24	30	0	3	46	68	1.77	- 0.94	1.59	3	1	0.0	0	0.7	34	22	12	7	16	10	5	3.8	79
WILMINGTON	28	1016.3	1017.5	75	54	64.8	- 0.6	83	16	36	30	0	0	53	70	3.44	0.43	2.39	7	0	0.0	0	2.3	2	28	NE	18	14	4	13	5.0	66
NORTH DAKOTA																																
BISMARCK	1647	956.3	1016.6	65	34	49.3	2.6	79	9	24	12	0	15	31	53	0.46	- 0.39	0.46	2	0	0.0	0	3.9	31	43	NW	30	16	8	7	4.3	80
FARGO	896	983.1	1016.1	60	34	47.3	0.8	74	16	23	27+	0	15	36	68	0.55	- 0.56	0.36	5	1	0.0	0	2.3	29	34	NW	8	12	8	11	4.9	73
WILLISTON	1899			64	33	48.9	3.3	77	1	20	12	0	15			T	- 0.73	T	0		0.0	0			47	NW	7	14	12	5	4.1	75
OHIO																																
AKRON	1208	972.2	1017.0	60	41	50.5	- 2.4	73	18+	25	29	0	5	40	73	3.80	1.32	1.72	12	2	0.1	T	5.1	24	29	32	23	8	9	14	6.0	
CINCINNATI OBS	761			66	46	55.7	- 2.2	82	17+	27	29	0	2			3.87	1.63	1.90	8		0.0	0			24	SW	7					61
CLEVELAND	777	986.8	1016.1	60	42	51.3	- 1.5	77	18	25	29	0	3	41	71	2.55	0.13	1.01	11	1	T	0	6.4	23	32	W	31	7	8	16	6.5	46
COLUMBUS	812	987.5	1017.5	64	45	54.4	0.2	79	16	25	29	0	5	43	67	3.98	1.87	1.87	11	2	0.0	0	3.2	24	39	SW	7	14	5	12	5.3	58
DAYTON	1002	981.4	1017.7	63	44	53.1	- 2.5	79	16	25	29	0	5	42	70	2.76	0.53	0.99	9	1	0.0	0	4.0	23	32	W	8	13	7	11	5.1	63
MANSFIELD	1295			58	40	48.8	- 3.6	73	17	22	29	0	7			2.98	0.71	0.73	11	2	T	0						11	5	15	5.9	
TOLEDO	676	991.2	1016.5	59	39	49.1	- 3.0	78	18	16	29	0	8	39	69	3.28	0.89	1.47	8	0	0.0	0	5.1	26	38	NW	31	8	11	12	5.8	58
YOUNGSTOWN	1178	973.6	1016.7	58	40	49.4	- 2.5	72	20	22	29	0	6	40	75	4.14	1.43	1.56	15	2	0.4	T	5.3	23	30	26	31	8	8	15	6.5	
OKLAHOMA																																
OKLAHOMA CITY	1280	971.9	1018.4	74	51	62.8	- 0.1	96	9	38	24	2	0	47	60	1.00	- 1.51	0.85	3	3	0.0	0	2.8	19	42	E	18	17	5	9	4.0	70
TULSA	650	994.2	1018.6	78	49	63.3	0.5	93	10	34	25	2	0	47	62	0.26	- 3.05	0.24	3	1	0.0	0	2.8	20	35	NE	11	17	9	5	3.7	82
OREGON																																
ASTORIA	8	1017.6	1018.5	64	47	55.3	2.4	77	23	37	16	0	0	51	86	3.97	- 3.81	0.85	16	0	0.0	0	2.8	17	29	17	5+	4	6	21	7.7	
BURNS U	4151	877.4	1021.2	69	33	51.1	2.7	87	8	18	16	0	13	29	50	0.14	- 0.72	0.07	5		0.0	0	2.0	32				13	9	9	4.7	
EUGENE	359	1005.8	1019.3	66	46	55.5	2.3	82	2	37	16	0	0	50	88	2.43	- 1.40	1.17	9	0	0.0	0	1.9	21	29	23	4	3	9	19	7.5	
MEACHAM	4050			62	43	52.6	6.3	76	2	30	16	0	2			0.72	- 2.12	0.42	9		0.3	0						8	5	18	6.7	
MEDFORD	1298	971.9	1019.9	74	41	57.4	4.4	87	2	31	31	0	1	43	68	0.46	- 1.48	0.29	5	0	0.0	0	0.8	24	22	30	14	14	7	10	4.9	
PENDLETON	1482	965.8	1019.7	70	45	57.5	3.8	82	4	36	16	0	0	38	54	0.19	- 0.99	0.10	6	0	0.0	0	1.6	23	35	28	4	11	8	12	5.5	
PORTLAND	21	1017.6	1018.9	67	48	57.5	3.3	82	2	36	16	0	0	49	79	2.03	- 1.58	0.66	11	0	0.0	0	1.9	18	30	S	4	4	10	17	7.3	40
SALEM	196	1011.9	1019.3	66	45	55.3	1.2	82	2	35	16	0	0	49	84	2.20	- 1.71	0.71	8	0	0.0	0	2.4	19	23	27	4	2	10	19	7.5	
SEXTON SUMMIT R	3836	887.2	1018.2	66	49	57.5	6.8	80	1	31	16	0	2			0.89	- 2.52	0.35	7		T	T			43	18	4	16	4	11	4.5	
PACIFIC AREA																																
CANTON ISLAND	8			89	78	83.7	0.0	92	31	72	14	16	0			8.91	7.81	2.73	18		0.0	0						1	5	25	8.7	
ENIWETOK	13	1008.5	1009.0	87	77	81.8	- 1.2	92	25	73	17+	8	0	76	83	24.54	15.45	3.86	22		0.0	0	4.3	10								
TAGUAC GUAM R	361			86	72	78.5	- 0.8	88	28+	66	20+	0	0			6.89	- 6.21	2.33	19		0.0	0			21	SW	8+					54
JOHNSTON	7	1011.9	1012.3	84	77	80.7	- 0.2	87	17+	74	25+	0	0	72	75	3.26	- 0.01	2.31	18	0	0.0	0	13.9	9	34	E	29	3	17	11	6.3	57
KOROR R	94	1006.1	1009.9	88	76	81.8	0.6	90	13+	73	3+	2	0	76	85	9.68	- 3.41	2.00	21	3	0.0	0	2.8	26	19	SW	2+	1	2	28	9.2	63
KWAJALEIN	8	1008.1	1009.0	86	77	81.9	0.0	89	16	74	11	0	0	76	83	9.95	- 0.93	2.11	23	2	0.0	0	4.9	8	29	24	12+	0	5	26	9.1	
MAJURO	10	1008.8	1009.2	86	77	81.4	0.9	88	29+	73	10	0	0	75	82	14.71	- 0.46	3.49	22	4	0.0	0	2.4	8	29	W	12	0	7	24	8.7	46
MARCUS ISLAND	20			86	75	80.6		89	2	69	2	0	0			6.00		1.75	18		0.0	0			64	E	16	2	14	15	7.1	68
PONAPE R	123	1003.7	1009.3	87	74	80.4	0.7	90	30+	71	17	2	0	75	88	15.27	- 0.70	1.96	23	4	0.0	0	1.1	21	17	NW	14+	0	10	21	8.6	36
TRUK MOEN ISLAND	5	1008.8	1009.1	86	75	80.6	0.0	89	30	72	11+	0	0	75	84	9.53	- 3.92	2.11	16	2	0.0	0	2.8	28	31	NW	4	2	5	24	8.5	42
WAKE	11	1011.5	1011.8	85	76	80.8	- 0.8	87	27+	72	12	0	0	73	79	8.31	3.04	3.39	19	1	0.0	0	11.7	7	28	14	14	3	11	17	7.5	
YAP R	55	1007.1	1008.9	87	76	81.3	- 0.3	89	30+	74	19	0	0	76	87	8.42	- 4.77	1.72	24	2	0.0	0	1.2	26	18	SW	1	0	9	22	8.6	17

See footnotes at end of table

CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)				
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	F.	°F.	F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PENNSYLVANIA																																
ALLENTOWN	376	1002.4	1016.6	62	40	50.9	- 2.9	75	20	24	29	0	6	40	70	3.46	0.49	1.49	8	2	T	T	6.2	26	37	29	31	16	8	7	4.1	
ERIE	732	988.8	1015.9	58	43	50.5	- 2.1	74	20	26	29	0	2	40	69	3.84	0.54	1.37	15	2	T	T	5.6	24	29	15	7	8	5	18	6.7	
HARRISBURG	338	1004.1	1017.0	64	43	53.4	- 2.3	80	15	24	30	0	4	40	63	3.65	0.68	1.70	8	1	T	T	4.6	27	32	W	31	13	9	9	4.7	66
PHILADELPHIA	5	1015.9	1016.9	64	43	53.7	- 2.0	77	15	30	29	0	4	41	63	2.02	- 0.76	1.14	6	0	T	0	4.8	27	36	NW	31	17	7	7	3.8	68
PITTSBURGH	1137	972.9	1017.2	58	38	48.1	- 5.0	72	1	16	29	0	7	39	72	2.82	0.30	0.84	11	1	0.2	T	5.1	25	31	29	31	7	9	15	6.2	55
READING U	266			64	45	54.5	- 2.7	76	20	29	29	0	2			2.51	- 0.33	1.19	7		0.0	0			48	W	31	16	9	6	4.2	63
SCRANTON	930	982.1	1016.5	59	41	49.6	- 1.4	71	20	25	29	0	5	40	71	1.80	- 1.70	0.62	9	0	0.6	T	3.7	25	30	S	31	8	8	15	6.2	56
WILLIAMSPORT	527	997.6	1016.8	60	38	49.1	- 4.0	71	31+	23	30	0	7	39	75	3.98	0.66	1.47	9	1	T	0	3.7	27	26	27	8	8	10	13	6.1	
RHODE ISLAND																																
BLOCK ISLAND	110			58	46	51.7	- 3.5	66	1	33	29	0	0			1.14	- 1.88	0.51	6		0.0	0						11	11	9	5.0	
PROVIDENCE	51	1012.9	1015.1	63	42	52.1	- 1.1	76	19	29	6	0	4	39	64	2.75	- 0.35	1.30	8	2	0.0	0	6.1	25	31	21	15	13	8	10	4.5	65
SOUTH CAROLINA																																
CHARLESTON	41	1015.2	1017.0	75	55	65.2	- 1.0	86	2	34	25	0	0	55	75	6.23	3.39	3.81	7	1	0.0	0	2.7	1	40Y	SW	7	13	4	14	5.7	58
CHARLESTON U	9			74	60	67.2	- 0.9	85	3+	42	30	0	0			9.73	6.99	7.19	6		0.0	0			41	E	19					
COLUMBIA	217	1009.1	1017.4	75	51	62.8	- 1.9	85	16	26	30	0	3	50	70	2.34	- 0.04	2.01	6	0	0.0	0	1.3	34	25	29	9+	18	4	9	4.2	74
GNVLE-SPARTANBURG	957	983.4	1018.0	72	48	59.6	- 3.4	85	1	27	25	0	2	46	67	3.60	0.24	2.87	7	0	0.0	0	1.6	2	29	SW	7	17	6	8	3.7	75
SOUTH DAKOTA																																
ABERDEEN	1296	969.2	1016.5	66	35	50.2	2.0	78	30	21	24	0	14	34	58	0.37	- 0.82	0.32	2	0	0.0	0	2.9	30	36	32	7	17	6	8	4.2	
HURON	1282	969.9	1016.6	65	37	50.7	1.9	79	5	24	24	0	10	36	62	0.35	- 0.80	0.33	3	0	0.0	0	2.8	26	42	NW	7	16	5	10	4.4	81
PAPID CITY	3165	906.5	1017.4	70	40	54.8	4.8	90	9	29	21	1	1	30	43	0.57	- 0.22	0.57	2	0	0.0	0	4.3	33	43	NW	5	16	9	6	4.1	81
SIOUX FALLS	1418	965.1	1016.8	65	38	51.7	1.4	77	5	24	24	0	12	38	63	1.05	- 0.20	0.92	2	1	0.0	0	2.6	27	30	30	7	16	5	10	4.4	
TENNESSEE																																
BRISTOL	1507	964.4	1018.8	69	43	55.7	- 2.3	81	16+	28	30	0	7	43	67	2.16	0.01	1.06	8	1	T	T	1.0	30	35	28	8	13	11	7	4.1	
CHATTANOOGA	670	993.6	1018.3	71	45	58.3	- 3.8	82	17+	30	30+	0	3	48	75	1.03	- 1.99	0.48	6	0	0.0	0	1.3	32	29	SW	8	16	7	8	4.3	69
KNOXVILLE	980	983.4	1018.8	71	47	59.0	- 1.9	83	17+	32	25	0	1	46	66	1.08	- 1.53	0.50	5	0	0.0	0	1.3	33	30	SW	8	17	1	13	4.5	60
MEMPHIS	255	1008.8	1019.1	73	49	60.8	- 2.3	85	17	31	25	0	1	45	61	0.54	- 2.18	0.54	1	0	0.0	0	0.7	34	27	NW	11	20	3	8	3.5	81
NASHVILLE	590	996.6	1018.4	73	46	59.3	- 2.2	86	17	29	25	0	2	43	60	0.57	- 1.75	0.40	6	0	0.0	0	2.0	27	28	NW	8	19	5	7	3.5	82
OAK RIDGE	905			69	43	56.1	- 3.8	81	17+	27	25	0	4			1.08	- 1.59	0.46	5		0.0	0			35Y		9	16	7	8	4.1	
TEXAS																																
ABILENE	1762	956.7	1017.9	78	55	66.5	0.3	95	15	40	22	4	0	46	52	2.67	- 0.18	1.73	4	3	0.0	0	3.2	16	34	SE	17	17	6	8	3.5	72
AMARILLO	3604	894.3	1017.2	74	45	59.5	- 1.0	93	10	37	21	2	0	38	52	1.02	- 0.74	0.96	3	1	0.0	0	2.5	19	36	W	17	18	8	5	3.1	82
AUSTIN	597	996.6	1018.6	78	56	66.6	- 4.1	91	16+	41	25	2	0	53	68	3.26	0.43	1.62	6	1	0.0	0	1.1	2	27	NW	18	16	6	9	4.1	58
BROWNSVILLE	16	1016.3	1016.9	81	62	71.5	- 4.4	89	15+	48	23	0	0	62	76	0.74	- 2.79	0.21	7	0	0.0	0	2.8	4	30	E	19	13	10	8	4.5	63
CORPUS CHRISTI	41	1015.9	1017.6	81	59	70.1	- 4.4	91	10	45	23	5	0	59	74	1.36	- 1.40	0.80	7	1	0.0	0	3.7	6	30	S	18	17	5	9	4.2	60
DALLAS	481	1001.4	1018.5	77	55	66.0	- 1.8	92	10+	42	25	3	0	53	66	1.61	- 1.09	0.85	5	2	0.0	0	1.2	16	39	SE	15	18	5	8	3.8	68
DEL RIO	1026	981.7	1017.7	82	56	69.1	- 2.3	90	15+	45	22	3	0	53	61	0.43	- 1.55	0.43	1	0	0.0	0	4.3	12	21	14	17	17	8	6	3.1	
EL PASO	3918	884.9	1016.4	79	47	63.0	- 1.4	92	9	39	29+	1	0	31	31	0.18	- 0.67	0.15	2	1	0.0	0	0.6	9	33	SW	16	24	4	3	1.8	92
FORT WORTH	537	998.3	1018.9	78	55	66.6	- 1.3	93	9	41	25	3	0	52	65	1.97	- 0.62	1.28	4	2	0.0	0	1.0	19	31	16	15	18	5	8	3.8	
GALVESTON U	7			76	66	70.8	- 2.7	82	18+	56	25+	0	0			1.91	- 0.95	1.06	4		0.0	0			38	NW	18					69
HOUSTON U	41			79	61	70.2	- 2.2	91	10	46	25	1	0			3.40	- 0.20	2.35	3		0.0	0										
HOUSTON	50	1015.9	1018.2	80	59	69.4	- 2.0	89	16+	45	26+	0	0	56	68	3.09	- 0.68	1.50	3	2	0.0	0	2.3	4	25	15	18	13	11	7	4.2	72
LUBBOCK	3243	906.5	1017.2	78	49	63.5	2.3	93	10+	40	22	4	0	41	50	1.06	- 0.94	0.85	5	4	0.0	0	0.9	15	30	32	17+	21	6	4	2.7	
MIDLAND	2851	918.7	1016.5	79	49	63.9	- 2.0	94	10	41	22	5	0	41	48	1.41	- 0.25	1.41	1	2	0.0	0	2.3	15	29	17	17	22	7	2	1.9	
PORT ARTHUR	16	1017.6	1018.2	80	57	68.4	- 1.9	89	10+	40	26+	0	0	57	73	0.78	- 2.10	0.44	3	0	0.0	0	2.7	4	35	SE	18	14	9	8	4.5	71
SAN ANGELO	1903	951.2	1017.5	80	52	65.8	- 2.5	94	10+	38	28	4	0	50	62	2.11	0.28	1.40	2	2	0.0	0	2.4	18	44	30	18	21	5	5	2.9	
SAN ANTONIO	788	990.5	1018.6	79	55	66.8	- 3.8	90	16	40	25	1	0	55	72	2.69	0.19	1.35	6	2	0.0	0	2.0	5	35	S	17	17	6	8	3.9	72
VICTORIA	104	1013.9	1018.0	80	58	68.8	- 3.8	90	16	44	26	1	0	58	73	4.04	0.56	2.45	7	2	0.0	0	2.7	2	38Y	NW	18	16	8	7	3.9	
WACO	500	1000.3	1018.4	77	55	66.0	- 3.4	90	10+	40	25	2	0	53	68	2.91	0.36	1.53	3	2	0.0	0	0.8	19	23	27	18	17	7	7	3.7	
WICHITA FALLS	994	981.7	1018.1	77	50	63.4	- 3.0	95	10	39	27+	3	0	48	64	3.11	0.24	2.10	5	3	0.0	0	2.3	20	29	15	17	19	3	9	3.7	
UTAH																																
MILFORD	5028			74	30	51.9	1.2	87	5	22	31+	0	20			0.03	- 0.74	0.03	1		0.0	0						24	3	4	2.3	
SALT LAKE CITY	4220	876.4	1020.7	71	38	54.5	2.8	83	10+	30	31	0	2	33	52	0.39	- 0.76	0.39	1	1	0.0	0	1.5	15	26	S	15+	20	8	3	3.1	89
WENDOVER	4237			66	43	54.2	1.0	79	5	36	31+	0	0			0.02	- 0.44	0.02	1		0.0	0						22	7	2	2.3	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
VERMONT	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
BURLINGTON	332	1001.0	1013.5	55	39	46.8	- 0.8	76	20	26	29	0	7	37	72	3.32	0.35	0.74	15	3	0.4	T	4.1	23	33	SW	15	3	6	22	8.1	37
VIRGINIA																																
LYNCHBURG	916			67	43	54.7	- 3.5	79	16	21	30	0	4			4.39	1.75	2.62	3	2	0.0	0			26	W	8	16	8	7	3.7	70
NORFOLK	26	1016.6	1017.5	68	50	59.0	- 3.0	81	1	29	30	0	1	48	69	1.29	- 1.63	0.99	5	0	0.0	0	0.5	27	34	SE	7	19	5	7	3.8	67
RICHMOND	162	1011.9	1017.9	68	44	56.1	- 2.6	78	16+	23	30	0	5	44	69	1.38	- 1.62	0.86	5	0	0.0	0	0.5	28	25	SE	7	16	9	6	3.9	72
ROANOKE	1149	975.6	1017.9	68	44	56.0	- 2.2	81	16+	25	30	0	4	41	62	3.42	0.21	2.38	4	3	0.0	0	3.0	29	23	31	8	15	9	7	4.0	
WASHINGTON																																
OLYMPIA	195	1011.2	1018.6	64	43	53.3	1.9	75	23+	33	10	0	0	47	83	3.30	- 1.98	1.00	12	0	0.0	0	3.7	20	30	19	6	3	7	21	7.9	
SEATTLE TACOMA	400	1002.4	1018.8	64	49	56.4	4.0	74	7	40	16	0	0	49	80	2.76	- 1.26	0.90	13	0	0.0	0	3.0	19	30	1	6+	2	8	21	8.0	39
SPOKANE	2356	935.3	1019.4	66	40	52.7	3.6	78	3	26	16	0	2	35	56	0.05	- 1.52	0.02	4	0	T	0	3.1	19	33	SW	6	8	10	13	6.0	59
STAMPEDE PASS R	3958			53	40	46.3	3.9	68	24	29	16+	0	4			5.01	- 3.80	1.31	18		3.8							3	6	22	8.0	
TATOOSH ISLAND R	101	1013.5	1016.7	57	50	53.7	1.8	62	4	45	19+	0	0	50	88	10.98	2.76	1.83	19	1	0.0	0	8.0	13	66	SW	16	3	5	23	8.0	36
WALLA WALLA U	949			69	48	58.8	3.7	84	4	40	16	0	0			0.73	- 0.80	0.41	9		0.0	0			23	W	6	8	10	13	6.2	66
YAKIMA	1052	980.4	1019.3	68	38	52.5	2.0	79	8	28	16	0	2	37	63	0.06	- 0.54	0.05	2	0	0.0	0	3.9	27	39	24	4	7	11	13	6.4	
WEST INDIES																																
SAN JUAN P.R.	15	1011.5	1014.0	88	75	81.5	1.5	92	4	70	29	3	0	74	80	5.08	- 0.75	0.86	20	5	0.0	0	5.2	9	23	E	16	2	21	8	5.9	65
SWAN ISLAND	28			85	78	81.3	- 0.4	88	9+	73	27+	0	0			12.42	2.72	3.46	18		0.0	0						2	11	18	7.6	
WEST VIRGINIA																																
BECKLEY	2504	929.6	1018.8	61	39	49.7		73	17+	18	29	0	8	39	71	2.67		0.92	9	0	0.2	T	2.6	24	25	24	8+	12	9	10	5.2	
CHARLESTON	939	983.7	1017.9	64	41	52.6	- 4.7	78	15	21	29	0	6	42	70	2.09	- 0.49	0.93	10	1	T	0	3.0	23	25	28	23	9	13	9	5.4	
ELKINS	1970	946.5	1018.4	62	35	48.7	- 3.4	76	15	14	29	0	12	39	76	2.51	- 0.52	0.62	10	2	0.4	0	4.1	27	37	25	31	10	10	11	5.8	
HUNTINGTON	827	987.8	1017.9	66	43	54.2	- 3.1	82	15	23	30	0	5	42	69	2.25	0.40	1.09	8	2	0.0	0	2.5	23	21	26	31	13	8	10	4.8	
PARKERSBURG U	615			64	43	53.9	- 3.1	79	20	23	30	0	5			2.27	0.22	1.10	7		0.0	0			31	W	31					60
WISCONSIN																																
GREEN BAY	682	989.2	1015.1	59	40	49.3	- 0.1	79	18	25	28	0	9	41	75	1.32	- 0.59	0.90	6	1	0.0	0	3.7	28	38	SW	6	10	9	12	5.7	53
LA CROSSE	651	991.9	1016.5	62	39	50.3	- 0.8	80	17	24	13	0	9	40	71	1.66	- 0.53	1.02	7	1	0.0	0	2.5	27	24	31	31	12	6	13	5.5	
MADISON	858	984.4	1016.0	60	39	49.2	- 0.7	79	18	25	29	0	9	40	73	1.69	- 0.52	0.90	6	2	0.0	0	4.1	27	33	N	23	13	6	12	5.3	60
MILWAUKEE	672	990.5	1016.1	59	42	50.8	0.8	78	18+	25	29	0	2	42	72	2.68	0.58	1.52	9	3	T	T	4.1	27	31	W	31	14	5	12	5.1	63
WYOMING																																
CASPER	5338	840.8	1018.8	69	35	51.8	3.5	80	3	24	31	0	12	25	41	T	- 0.84	T	0	0	0.0	0	7.4	26	35	23	15	13	11	7	4.3	
CHEYENNE	6126	816.1	1019.1	66	38	52.0	4.5	79	3	29	31	0	4	26	43	0.75	- 0.08	0.73	2	0	T	T	9.0	30	42	N	16	18	6	7	3.7	86
LANDER	5563	832.7	1019.0	67	37	51.9	4.8	80	9	29	17	0	5	28	46	0.34	- 0.87	0.34	1	0	0.0	0	2.0	22	30	SW	15	12	8	11	4.9	77
SHERIDAN	3964	881.8	1019.1	70	36	52.9	5.1	86	9	27	17	0	9	29	46	0.02	- 1.11	0.02	1	0	0.0	0	2.5	31	50	NW	5	11	9	11	5.5	78

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

A Maximum hourly average.
B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	°C.	°C.	°C.	°C.	C.		°C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
ALABAMA																																
BIRMINGHAM	189	995.9	1018.5	22.8	8.3	15.6	-3.2	28.3	17	- 2.2	25	0	3	10.0	74	17	- 58	10	5	0	0	0	0.8	2	10.3	W	8	16	8	7	3.9	74
HUNTSVILLE	183	995.6	1018.5	23.9	9.4	16.6	-0.7	30.6	17	0.0	25	0	1	7.8	60	17	- 53	9	5	0	0	0	0.3	5	10.7	28	23	17	5	9	4.1	
MOBILE	64	1009.8	1017.5	26.7	14.4	20.4	-0.7	31.1	10+	3.9	25	0	0	12.8	67	40	- 37	39	3	0	0	0	1.9	4	9.4	10	6	15	8	8	3.8	
MONTGOMERY	59	1010.8	1018.0	23.9	11.7	17.7	-1.6	28.9	17	0.6	26	0	0	12.8	76	29	- 29	20	5	1	0	0	0.9	2	8.9	W	7	11	11	9	4.6	64
ALASKA												B																				
ANCHORAGE PRK STRIP	26			1.7	- 5.0	- 1.7	-3.3	11.7	3	-14.4	18	0	25			37	- 11	14	10		417	178										
ANCHORAGE	43	993.6	998.6	3.3	- 5.0	- 0.7		13.3	5	-12.8	21+	0	26	- 6.7	64	37		11	11	0	424	152	1.7	1	11.6	36	13	7	5	19	7.2	44
ANNETTE	34	1003.7	1007.7	10.6	5.6	8.3	0.1	14.4	27+	0.6	18	0	0	5.6	83	690	261	85	25	1	T	0	4.7	14	17.4	16	16	0	1	30	9.4	
BARROW	7	1007.1	1007.7	- 8.9	-16.7	-12.6	-4.1	- 1.1	23	-26.7	14	0	31	-15.0	81	17	5	4	18	0	229	102	1.6	16	14.8	19	25	3	9	19	7.7	
BARTER ISLAND	12	1006.4	1008.2	- 9.4	-16.1	-12.7	-4.5	- 2.8	9	-29.4	17	0	31	-13.9	89	10	- 11	2	11	0	130	76	2.0	26	17.4	27	23+	3	4	24	8.4	
BETHEL	38	998.3	1003.9	- 0.6	- 7.8	- 4.3	-4.0	4.4	4	-13.3	31	0	31	- 7.2	81	3	- 36	2	7	0	66	T	2.1	2	14.8	2	2	4	7	20	7.7	
COLD BAY	29	997.6	1001.4	5.0	0.6	2.6	-1.9	9.4	11+	- 5.0	25+	0	14	- 0.6	80	70	- 47	12	21	0	196	T	2.5	33	19.2	15	26+	0	3	28	8.7	
FAIRBANKS	133	987.8	1005.5	- 5.6	-14.4	-10.1	-6.8	7.2	2	-26.1	20	0	31	-13.9	75	19	- 3	7	10	0	399	178	0.6	34	9.4	36	4	6	6	19	7.5	
JUNEAU	4	1002.4	1003.2	9.4	3.9	6.5	1.2	13.9	4	- 1.7	25	0	5	5.6	94	203	- 9	24	29	0	8	T	5.5	12	21.9	12	28	0	1	30	9.7	11
KING SALMON	13	997.6	999.7	1.7	- 8.9	- 3.6	-5.6	10.6	3	-15.6	25+	0	29	- 6.7	79	10	- 45	4	9	0	71	T	2.7	1	14.8	4	2	11	8	12	5.6	
KOTZEBUE	3	1005.4	1005.9	- 5.6	-11.7	- 8.6	-4.5	1.1	3	-19.4	28+	0	31	-11.7	78	8	- 7	2	7	0	406	279	3.4	10	19.2	12	22+	11	2	18	6.0	
MC GRATH	102	991.9	1005.1	- 5.0	-14.4	- 9.9	-7.0	3.9	2	-25.0	16	0	31	-13.9	71	4	- 30	1	7	0	140	76	1.5	36	9.4	4	4	3	10	18	7.8	
NOME	4	1003.4	1004.3	- 1.7	- 8.3	- 4.9	-3.7	5.6	3	-16.1	30	0	31	- 8.3	75	15	- 28	3	11	0	150	102	1.3	4	21.0	16	23	11	2	18	6.2	32
ST. PAUL ISLAND	7	1003.7	1004.8	3.9	0.0	1.9	-0.9	6.7	13	- 5.0	24	0	20	- 0.6	83	37	- 43	6	24	0	94	T	3.0	34	24.6	14	25	0	4	27	8.9	
SHEMYA	37	1006.4	1010.3	7.2	3.3	5.2	0.9	9.4	16	- 0.6	22	0	2	2.2	82	93	23	27	22	0	25	0	3.0	25	24.6	13	30	2	10	19	7.7	
YAKUTAT	9		998.1	7.8	1.1	4.3	-1.2	14.4	4	- 7.2	19	0	9	2.8	89	937	439	137	28	0	20	0	3.2	11	16.5	14	28	2	0	29	9.1	
ARIZONA																																
FLAGSTAFF	2131	791.7	1020.3	20.6	- 0.6	9.8	1.5	26.7	11+	- 5.6	29	0	20	- 3.3	48	7	- 32	6	3	1	56	T	0.3	5	8.9	20	15	23	4	4	2.0	
PHOENIX	340	974.9	1013.3	33.3	13.3	23.2	1.7	37.2	11+	8.3	19+	26	0	3.9	33	5	- 7	5	2	2	0	0	1.1	11	10.7Y	ENE	21+	24	4	3	2.1	92
TUCSON	788	926.5	1013.5	30.6	13.3	22.2	1.1	36.7	12	5.0	18	15	0	- 2.2	23	2	- 14	2	1	0	0	0	2.5	13	13.4	E	22+	26	1	4	1.6	92
WINSLOW	1492	855.4	1019.4	25.0	3.3	14.0	-0.1	31.7	9	- 1.7	29	0	6	- 2.2	39	4	- 13	3	2	0	T	0	0.8	22	11.2	19	15+	24	4	3	2.0	
YUMA	59	1005.4	1012.7	35.0	16.1	25.3	0.7	40.0	12	11.1	18	26	0	4.4	29	0	- 10	0	0	0	0	0	0.9	2	13.0	NW	15	24	4	3	1.6	96
ARKANSAS																																
FORT SMITH	137	1002.4	1018.9	25.6	7.8	16.5	-1.2	34.4	9	- 1.1	25	2	1	8.3	67	23	- 65	11	2	1	0	0	0.6	2	10.3	N	11	16	7	8	4.0	71
LITTLE ROCK	78	1009.5	1019.1	23.9	8.9	16.4	-0.8	30.6	9	- 0.6	25	0	1	9.4	69	5	- 68	5	1	0	0	0	0.6	30	11.6	N	23	17	4	10	3.9	67
TEXARKANA	113	1005.8	1018.8	25.6	10.6	18.1	-0.9	33.3	9	- 1.7	25	1	1	10.6	68	10	- 66	9	2	2	0	0	0.4	14				19	3	9	3.7	
CALIFORNIA																																
BAKERSFIELD	151	999.3	1016.8	28.9	12.8	20.9	1.6	36.1	2	7.8	16	9	0	6.1	43	0	- 8	0	0	0	0	0	0.6	1	9.4	33	15	25	5	1	1.8	
BISHOP	1252			28.3	3.9	16.1	1.9	34.4	7	0.6	18+	6	0			0	- 11	0	0		0	0						25	5	1	2.0	
BLUE CANYON	1609			21.1	10.6	15.8	3.7	29.4	7	- 0.6	15	0	1			21	- 65	21	2		T	0			8.9	19	4	20	6	5	2.9	
BURBANK	221	989.2	1014.7	30.6	13.3	22.0	2.9	37.2	22	7.2	17	14	0	6.1	45	T	- 12	T	0	0	0	0	0.4	19	9.4	32	15	21	5	5	2.7	
EUREKA U	13			16.7	10.0	13.2	0.7	26.7	23	5.6	16	0	0			18	- 63	6	7		0	0			12.5	SE	4	3	11	17	7.2	47
FRESNO	100	1005.1	1016.8	28.3	8.9	18.8	0.7	35.6	2	2.8	16	7	0	7.2	54	8	- 3	8	1	0	0	0	0.4	32	10.3	NW	15	25	4	2	2.0	97
LONG BEACH	10	1013.9	1015.4	28.3	13.9	21.1	1.9	38.3	22	9.4	17	9	0	8.9	55	0	- 4	0	0	0	0	0	0.9	27	9.4	8	21+	19	8	4	3.1	
LOS ANGELES	30	1011.5	1015.1	26.1	15.6	20.8	2.6	38.3	22	10.0	17	7	0	10.6	61	T	- 10	T	0	0	0	0	1.0	26	16.5Y	N	15	18	5	8	3.5	
LOS ANGELES U	82			29.4	16.7	22.8	3.2	37.8	22	11.1	17	13	0			0	- 10	0	0		0	0			11.2	N	15	22	7	2	2.3	77
MT SHASTA R	1080			23.3	4.4	13.7	2.7	29.4	8	- 0.6	19	0	1			1	- 61	1	2		T	T										
OAKLAND	2	1017.3	1017.3	22.8	13.3	17.9	1.7	30.6	23+	10.6	27+	0	0	12.2	74	2	- 18	2	1	0	0	0	1.9	28	10.7	27	15	16	7	8	4.3	
RED BLUFF	104	1004.1	1016.9	28.3	10.0	19.1	0.4	38.9	7	6.7	18	5	0	4.4	44	T	- 35	T	1	0	0	0	1.1	33	9.8	N	16+	17	8	6	3.6	89
SACRAMENTO	5	1016.3	1016.9	27.8	10.0	18.8	1.3	33.3	7	5.6	15	2	0	7.8	56	3	- 17	3	1	0	0	0	0.6	25	12.1	N	16	21	7	3	2.5	97
SANDBERG R	1377			23.3	13.9	18.7	3.8	31.1	8	0.6	16	0	0			0	- 12	0	0		0	0			14.8	34	16	21	7	3	2.5	
SAN DIEGO	4	1013.9	1014.9	26.7	15.0	20.8	1.8	40.0	22	10.6	17	6	0	10.6	59	T	- 12	T	0	0	0	0	1.0	29	8.0	NW	23+	20	4	7	2.9	77
SAN FRANCISCO	2	1017.3	1018.0	22.8	11.1	16.9	1.1	31.1	24	7.2	17	0	0	9.4	69	T	- 19	T	0	0	0	0	2.3	29	14.8	WNW	15	15	10	6	3.9	
SAN FRANCISCO U	16			22.8	13.9	18.3	2.0	32.2	24	10.6	31	1	0			T	- 22	T	1		0	0			10.7	W	15					73
SANTA CATALINA	478			26.1	18.9	22.4	3.9	36.7	22	12.2	18+	6	0			T	- 24	T	0	0	0	0						21	6	4	2.5	
SANTA MARIA	72			27.2	8.9	17.9	2.1	37.8	22	2.2	16	8	0			T	- 15	T	1		0	0						20	8	3	3.0	
	7	1016.6	1017.6	27.8	10.0	18.6	0.8	32.8	7	5.0	17	2	0	7.8	56	4	- 12	4	1	0	0	0	1.5	31	10.3	32	16	18	9	4	2.7	
COLORADO																																
ALAMOSA	2297			18.3	- 3.9	7.3	0.4	24.4	7	- 8.3	1	0	29			27	12	25	3		13	T						20	8	3	2.7	
COLORADO SPRINGS	1873	815.1	1019.2	20.0	3.3	11.6	1.4	26.1	10+	- 1.7	21	0	1	- 2.2	44	12	- 5	6	3	0	T	0	1.6	4	10.7	19	15	16	7	8	3.6	
DENVER	1610	840.2	1017.9	22.2	3.3	12.8	2.1	28.9	9	- 1.7	31	0	2	- 1.1	44	11	- 14	10	2	0	0	0	1.5	18	11.2	N	18	18	6	7	3.5	89
GRAND JUNCTION	1480	856.4	1019.0	22.8	6.7	14.5	1.7	27.8	11	2.8	28	0	0	1.1	46	36	17	23	3	1	0	0	1.0	11	12.1	S	15	22	4	5	2.7	86
PUEBLO	1428	859.5	1018.4	24.4	2.2	13.3	0.7	31.7	10	- 1.1	21	0	6	- 0.6	44	10	- 15	7	3	0	0	0	0.3	6	15.2	N	6	16	8	7	3.5	90

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

OCTOBER 1965

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .25 mm. or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Sleet: Total	Precipitation: Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	°C.	C.	°C.	°C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
CONNECTICUT																																
BRIDGEPORT	2	1015.6	1016.2	17.8	7.8	12.8	-0.2	22.8	15	0.6	29+	0	0	6.7	67	44	- 42	19	5	1	0	0	3.6	27	17.9	31	31	14	10	7	4.2	
HARTFORD	52	1008.5	1015.0	17.2	3.9	10.6	-1.1	26.1	20+	- 3.3	6	0	7	3.9	68	126	45	42	8	3	0	0	1.7	26	14.8	NW	4	11	11	9	5.3	64
NEW HAVEN	2			16.7	6.1	11.4	-0.8	21.7	20	- 0.6	29	0	2			73	- 14	25	7		0	0			14.3	NW	4+	13	12	6	4.1	78
DELAWARE																																
WILMINGTON	24	1013.9	1017.0	18.3	5.6	12.0	-1.7	25.0	15	- 2.8	30+	0	3	6.1	70	40	- 34	24	6	0	0	0	1.9	27	11.2	31	3	17	8	6	3.6	
DIST.OF COLUMBIA																																
WASH NATL AP	4	1014.9	1017.2	20.0	8.3	14.2	-0.8	25.6	16+	- 1.1	29	0	2	7.2	66	59	- 19	41	5	2	0	0	1.3	27	15.6	W	8	15	9	7	3.9	68
FLORIDA																																
APALACHICOLA U	4			25.0	17.2	21.1	-0.7	31.1	2	6.7	25	0	0			176	114	161	5	1	0	0			14.8	E	14+	15	7	9	4.4	67
DAYTONA BEACH	9	1014.9	1016.4	26.7	17.2	22.0	-1.0	32.8	2	10.0	25	1	0	17.2	78	93	- 50	27	8	1	0	0	1.2	3	11.2	2	17	10	7	14	5.9	
FORT MYERS	5	1015.2	1015.5	28.9	20.6	24.5	0.0	32.8	5	13.9	25	1	0	19.4	76	112	8	46	9	2	0	0	1.5	3	11.6	27	7	12	11	8	5.1	
JACKSONVILLE	7	1015.6	1016.7	26.7	16.1	21.3	-0.3	32.8	2+	6.1	27	2	0	16.1	76	44	- 87	29	8	2	0	0	1.4	1	18.8	NE	17	12	9	10	5.2	61
KEY WEST	1	1013.9	1014.7	28.9	24.4	26.8	0.7	31.7	2	21.7	26+	0	0	21.7	74	164	17	58	9	6	0	0	1.8	6	12.5	NW	23+	10	12	9	5.6	63
LAKELAND U	65			27.8	18.3	22.9	-0.7	33.3	1	10.0	25	5	0			57	- 18	23	8		0	0						13	8	10	5.0	68
MIAMI	2	1014.6	1014.9	29.4	22.2	25.6	0.2	32.2	8+	16.7	25	2	0	20.6	77	426	218	144	14	3	0	0	0.9	5	13.0	10	30	7	12	12	6.1	
ORLANDO	33	1011.9	1016.1	27.8	19.4	23.4	0.1	33.3	2	11.7	25	3	0	16.7	71	103	3	30	8	2	0	0	1.3	1	9.8	29	23	10	9	12	5.3	
PENSACOLA	34	1013.5	1017.6	25.6	15.0	20.2	-1.1	30.0	10+	4.4	26	0	0	13.9	70	72	- 4	62	3		0	0	1.4	1	13.0	N	24+					73
TALLAHASSEE	17	1014.6	1017.1	27.2	14.4	20.7	-0.2	33.3	2	2.2	27+	3	0	13.3	68	89	27	71	5	1	0	0	1.4	1	9.4	2	18+	13	7	11	4.5	
TAMPA	6	1015.9	1016.0	27.8	17.8	22.5	-1.2	31.7	3	10.0	28+	0	0	16.7	75	36	- 34	25	7	3	0	0	1.4	2	10.3	9	30	13	9	9	5.1	58
WEST PALM BEACH	5	1014.2	1014.9	29.4	21.1	25.1	-0.6	32.8	3	14.4	24	3	0	20.0	76	476	274	243	12	3	0	0	1.2	6	14.3	8	14	9	12	10	5.6	
GEORGIA																																
ATHENS	244	989.2	1018.1	22.2	9.4	15.7	-1.6	30.0	1	- 1.1	25	0	2	9.4	71	74	1	73	6	0	0	0	0.8	34	8.9	22	1	18	6	7	3.9	
ATLANTA	308	981.4	1018.3	21.7	10.0	15.7	-1.2	28.9	1	- 1.7	25	0	1	8.9	69	60	- 2	10	6	0	0	0	0.8	34	13.0	NE	19	15	6	10	4.3	69
AUGUSTA	44	1012.2	1017.3	25.0	10.0	17.3	-1.2	32.2	2	- 1.7	26	1	3	10.6	72	67	15	60	7	1	0	0	0.8	34	9.4	26	23+	15	7	9	4.7	
COLUMBUS	117			23.9	11.1	17.6	-0.9	28.9	2+	0.0	26	0	1	11.7	74	76	31	62	4		0	0	0.8	3	10.3	7	29	13	8	10	5.0	
MACON	108	1005.4	1018.5	23.9	10.0	16.9	-2.1	30.0	2	- 1.7	26+	0	2	11.1	75	43	- 8	27	5	0	0	0	1.1	1	9.8	N	24+	16	7	8	4.5	68
ROME	194			22.8	7.2	15.0	-1.2	28.9	17+	- 3.3	25	0	5			34	- 41	17	6		0	0										
SAVANNAH	14	1015.2	1017.1	25.6	12.2	19.0	-0.6	31.7	3+	0.6	25	0	0	12.8	73	34	- 32	15	8	2	0	0	1.0	1	11.6	SW	7	12	8	11	5.1	64
HAWAII																																
HILO	9	1013.2	1014.4	28.9	19.4	24.1	0.2	32.8	13	17.2	6	1	0	19.4	77	147	-127	75	22	2	0	0	0.2	25	12.5	12	13+	2	16	13	6.9	36
HONOLULU	2	1013.9	1014.3	30.0	21.7	25.7	0.0	32.8	7	18.3	25+	2	0	18.9	67	90	44	45	10	2	0	0	2.5	4	10.3	SE	13	5	18	8	6.2	75
KAHULUI	15	1011.9	1014.1	28.9	20.6	24.7	-0.5	32.2	14	16.7	5	1	0			49	27	16	8	0	0	0	2.7	6	13.0	NE	29+	6	17	8	5.7	75
LIHUE	31	1010.2	1015.2	27.2	20.6	23.8	-1.1	29.4	20+	17.2	25+	0	0	20.0	81	170	67	42	24	0	0	0	3.0	4	9.4	E	31+	4	18	9	6.5	48
IDAHO																																
BOISE	865	920.1	1020.5	21.7	5.6	13.6	2.7	30.6	4+	- 1.1	16	0	1	1.1	49	7	- 14	6	3	0	T	0	0.7	15	10.3	SE	14	14	13	4	4.1	85
IDAHO FALLS 42NW R	1460			20.0	- 5.0	7.3	0.6	27.8	9	-10.6	26+	0	29			0	- 10	0	0			0	0.4	31	10.3	NNW	16+					
IDAHO FALLS 46W R	1503			20.0	- 3.3	8.3	1.2	26.1	9+	- 8.3	26+	0	27			1	- 16	1	1		0	0	1.3	23	15.2	WSW	5					
LEWISTON	431			20.6	6.1	13.5	2.4	27.8	2	0.0	16	0	1			9	- 22	6	4		0	0						6	9	16	6.5	
POCATELLO	1358	867.9	1021.3	20.6	0.0	10.3	0.8	27.8	9+	- 5.6	21+	0	16	- 2.2	48	1	- 22	T	2	0	0	0	2.1	22	16.1	W	5	17	11	3	3.6	89
ILLINOIS																																
CAIRO U	96			21.1	9.4	15.3	-1.3	28.9	17	3.3	29+	0	0			23	- 50	20	5		0	0			12.5	SW	7	20	4	7	3.5	77
CHICAGO O HARE	201	991.9	1016.3	17.8	6.1	11.8	0.1	27.8	17	- 5.6	29	0	4	5.6	69	40	- 30	25	6	0	T	T	1.6	26	12.5	1	21	12	7	12	5.0	
CHICAGO MIDWAY	185	993.9		17.2	7.2	12.2	-0.6	28.9	17	- 1.1	29	0	1	4.4	63	27	- 44	11	6	0	0	0	1.9	25	13.4	NW	23	13	7	11	4.9	62
MOLINE	177	994.9	1016.6	18.3	6.1	12.0	-0.7	27.8	18	- 2.2	28	0	3	5.6	69	22	- 40	10	5	2	0	0	1.9	25	17.0	W	7	13	8	10	4.7	62
PEORIA	199	993.6	1017.6	17.8	5.6	11.4	-1.6	26.7	18	- 2.2	29+	0	5	6.1	74	18	- 47	8	6	3	0	0	1.1	24	15.2	NW	7	13	8	10	4.5	66
ROCKFORD	221	988.8	1016.0	17.2	5.6	11.3	-0.1	26.1	18+	- 3.3	29	0	2	5.6	70	74	5	25	9	3	0	0	1.7	26	10.7	31	31	16	3	12	4.6	
SPRINGFIELD	179	995.6	1017.7	19.4	6.7	12.8	-0.9	28.3	18	- 2.8	29	0	2	6.1	68	22	- 52	17	7	3	0	0	1.7	23	15.6	NW	7	17	6	8	3.9	75
INDIANA																																
EVANSVILLE	116	1004.4	1018.5	21.1	5.6	13.3	-1.8	28.9	16	- 3.3	30	0	4	6.1	68	27	- 38	26	4	1	0	0	1.1	28	12.1	SW	7	18	6	7	3.6	80
FORT WAYNE	241	986.5	1016.7	17.2	5.6	11.4	-0.3	26.7	17	- 5.0	29	0	6	6.1	73	117	45	74	9	1	0	0	2.3	25	13.9	NW	31+	11	7	13	5.5	61
INDIANAPOLIS	242	988.5	1017.7	18.3	6.1	12.1	-0.9	27.2	17+	- 3.3	29	0	4	6.1	70	27	- 40	11	5	2	0	0	1.6	25	13.4	NW	23	14	6	11	4.7	65
SOUTH BEND	236	988.2	1016.3	16.1	6.1	10.9	-1.0	26.1	18+	- 3.3	29	0	4	6.1	75	64	- 16	18	10	1	61	T	2.0	25	11.2	24	25+	6	13	12	6.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature												Precipitation							Wind						No. of days (sunrise to sunset)				
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 C or lower	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	No. of days: .25 mm. or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
IOWA																																
BURLINGTON	212			18.9	6.7	12.7	-0.3	27.8	18	- 1.7	24	0	2	6.1	66	14	- 54		6	1	0		1.3	27	13.0	30	7	16	4	11	4.2	
DES MOINES	286	982.4	1017.4	19.4	6.7	12.9	0.6	27.8	17	- 2.2	24	0	3	5.0	62	20	- 32	19	4	0	0	0	1.1	27	14.8	NW	7	13	8	10	4.5	68
DUBUQUE	325			16.1	5.0	10.5	0.1	25.6	17	- 2.2	28+	0	4			97	28	57	6		0	0						12	8	11	5.2	
SIOUX CITY	334	977.0	1017.1	21.1	5.6	13.1	0.9	26.7	17	- 2.2	24	0	4	4.4	59	12	- 24	12	2	1	0	0	0.8	28	17.9	NW	7	16	6	9	3.9	81
WATERLOO	265	984.4	1016.5	17.8	4.4	11.0	0.1	27.8	17	- 3.3	28+	0	6	5.0	70	49	- 5	35	5	1	0	0	1.3	27	12.5	30	8+	11	10	10	5.0	
KANSAS																																
CONCORDIA	448	964.8	1017.6	22.8	7.2	15.0	0.7	33.3	10	- 1.7	24	1	2	5.6	59	6	- 37	6	1	0	0	0	1.3	22	16.1	S	17	18	4	9	3.9	75
DODGE CITY	787	927.5	1018.2	23.3	8.3	15.6	0.9	33.3	10	2.2	22	2	0	6.1	62	77	41	72	3	2	0	0	1.2	23	15.6	SE	17	15	8	8	4.1	87
GOODLAND	1111	891.6	1018.5	21.1	4.4	12.8	1.1	30.6	9	- 1.7	21	0	2	3.3	59	78	58	61	3	2	0	0	1.7	24	11.6	12	17+	22	5	4	2.9	
TOPEKA	267	986.1	1018.0	21.7	6.1	14.1	-0.5	31.1	10	- 2.2	12	0	2	6.7	66	23	- 36	16	3	1	0	0	0.8	24	15.2	NW	8	17	7	7	3.9	79
WICHITA	403	970.5	1018.2	22.8	8.3	15.8	0.3	34.4	10	0.0	24	1	1	7.8	63	8	- 53	8	2	0	0	0	1.2	21	14.3	SE	18	16	7	8	3.9	75
KENTUCKY																																
COVINGTON	265	986.1	1017.9	16.7	7.2	11.9	-1.5	25.6	16	- 2.8	29	0	3	5.6	68	97	39	43	6	1	0	0	1.5	25	10.7	30	31+	15	5	11	4.6	
LEXINGTON	294	982.7	1018.6	18.3	6.1	12.2	-2.3	27.8	16	- 2.8	29	0	4	6.1	70	62	4	35	7	1	0	0	1.4	20	14.3	26	8	16	7	8	4.0	
LOUISVILLE	144	1000.3	1018.1	19.4	6.7	13.2	-1.2	30.6	17	- 2.8	30	0	3	6.7	70	65	7	35	8	2	0	0	0.9	26	15.6	W	8	16	8	7	4.1	69
LOUISIANA																																
ALEXANDRIA	28	1014.6	1018.7	25.0	10.6	17.5	-2.0	31.1	9	- 0.6	25	0	2	12.2	78	7	- 82	7	2	0	0	0	0.8	1	10.3	5	24	17	3	11	4.1	
BATON ROUGE	20	1015.6	1018.1	25.6	12.8	19.3	-1.3	30.0	16+	3.3	26+	0	0	12.2	71	23	- 39	23	2	0	0	0	1.3	35	8.9	33	21	18	5	8	3.8	
LAKE CHARLES	4	1017.3	1018.2	26.7	13.3	19.9	-1.5	31.7	16	4.4	26	0	0	13.3	73	8	- 70	8	2	0	0	0	1.3	4	9.8	12	18	16	7	8	4.3	
NEW ORLEANS	1	1016.6	1017.6	25.6	13.3	19.3	-2.1	29.4	11+	2.8	27	0	0	13.3	71	26	- 46	18	3	0	0	0	1.5	1	8.0	3	24+	20	5	6	3.5	
SHREVEPORT	77	1009.1	1018.5	25.6	12.8	18.9	-1.2	33.3	9	2.2	25	1	0	12.2	71	9	- 62	9	3	1	0	0	0.4	6	11.6	17	15	17	6	8	3.5	71
MAINE																																
CARIBOU	190			9.4	0.6	5.0	-1.1	20.0	19	- 6.1	28+	0	15			105	20	20	15		30	T						2	6	23	8.1	
PORTLAND	19	1011.2	1013.6	15.0	2.8	8.7	-0.6	26.1	19	- 5.0	6	0	9	3.3	72	63	- 18	28	10	1	T	0	1.6	26	15.2	E	8	10	10	11	5.5	57
MARYLAND																																
BALTIMORE	45	1011.9	1017.4	18.9	5.6	12.2	-1.7	25.6	15	- 3.3	30	0	3	5.0	67	48	- 33	30	7	1	0	0	2.2	27	15.6	SW	8	16	8	7	3.7	68
MASSACHUSETTS																																
BLUE HILL OBS R	192			16.1	5.6	10.7	-0.8	26.7	19	- 3.3	6	0	4			73	- 22	25	7		0	0			21.5	SSW	15					68
BOSTON	5	1013.2	1014.3	16.1	6.7	11.6	-1.2	24.4	19	0.0	29	0	1	4.4	65	40	- 39	23	8	2	0	0	2.9	26	15.2	NW	4+	11	10	10	4.8	67
NANTUCKET	13	1014.6	1015.0	15.0	5.6	10.4	-1.9	20.6	21	- 1.7	18	0	3	7.2	78	22	- 72	13	9	1	T	T	2.7	25	15.6	SE	8	13	7	11	5.0	62
PITTSFIELD	357			13.9	1.7	7.9	-1.0	25.6	20	- 6.1	30+	0	11			49	- 34	20	10		T	T										
WORCESTER	301	977.3	1014.6	15.0	3.9	9.5	-0.8	26.7	19	- 3.3	29	0	7	2.8	66	77	- 11	33	10	3	T	T	3.3	27	16.5	30	4	13	10	8	4.7	
MICHIGAN																																
ALPENA	210			12.8	1.7	7.1	-0.8	27.8	18	- 8.9	29+	0	12			35	- 27	9	13		25	T			13.0	NW	31+	4	8	19	7.6	43
DETROIT	189	992.6	1015.5	15.6	6.1	10.7	-1.4	26.7	18	- 4.4	29	0	3	5.0	71	73	6	34	8	0	T	T	2.3	27	20.1	NW	31	5	12	14	6.6	50
DETROIT M WAYNE CO	193	991.2	1015.6	14.4	3.3	9.0	-3.2	25.6	18	- 7.8	29	0	9	4.4	73	99	34	43	8	0	T	0	2.2	25				8	8	15	6.3	
DETROIT WILLOW RUN	217	987.8	1016.1	14.4	3.3	9.0	-3.2	25.0	18	- 6.7	29	0	8	3.3	69	68	4	34	7	0	T	T	2.4	25	14.8	29	31	6	11	14	6.2	
FLINT	235	987.1	1015.3	15.0	4.4	9.7	-0.3	26.7	18	- 6.7	29	0	7	4.4	72	27	- 33	13	9	3	T	T	2.1	25	12.5	29	31	4	11	16	6.7	
GRAND RAPIDS	239	986.1	1015.6	15.0	5.0	10.0	-0.6	26.7	18	- 5.6	29	0	6	5.0	76	53	- 13	20	9	3	0	0	1.9	25	15.6	NW	31	7	9	15	6.3	51
HOUGHTON LAKE	351	972.6	1014.9	12.8	2.8	7.6		24.4	18	- 8.3	29+	0	10	3.3	76	50		12	14	5	8	T	1.7	27	10.3	29	31+	6	9	16	6.7	
LANSING	256	983.7	1015.6	15.0	3.9	9.4	-1.3	26.7	18	- 7.2	28	0	7	6.1	81	25	- 38	10	8	1	T	T	2.1	26	17.0	NW	31	6	12	13	6.4	48
MARQUETTE U	206			12.8	4.4	8.6	-0.3	26.7	18	- 3.3	28	0	6			57	- 3	19	13		T	T			16.1	NW	23	3	10	18	7.5	48
MUSKEGON	191	992.2	1015.2	15.6	6.7	11.1	-0.3	23.9	18+	- 5.0	29	0	3	6.1	71	71	7	30	12	3	T	T	1.6	28	13.4	31	31	7	11	13	6.1	
SAULT STE MARIE	220	986.5	1013.5	10.0	2.2	6.2	-1.7	23.9	18	- 7.2	28	0	10	2.8	79	82	10	15	19	0	43	T	1.3	31	19.2	30	3	3	4	24	8.3	34
MINNESOTA																																
DULUTH	435	963.1	1015.0	12.8	1.7	7.1	0.1	23.3	18	- 6.7	24	0	13	1.1	69	84	29	45	6	3	T	T	1.7	29	18.8	NW	2	9	10	12	6.0	52
INTERNATIONAL FALLS	359	970.9	1014.3	12.2	1.7	6.7	0.9	19.4	1	- 5.6	28	0	13	1.1	71	84	40	55	11	1	T	T	1.5	26	12.5	36	22	7	10	14	6.7	
MINNEAPOLIS	254	985.1	1015.8	16.7	3.9	10.4	1.0	27.2	18	- 5.0	28	0	9	3.3	64	23	- 18	14	6	3	0	0	1.2	30	15.6	NW	2	12	7	12	5.3	60
ROCHESTER	395	968.2	1016.4	15.6	4.4	10.0	0.1	25.0	18+	- 4.4	28	0	6	3.3	66	7	- 36	4	5	1	0	0	2.1	27	14.8	32	31	12	5	14	5.3	
ST CLOUD	315	977.3	1015.6	15.6	3.3	9.3	0.8	25.0	18	- 5.0	28+	0	13		66	24	- 18	11	4		0	0						10	9	12	5.7	
MISSISSIPPI																																
JACKSON	94	1006.8	1018.6	24.4	9.4	17.0	-2.4	30.0	9	- 0.6	30+	0	3	11.7	77	21	- 30	21	2	0	0	0	0.8	5	8.0	N	24	18	4	9	3.7	72
MERIDIAN	88	1007.8	1018.9	25.0	8.3	16.8	-1.8	30.6	17+	- 1.7	26+	0	3	11.1	76	37	- 20	37	1	1	0	0	0.8	1	8.9	11	19	18	3	10	4.0	
VICKSBURG U	71			23.9	13.3	18.5	-1.2	29.4	17+	4.4	25	0	0			27	- 25	25	3		0	0			7.6	N	24	19	3	9	3.5	69

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

OCTOBER 1965

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	°C.	C.	C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
MISSOURI																																
COLUMBIA	237	989.5	1017.7	20.6	8.3	14.5	-0.3	28.9	18	0.6	24	0	0	5.6	61	58	- 21	30	8	4	0	0	1.1	24	15.2	NW	8	19	2	10	3.9	78
KANSAS CITY	226	990.5	1017.6	22.2	9.4	15.8	0.2	31.7	10	1.7	24	0	0	6.1	56	46	- 26	34	2	2	0	0	0.9	22	12.5	NW	7	16	7	8	4.0	74
SAINT JOSEPH	247			23.9	6.7	15.3	1.2	32.8	10	- 2.8	24	1	3	5.0	58	4	- 51	3	3	0	0	0	0.5	22	16.5	31	7	19	4	8	3.7	
ST LOUIS	163	998.0	1018.5	20.0	7.2	13.6	-1.1	28.3	17	- 1.1	29	0	2	6.1	64	12	- 61	5	6	3	0	0	1.5	25	14.8	NW	8	17	7	7	3.7	71
SPRINGFIELD	386	973.2	1018.9	21.1	6.1	13.7	-1.7	29.4	10	- 2.2	24+	0	3	6.1	67	23	- 73	14	6	3	0	0	1.1	21	13.0	NW	8	15	7	9	4.1	65
MONTANA																																
BILLINGS	1087	893.7	1017.8	20.0	5.0	12.4	2.7	29.4	9	0.0	31+	0	2	0.6	50	2	- 25	2	2	0	0	0	3.3	25	23.2	NW	5	11	8	12	5.6	69
GLASGOW	696			20.0	2.8	11.2	3.8	27.2	1	- 2.8	11	0	8			T	- 16	T	0		0	0						9	12	10	5.6	
GREAT FALLS	1116	890.3	1017.8	18.9	5.0	11.9	3.3	26.7	4	- 2.8	16	0	5	- 0.6	46	T	- 19	T	0	0	0	0	4.2	23	25.0	W	6	5	12	14	6.6	71
HAVRE	787			18.9	1.7	10.3	2.6	27.8	8	- 6.1	11	0	14			2	- 19	2	1		0	0			21.0	W	6	10	8	13	6.0	70
HELENA	1167	884.5	1020.6	18.3	1.1	9.6	2.1	27.2	8	- 3.3	27	0	13	0.0	58	3	- 13	3	1	0	0	0	1.7	26	18.8	W	5	10	6	15	5.8	69
KALISPELL	904	914.7	1020.6	15.6	- 0.6	7.4	0.8	23.9	8	- 4.4	16	0	22	2.2	77	3	- 29	3	3	0	0	0	1.2	20	10.3	21	6+	6	7	18	6.9	
MILES CITY	801	924.1	1017.5	20.0	2.8	11.5	2.1	27.8	1	- 2.8	20	0	5	- 0.6	47	T	- 22		0	0	0		1.3	26								
MISSOULA	972	908.9	1022.4	16.1	0.6	8.3	1.7	24.4	1	- 5.6	27	0	16	1.7	71	4	- 21	2	3	0	0	0	0.9	30	16.1	27	6	10	6	15	6.3	62
NEBRASKA																																
GRAND ISLAND	561	951.6	1017.9	21.7	5.0	13.2	1.3	29.4	9	- 2.8	24	0	2	3.9	61	9	- 15	7	3	1	0	0	1.2	26	10.7	21	12+	16	6	9	4.4	
LINCOLN U	351			21.1	7.2	14.3	0.6	27.8	10	- 1.1	24	0	1			10	- 30	10	2		0	0			16.1	W	7	14	8	9	4.4	75
NORFOLK	471			20.6	4.4	12.4	0.8	26.7	30	- 2.8	24	0	5			13	- 17	13	2		0	0						15	8	8	4.2	
NORTH PLATTE	846	919.4	1017.5	21.7	2.8	12.2	1.7	31.7	9	- 4.4	21	0	5	3.9	65	19	- 5	15	2	0	0	0	0.5	30	14.8	S	5	16	7	8	4.0	83
OMAHA	298	982.1	1017.5	21.7	6.7	14.0	0.8	28.3	17	- 3.3	24	0	2	6.7	64	19	- 25	19	2	0	0	0	0.4	29	15.6	NW	7	13	10	8	4.2	80
SCOTTSBLUFF	1206	882.5	1018.5	21.1	2.8	11.9	1.7	29.4	9	- 2.2	21	0	4	2.2	58	25	7	24	3	0	0	0	1.1	34	15.6	36	5	18	6	7	3.7	
VALENTINE	789			20.6	3.3	11.8	2.2	29.4	9+	- 5.6	21	0	5			20	- 3	20	2		0	0			17.0	N	7	16	8	7	3.8	80
NEVADA																																
ELKO	1539	850.3	1022.5	22.8	- 2.8	10.1	1.8	30.0	9	- 7.2	31	0	27	- 4.4	47	16	- 3	16	1	0	20	T	0.3	29	10.3	24	6+	20	8	3	2.8	
ELY	1906	813.8	1020.9	21.1	- 2.2	9.6	1.8	27.2	9	- 5.0	31+	0	27	- 7.2	39	7	- 12	7	2	0	51	T	1.7	20	12.5	NE	16	21	7	3	2.6	92
LAS VEGAS	659	939.7	1015.7	30.0	12.2	21.0	1.8	35.0	7	8.9	18	13	0	- 5.6	19	T	- 5	T	0	0	0	0	1.3	26	16.1	NW	16	24	4	3	1.9	92
RENO	1342	870.3	1020.7	25.0	- 2.2	11.3	1.8	32.8	8	- 7.8	16	1	28	- 1.7	50	1	- 12	1	1	0	T	0	0.1	24	11.6	NW	15	20	6	5	2.9	99
WINNEMUCCA	1310	872.3	1021.2	23.9	- 2.2	10.8	2.1	30.0	9+	- 6.7	17	0	26	- 7.2	35	4	- 16	4	2	0	0	0	0.3	19	13.9	NW	14	20	7	4	3.0	84
NEW HAMPSHIRE																																
CONCORD	104	1001.4	1014.2	15.6	1.1	8.2	-1.1	27.2	19	- 6.1	7+	0	17	2.2	71	69	1	29	9	1	T	0	1.3	28	16.1	NW	4	8	14	9	5.5	56
MT WASHINGTON OBS	1909			0.6	- 5.6	- 2.7	-2.1	11.7	19	-16.7	29	0	26			200	43	41	19	0	716	229			49.2Y	W	4	3	4	24	8.1	24
NEW JERSEY																																
ATLANTIC CITY	20	1014.9	1017.3	17.8	5.6	11.7	-2.3	23.9	20+	- 3.3	30	0	5	5.6	68	30	- 51	16	5	0	0	0	2.4	27	14.3	14	7	19	7	5	3.4	73
ATLANTIC CITY U	3			17.2	9.4	13.2	-1.6	22.8	16+	- 1.1	29	0	1			15	- 71	7	5						21.5	SE	7					
NEWARK	3	1015.2	1016.2	17.8	6.7	12.2	-2.0	25.0	19	- 1.1	29	0	2	4.4	63	59	- 20	35	8	1	T	T	3.0	25	14.8	31	3	14	11	6	3.9	
TRENTON U	17			17.2	7.2	12.4	-1.4	24.4	20+	- 1.7	29	0	1			34	- 38	13	7		T	T			17.0	SE	7	18	9	4	3.7	72
NEW MEXICO																																
ALBUQUERQUE	1618	841.9	1018.0	22.8	6.1	14.4	0.0	29.4	10	0.6	18	0	0	- 1.1	42	23	4	23	2	0	0	0	0.5	9	17.0	SW	16	22	6	3	2.2	87
CLAYTON	1515			21.1	5.0	13.1	0.2	29.4	9	1.1	21	0	0			99	74	99	3		0	0						19	7	5	3.3	
RATON	1944			21.1	0.0	10.7	0.1	28.3	9	- 3.3	1	0	18			12	- 14	12	2		0	0						18	9	4	3.3	
ROSWELL	1102			26.1	3.9	15.0	0.0	33.9	10+	- 1.1	28	5	4			1	- 26	1	1	0	0	0			13.9	SW	17	22	7	2	2.2	83
SILVER CITY	1638			23.9	6.7	15.2	-0.2	30.6	11+	- 1.1	18	0	2			T	- 21	T	0		0	0						25	6	0	1.4	
NEW YORK																																
ALBANY	84	1004.4	1015.1	17.2	4.4	10.7	0.2	26.7	20	- 4.4	6	0	6	2.8	63	60	- 10	35	10	1	T	0	2.2	25	17.9	NW	31	4	13	14	6.7	49
BINGHAMTON	485	956.3	1015.5	12.8	3.9	8.2	-1.7	21.1	20+	- 5.6	29	0	8	3.3	75	77	- 2	23	15	0	33	T	2.6	25	17.4	W	31	3	10	18	7.4	47
BUFFALO	215	988.8	1014.8	13.3	4.4	8.8	-1.7	22.2	18	- 6.7	29	0	4	4.4	76	129	53	58	14	3	30	T	2.7	25	21.0	W	31	5	5	21	7.7	37
NEW YORK U	40	1013.2	1016.5	18.9	9.4	14.1	-0.6	27.2	19	0.0	29	0	1	5.6	62	55	- 25	29	7	1	T	0	2.4	25	14.3	W	31	19	6	6	3.3	69
J.F. KENNEDY	5	1015.2	1016.1	17.8	8.3	13.1	-1.1	23.9	19	0.0	29	0	1	6.1	65	47	- 35	26	7	2	T	0	2.6	27	15.6	31	31	16	10	5	3.8	
NEW YORK LA GUARDIA	3	1014.2	1016.1	17.2	9.4	13.3	-1.5	23.9	19	0.6	29	0	0	5.0	60	37	- 49	14	7	1	T	0	2.5	27	16.5	W	31+	14	12	5	4.0	
ROCHESTER	167	995.3	1015.5	15.0	3.9	9.3	-1.7	23.9	20+	- 5.6	29	0	5	3.3	70	72	6	25	13	2	23	T	2.8	25	21.9	W	31	4	9	18	7.2	37
SYRACUSE	125	999.3	1014.5	13.9	3.9	8.8	-2.2	23.9	19	- 6.7	29	0	7	3.9	74	69	- 12	20	16	0	46	51	2.0	26	21.9	W	31	3	7	21	7.6	39
NORTH CAROLINA																																
ASHEVILLE	652	941.8	1018.4	19.4	5.0	12.1	-1.1	26.1	16	- 4.4	30	0	5	6.7	77	74	- 5	60	9	1	0	0	1.5	36	12.5	35	24	16	7	8	4.2	71
CAPE HATTERAS R	2	1016.9	1017.2	21.7	12.8	17.3	-1.3	27.8	1	1.7	6	0	0	12.2	72	81	- 27	49	5	2	0	0	0.8	1	18.8	ESE	7	11	8	12	5.3	64
CHARLOTTE	224	990.2	1017.6	22.2	8.9	15.3	-1.6	28.9	16	- 3.3	30	0	3	7.8	66	45	- 30	32	4	1	0	0	0.6	35	10.3	S	9+	19	4	8	3.8	79

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
NORTH CAROLINA																																
GREENSBORO	273	986.5	1018.1	21.1	7.8	14.4	-0.8	27.8	16	- 3.9	30	0	3	7.8	69	94	26	48	6	2	0	0	0.6	30	9.4	W	8	15	10	6	3.9	72
RALEIGH	132	1001.7	1017.7	22.2	7.8	14.9	-0.9	27.8	16	- 4.4	30	0	3	7.8	68	45	- 24	40	3	1	0	0	0.3	34	9.8	12	7	16	10	5	3.8	79
WILMINGTON	9	1016.3	1017.5	23.9	12.2	18.2	-0.3	28.3	16	2.2	30	0	0	11.7	70	87	11	61	7	0	0	0	1.0	2	12.5	NE	18	14	4	13	5.0	66
NORTH DAKOTA																																
BISMARCK	502	956.3	1016.6	18.3	1.1	9.6	1.4	26.1	9	- 4.4	12	0	15	- 0.6	53	12	- 10	12	2	0	0	0	1.7	31	19.2	NW	30	16	8	7	4.3	80
FARGO	273	983.1	1016.1	15.6	1.1	8.5	0.4	23.3	16	- 5.0	27+	0	15	2.2	68	14	- 14	9	5	1	0	0	1.0	29	15.2	NW	8	12	8	11	4.9	73
WILLISTON	579			17.8	0.6	9.4	1.8	25.0	1	- 6.7	12	0	15			T	- 19	T	0		0	0			21.0	NW	7	14	12	5	4.1	75
OHIO																																
AKRON	368	972.2	1017.0	15.6	5.0	10.3	-1.3	22.8	18+	- 3.9	29	0	5	4.4	73	97	34	44	12	2	T	T	2.3	24	13.0	32	23	8	9	14	6.0	
CINCINNATI OBS	232			18.9	7.8	13.2	-1.2	27.8	17+	- 2.8	29	0	2			98	41	48	8		0	0			10.7	SW	7					61
CLEVELAND	237	986.8	1016.1	15.6	5.6	10.7	-0.8	25.0	18	- 3.9	29	0	3	5.0	71	65	3	26	11	1	T	0	2.9	23	14.3	W	31	7	8	16	6.5	46
COLUMBUS	247	987.5	1017.5	17.8	7.2	12.4	0.1	26.1	16	- 3.9	29	0	5	6.1	67	101	47	47	11	2	0	0	1.4	24	17.4	SW	7	14	5	12	5.3	58
DAYTON	305	981.4	1017.7	17.2	6.7	11.7	-1.4	26.1	16	- 3.9	29	0	5	5.6	70	70	13	25	9	1	0	0	1.8	23	14.3	W	8	13	7	11	5.1	63
MANSFIELD	395			14.4	4.4	9.3	-2.0	22.8	17	- 5.6	29	0	7			76	18	19	11	2	T	0						11	5	15	5.9	
TOLEDO	206	991.2	1016.5	15.0	3.9	9.5	-1.7	25.6	18	- 8.9	29	0	8	3.9	69	83	23	37	8	0	0	0	2.3	26	17.0	NW	31	8	11	12	5.8	58
YOUNGSTOWN	359	973.6	1016.7	14.4	4.4	9.7	-1.4	22.2	20	- 5.6	29	0	6	4.4	75	105	36	40	15	2	10	T	2.4	23	13.4	26	31	8	8	15	6.5	
OKLAHOMA																																
OKLAHOMA CITY	390	971.9	1018.4	23.3	10.6	17.1	-0.1	35.6	9	3.3	24	2	0	8.3	60	25	- 38	22	3	3	0	0	1.3	19	18.8	E	18	17	5	9	4.0	70
TULSA	198	994.2	1018.6	25.6	9.4	17.4	0.3	33.9	10	1.1	25	2	0	8.3	62	7	- 77	6	3	1	0	0	1.3	20	15.6	NE	11	17	9	5	3.7	82
OREGON																																
ASTORIA	2	1017.6	1018.5	17.8	8.3	12.9	1.3	25.0	23	2.8	16	0	0	10.6	86	101	- 97	22	16	0	0	0	1.3	17	13.0	17	5+	4	6	21	7.7	
BURNS U	1265	877.4	1021.2	20.6	0.6	10.6	1.5	30.6	8	- 7.8	16	0	13	- 1.7	50	4	- 18	2	5		0	0	0.9	32				13	9	9	4.7	
EUGENE	109	1005.8	1019.3	18.9	7.8	13.1	1.3	27.8	2	2.8	16	0	0	10.0	88	62	- 36	30	9	0	0	0	0.8	21	13.0	23	4	3	9	19	7.5	
MEACHAM	1234			16.7	6.1	11.4	3.5	24.4	2	- 1.1	16	0	2			18	- 54	11	9		8	0						8	5	18	6.7	
MEDFORD	396	971.9	1019.9	23.3	5.0	14.1	2.4	30.6	2	- 0.6	31	0	1	6.1	68	12	- 38	7	5	0	0	0	0.4	24	9.8	30	14	14	7	10	4.9	
PENDLETON	452	965.8	1019.7	21.1	7.2	14.2	2.1	27.8	4	2.2	16	0	0	3.3	54	5	- 25	3	6	0	0	0	0.7	23	15.6	28	4	11	8	12	5.5	
PORTLAND	6	1017.6	1018.9	19.4	8.9	14.2	1.8	27.8	2	2.2	16	0	0	9.4	79	52	- 40	17	11	0	0	0	0.8	18	13.4	S	4	4	10	17	7.3	40
SALEM	60	1011.9	1019.3	18.9	7.2	12.9	0.7	27.8	2	1.7	16	0	0	9.4	84	56	- 43	18	8	0	0	0	1.1	19	10.3	27	4	2	10	19	7.5	
SEXTON SUMMIT R	1169	887.2	1018.2	18.9	9.4	14.2	3.8	26.7	1	- 0.6	16	0	2			23	- 64	9	7		T	T			19.2	18	4	16	4	11	4.5	
PACIFIC AREA																																
CANTON ISLAND	2			31.7	25.6	28.7	0.0	33.3	31	22.2	14	16	0			226	198	69	18		▯	0						1	5	25	8.7	
ENIWETOK	4	1008.5	1009.0	30.6	25.0	27.7	-0.7	33.3	25	22.8	17+	8	0	24.4	83	623	392	98	22		0	0	1.9	10								
TAGUAC GUAM R	110			30.0	22.2	25.8	-0.4	31.1	28+	18.9	20+	0	0			175	-158	59	19		0	0			9.4	SW	8+					54
JOHNSTON	2	1011.9	1012.3	28.9	25.0	27.1	-0.1	30.6	17+	23.3	25+	0	0	22.2	75	83		59	18	0	0	0	6.2	9	15.2	E	29	3	17	11	6.3	57
KOROR R	29	1006.1	1009.9	31.1	24.4	27.7	0.3	32.2	13+	22.8	3+	2	0	24.4	85	246	- 87	51	21	3	0	0	1.3	26	8.5	SW	2+	1	2	28	9.2	63
KWAJALEIN	2	1008.1	1009.0	30.0	25.0	27.7	0.0	31.7	16	23.3	11	0	0	24.4	83	253	- 24	54	23	2	0	0	2.2	8	13.0	24	12+	0	5	26	9.1	
MAJURO WB AIRPORT	3	1008.8	1009.2	30.0	25.0	27.4	0.5	31.1	29+	22.8	10	0	0	23.9	82	374	- 12	89	22	4	0	0	1.1	8	13.0	W	12	0	7	24	8.7	46
MARCUS ISLAND	6			30.0	23.9	27.0		31.7	2	20.6	2	0	0			152		44	18		0	0			28.6	E	16	2	14	15	7.1	68
PONAPE R	37	1003.7	1009.3	30.6	23.3	26.9	0.4	32.2	30+	21.7	17	2	0	23.9	88	388	- 18	50	23	4	0	0	0.5	21	7.6	NW	14+	0	10	21	8.6	36
TRUK MOEN ISLAND	2	1008.8	1009.1	30.0	23.9	27.0	0.0	31.7	30	22.2	11+	0	0	23.9	84	242	-100	54	16	2	0	0	1.3	28	13.9	NW	4	2	5	24	8.5	42
WAKE	3	1011.5	1011.8	29.4	24.4	27.1	-0.4	30.6	27+	22.2	12	0	0	22.8	79	211	77	86	19	1	0	0	5.2	7	12.5	14	14	3	11	17	7.5	
YAP R	17	1007.1	1008.9	30.6	24.4	27.4	-0.2	31.7	30+	23.3	19	0	0	24.4	87	214	-121	44	24	2	0	0	0.5	26	8.0	SW	1	0	9	22	8.6	17
PENNSYLVANIA																																
ALLENTOWN	115	1002.4	1016.6	16.7	4.4	10.5	-1.6	23.9	20	- 4.4	29	0	6	4.4	70	88	12	38	8	2	T	T	2.8	26	16.5	29	31	16	8	7	4.1	
ERIE	223	988.8	1015.9	14.4	6.1	10.3	-1.2	23.3	20	- 3.3	29	0	2	4.4	69	98	14	35	15	2	T	T	2.5	24	13.0	15	7	8	5	18	6.7	
HARRISBURG	103	1004.1	1017.0	17.8	6.1	11.9	-1.3	26.7	15	- 4.4	30	0	4	4.4	63	93	17	43	8	1	T	T	2.1	27	14.3	W	31	13	9	9	4.7	66
PHILADELPHIA	2	1015.9	1016.9	17.8	6.1	12.1	-1.1	25.0	15	- 1.1	29	0	4	5.0	63	51	- 19	29	6	0	T	0	2.1	27	16.1	NW	31	17	7	7	3.8	68
PITTSBURGH	347	972.9	1017.2	14.4	3.3	8.9	-2.8	22.2	1	- 8.9	29	0	7	3.9	72	72	8	21	11	1	5	T	2.3	25	13.9	29	31	7	9	15	6.2	55
READING U	81			17.8	7.2	12.5	-1.5	24.4	20	- 1.7	29	0	2			64	- 8	30	7		0	0			21.5	W	31	16	9	6	4.2	63
SCRANTON	283	982.1	1016.5	15.0	5.0	9.8	-0.8	21.7	20	- 3.9	29	0	5	4.4	71	46	- 43	16	9	0	15	T	1.7	25	13.4	S	31	8	8	15	6.2	56
WILLIAMSPORT	161	997.6	1016.8	15.6	3.3	9.5	-2.2	21.7	31+	- 5.0	30	0	7	3.9	75	101	17	37	9	1	T	0	1.7	27	11.6	27	8	8	10	13	6.1	
RHODE ISLAND																																
BLOCK ISLAND	34			14.4	7.8	10.9	-1.9	18.9	1	0.6	29	0	0			29	- 48	13	6		0	0						11	11	9	5.0	
PROVIDENCE	16	1012.9	1015.1	17.2	5.6	11.2	-0.6	24.4	19	- 1.7	6	0	4	3.9	64	70	- 9	33	8	2	0	0	2.7	25	13.9	21	15	13	8	10	4.5	65

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station		Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)				
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
	Elevation (ground)	Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	°C.	°C.	°C.	°C.	°C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
SOUTH CAROLINA																																
CHARLESTON	12	1015.2	1017.0	23.9	12.8	18.4	-0.6	30.0	2	1.1	25	0	0	12.8	75	158	86	97	7	1	0	0	1.2	1	17.9Y	SW	7	13	4	14	5.7	58
CHARLESTON U	3			23.3	15.6	19.6	-0.5	29.4	3+	5.6	30	0	0			247	178	183	6		0	0			18.3	E	19					
COLUMBIA	66	1009.1	1017.4	23.9	10.6	17.1	-1.1	29.4	16	-3.3	30	0	3	10.0	70	59	-1	51	6	0	0	0	0.6	34	11.2	29	9+	18	4	9	4.2	74
GNVLE SPARTANBURG	292	983.4	1018.0	22.2	8.9	15.3	-1.9	29.4	1	-2.8	25	0	2	7.8	67	91	6	73	7	0	0	0	0.7	2	13.0	SW	7	17	6	8	3.7	75
SOUTH DAKOTA																																
ABERDEEN	395	969.2	1016.5	18.9	1.7	10.1	1.1	25.6	30	-6.1	24	0	14	1.1	58	9	-21	8	2	0	0	0	1.3	30	16.1	32	7	17	6	8	4.2	
HURON	391	969.9	1016.6	18.3	2.8	10.4	1.1	26.1	5	-4.4	24	0	10	2.2	62	9	-20	8	3	0	0	0	1.3	26	18.8	NW	7	16	5	10	4.4	81
RAPID CITY	965	906.5	1017.4	21.1	4.4	12.7	2.7	32.2	9	-1.7	21	1	1	-1.1	43	14	-6	14	2	0	0	0	1.9	33	19.2	NW	5	16	9	6	4.1	81
SIOUX FALLS	432	965.1	1016.8	18.3	3.3	10.9	0.8	25.0	5	-4.4	24	0	12	3.3	63	27	-5	23	2	1	0	0	1.2	27	13.4	30	7	16	5	10	4.4	
TENNESSEE																																
BRISTOL	459	964.4	1018.8	20.6	6.1	13.2	-1.3	27.2	16+	-2.2	30	0	7	6.1	67	55		27	8	1	T	T	0.4	30	15.6	28	8	13	11	7	4.1	
CHATTANOOGA	204	993.6	1018.3	21.7	7.2	14.6	-2.1	27.8	17+	-1.1	30+	0	3	8.9	75	26	-51	12	6	0	0	0	0.6	32	13.0	SW	8	16	7	8	4.3	69
KNOXVILLE	299	983.4	1018.8	21.7	8.3	15.0	-1.1	28.3	17+	0.0	25	0	1	7.8	66	27	-39	13	5	0	0	0	0.6	33	13.4	SW	8	17	1	13	4.5	60
MEMPHIS	78	1008.8	1019.1	22.8	9.4	16.0	-1.3	29.4	17	-0.6	25	0	1	7.2	61	14	-55	14	1	0	0	0	0.3	34	12.1	NW	11	20	3	8	3.5	81
NASHVILLE	180	996.6	1018.4	22.8	7.8	15.2	-1.2	30.0	17	-1.7	25	0	2	6.1	60	14	-44	10	6	0	0	0	0.9	27	12.5	NW	8	19	5	7	3.5	82
OAK RIDGE	276			20.6	6.1	13.4	-2.1	27.2	17+	-2.8	25	0	4			27	-40	12	5		0	0			15.6Y		9	16	7	8	4.1	
TEXAS																																
ABILENE	537	956.7	1017.9	25.6	12.8	19.2	0.2	35.0	15	4.4	22	4	0	7.8	52	68	-5	44	4	3	0	0	1.4	16	15.2	SE	17	17	6	8	3.5	72
AMARILLO	1098	894.3	1017.2	23.3	7.2	15.3	-0.6	33.9	10	2.8	21	2	0	3.3	52	26	-19	24	3	1	0	0	1.1	19	16.1	W	17	18	8	5	3.1	82
AUSTIN	182	996.6	1018.6	25.6	13.3	19.2	-2.3	32.8	16+	5.0	25	2	0	11.7	68	83	11	41	6	1	0	0	0.5	2	12.1	NW	18	16	6	9	4.1	58
BROWNSVILLE	5	1016.3	1016.9	27.2	16.7	21.9	-2.4	31.7	15+	8.9	23	0	0	16.7	76	19	-71	5	7	0	0	0	1.3	4	13.4	E	19	13	10	8	4.5	63
CORPUS CHRISTI	12	1015.9	1017.6	27.2	15.0	21.2	-2.4	32.8	10	7.2	23	5	0	15.0	74	35	-36	20	7	1	0	0	1.7	6	13.4	S	18	17	5	9	4.2	60
DALLAS	147	1001.4	1018.5	25.0	12.8	18.9	-1.0	33.3	10+	5.6	25	3	0	11.7	66	41	-28	22	5	2	0	0	0.5	16	17.4	SE	15	18	5	8	3.8	68
DEL RIO	313	981.7	1017.7	27.8	13.3	20.6	-1.3	32.2	15+	7.2	22	3	0	11.7	61	11	-39	11	1	0	0	0	1.9	12	9.4	14	17	17	8	6	3.1	
EL PASO	1194	884.9	1016.4	26.1	8.3	17.2	-0.8	33.3	9	3.9	29+	1	0	-0.6	31	5	-17	4	2	1	0	0	0.3	9	14.8	SW	16	24	4	3	1.8	92
FORT WORTH	164	998.3	1018.9	25.6	12.8	19.2	-0.7	33.9	9	5.0	25	3	0	11.1	65	50	-16	33	4	2	0	0	0.4	19	13.9	16	15	18	5	8	3.8	
GALVESTON U	2			24.4	18.9	21.6	-1.5	27.8	18+	13.3	25+	0	0			49	-24	27	4		0	0			17.0	NW	18					69
HOUSTON U	12			26.1	16.1	21.2	-1.2	32.8	10	7.8	25	1	0			86	-5	60	3		0	0										
HOUSTON	15	1015.9	1018.2	26.7	15.0	20.8	-1.1	31.7	16+	7.2	26+	0	0	13.3	68	78	-17	38	3	2	0	0	1.0	4	11.2	15	18	13	11	7	4.2	72
LUBBOCK	988	906.5	1017.2	25.6	9.4	17.5	1.3	33.9	10+	4.4	22	4	0	5.0	50	27	-24	22	5	4	0	0	0.4	15	13.4	32	17+	21	6	4	2.7	
MIDLAND	869	918.7	1016.5	26.1	9.4	17.7	-1.1	34.4	10	5.0	22	5	0	5.0	48	36	-6	36	1	2	0	0	1.0	15	13.0	17	17	22	7	2	1.9	
PORT ARTHUR	5	1017.6	1018.2	26.7	13.9	20.2	-1.1	31.7	10+	4.4	26+	0	0	13.9	73	20	-53	11	3	0	0	0	1.2	4	15.6	SE	18	14	9	8	4.5	71
SAN ANGELO	580	951.2	1017.5	26.7	11.1	18.8	-1.4	34.4	10+	3.3	28	4	0	10.0	62	54	7	36	2	2	0	0	1.1	18	19.7	30	18	21	5	5	2.9	
SAN ANTONIO	240	990.5	1018.6	26.1	12.8	19.3	-2.1	32.2	16	4.4	25	1	0	12.8	72	68	5	34	6	2	0	0	0.9	5	15.6	S	17	17	6	8	3.9	72
VICTORIA	32	1013.9	1018.0	26.7	14.4	20.4	-2.1	32.2	16	6.7	26	1	0	14.4	73	103	14	62	7	2	0	0	1.2	2	17.0Y	NW	18	16	8	7	3.9	
WACO	152	1000.3	1018.4	25.0	12.8	18.9	-1.9	32.2	10+	4.4	25	2	0	11.7	68	74	9	39	3	2	0	0	0.4	19	10.3	27	18	17	7	7	3.7	
WICHITA FALLS	303	981.7	1018.1	25.0	10.0	17.4	-1.7	35.0	10	3.9	27+	3	0	8.9	64	79	6	53	5	3	0	0	1.0	20	13.0	15	17	19	3	9	3.7	
UTAH																																
MILFORD	1533			23.3	-1.1	11.1	0.7	30.6	5	-5.6	31+	0	20			1	-19	1	1		0	0						24	3	4	2.3	
SALT LAKE CITY	1286	876.4	1020.7	21.7	3.3	12.5	1.6	28.3	10+	-1.1	31	0	2	0.6	52	10	-19	10	1	1	0	0	0.7	15	11.6	S	15+	20	8	3	3.1	89
WENDOVER	1291			18.9	6.1	12.3	0.6	26.1	5	2.2	31+	0	0			1	-11	1	1		0	0						22	7	2	2.3	
VERMONT																																
BURLINGTON	101	1001.0	1013.5	12.8	3.9	8.2	-0.4	24.4	20	-3.3	29	0	7	2.8	72	84	9	19	15	3	10	T	1.8	23	14.8	SW	15	3	6	22	8.1	37
VIRGINIA																																
LYNCHBURG	279			19.4	6.1	12.6	-1.9	26.1	16	-6.1	30	0	4			112	44	67	3	2	0	0			11.6	W	8	16	8	7	3.7	70
NORFOLK	8	1016.6	1017.5	20.0	10.0	15.0	-1.7	27.2	1	-1.7	30	0	1	8.9	69	33	-41	25	5	0	0	0	0.2	27	15.2	SE	7	19	5	7	3.8	67
RICHMOND	49	1011.9	1017.9	20.0	6.7	13.4	-1.4	25.6	16+	-5.0	30	0	5	6.7	69	35	-41	22	5	0	0	0	0.2	28	11.2	SE	7	16	9	6	3.9	72
ROANOKE	350	975.6	1017.9	20.0	6.7	13.3	-1.2	27.2	16+	-3.9	30	0	4	5.0	62	87	5	60	4	3	0	0	1.3	29	10.3	31	8	15	9	7	4.0	
WASHINGTON																																
OLYMPIA	59	1011.2	1018.6	17.8	6.1	11.8	1.1	23.9	23+	0.6	10	0	0	8.3	83	84	-50	25	12	0	0	0	1.7	20	13.4	19	6	3	7	21	7.9	
SEATTLE TACOMA	122	1002.4	1018.8	17.8	9.4	13.6	2.2	23.3	7	4.4	16	0	0	9.4	80	70	-32	23	13	0	0	0	1.3	19	13.4	1	6+	2	8	21	8.0	39
SPOKANE	718	935.3	1019.4	18.9	4.4	11.5	2.0	25.6	3	-3.3	16	0	2	1.7	56	1	-39	1	4	0	T	0	1.4	19	14.8	SW	6	8	10	13	6.0	59
STAMPEDE PASS R	1206			11.7	4.4	7.9	2.2	20.0	24	-1.7	16+	0	4			127	-97	33	18		97	51						3	6	22	8.0	
TATOOSH ISLAND R	31	1013.5	1016.7	13.9	10.0	12.1	1.0	16.7	4	7.2	19+	0	0	10.0	88	279	70	46	19	1	0	0	3.6	13	29.5	SW	16	3	5	23	8.0	36
WALLA WALLA U	289			20.6	8.9	14.9	2.1	28.9	4	4.4	16	0	0			19	-20	10	9		0	0			10.3	W	6	8	10	13	6.2	66
YAKIMA	321	980.4	1019.3	20.0	3.3	11.4	1.1	26.1	8	-2.2	16	0	2	2.8	63	2	-14	1	2	0	0	0	1.7	27	17.4	24	4	7	11	13	6.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	°C.	°C.	C.	°C.		°C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
WEST INDIES																																
SAN JUAN P.R.	5	1011.5	1014.0	31.1	23.9	27.5	0.8	33.3	4	21.1	29	3	0	23.3	80	129	- 19	22	20	5	0	0	2.3	9	10.3	E	16	2	21	8	5.9	65
SWAN ISLAND	9			29.4	25.6	27.4	-0.2	31.1	9+	22.8	27+	0	0			315	69	88	18		0	0						2	11	18	7.6	
WEST VIRGINIA																																
BECKLEY	763	929.6	1018.8	16.1	3.9	9.8		22.8	17+	- 7.8	29	0	8	3.9	71	68		23	9	0	5	T	1.2	24	11.2	24	8+	12	9	10	5.2	
CHARLESTON	286	983.7	1017.9	17.8	5.0	11.4	-2.6	25.6	15	- 6.1	29	0	6	5.6	70	53	- 12	24	10	1	T	0	1.3	23	11.2	28	23	9	13	9	5.4	
ELKINS	600	946.5	1018.4	16.7	1.7	9.3	-1.9	24.4	15	-10.0	29	0	12	3.9	76	64	- 13	16	10	2	10	0	1.8	27	16.5	25	31	10	10	11	5.8	
HUNTINGTON	252	987.8	1017.9	18.9	6.1	12.3	-1.7	27.8	15	- 5.0	30	0	5	5.6	69	57	10	28	8	2	0	0	1.1	23	9.4	26	31	13	8	10	4.8	
PARKERSBURG U	187			17.8	6.1	12.2	-1.7	26.1	20	- 5.0	30	0	5			58	6	28	7		0	0			13.9	W	31					60
WISCONSIN																																
GREEN BAY	208	989.2	1015.1	15.0	4.4	9.6	-0.1	26.1	18	- 3.9	28	0	9	5.0	75	34	- 15	23	6	1	0	0	1.7	28	17.0	SW	6	10	9	12	5.7	53
LA CROSSE	198	991.9	1016.5	16.7	3.9	10.2	-0.4	26.7	17	- 4.4	13	0	9	4.4	71	42	- 13	26	7	1	0	0	1.1	27	10.7	31	31	12	6	13	5.5	
MADISON	262	984.4	1016.0	15.6	3.9	9.6	-0.4	26.1	18	- 3.9	29	0	9	4.4	73	43	- 13	23	6	2	0	0	1.8	27	14.8	N	23	13	6	12	5.3	60
MILWAUKEE	205	990.5	1016.1	15.0	5.6	10.4	0.4	25.6	18+	- 3.9	29	0	2	5.6	72	68	15	39	9	3	T	T	1.8	27	13.9	W	31	14	5	12	5.1	63
WYOMING																																
CASPER	1627	840.8	1018.8	20.6	1.7	11.0	1.9	26.7	3	- 4.4	31	0	12	- 3.9	41	T	- 21	T	0	0	0	0	3.3	26	15.6	23	15	13	11	7	4.3	
CHEYENNE	1867	816.1	1019.1	18.9	3.3	11.1	2.5	26.1	3	- 1.7	31	0	4	- 3.3	43	19	- 2	19	2	0	T	T	4.0	30	18.8	N	16	18	6	7	3.7	86
LANDER	1696	832.7	1019.0	19.4	2.8	11.1	2.7	26.7	9	- 1.7	17	0	5	- 2.2	46	9	- 22	9	1	0	0	0	0.9	22	13.4	SW	15	12	8	11	4.9	77
SHERIDAN	1208	881.8	1019.1	21.1	2.2	11.6	2.8	30.0	9	- 2.8	17	0	9	- 1.7	46	1	- 28	1	1	0	0	0	1.1	31	22.4	NW	5	11	9	11	5.5	78

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.
A Maximum hourly average.
B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

OCTOBER 1965

State and station	Current season		Normals
	This month	Period July through this month	July through this month
ALABAMA			
BIRMINGHAM	171	184	99
HUNTSVILLE	135	150	139
MOBILE	43	43	22
MONTGOMERY	107	107	68
ALASKA			
ANCHORAGE	1055	1827	
ANNETTE	552	1239	1344
BARROW	1720	4433	4178
BARTER ISLAND	1729	4486	3979
BETHEL	1254	2613	2367
COLD BAY	871	2295	2196
FAIRBANKS	1580	2602	2348
JUNEAU	654	1678	1847
KING SALMON	1215	2435	2056
KOTZEBUE	1495	3098	2799
MC GRATH	1569	2759	2363
NOME	1294	3106	2764
ST. PAUL ISLAND	907	2726	2618
SHEMYA	720	2349	2337
YAKUTAT	775	2220	1875
ARIZONA			
FLAGSTAFF	467	884	873
PHOENIX	7	11	22
TUCSON	33	41	25
WINSLOW	236	313	251
YUMA	0	0	0
ARKANSAS			
FORT SMITH	144	160	139
LITTLE ROCK	137	156	136
TEXARKANA	100	108	78
CALIFORNIA			
BAKERSFIELD	18	18	37
BISHOP	146	231	290
BLUE CANYON	157	457	551
BURBANK	7	17	49
EUREKA U	285	1101	1114
FRESNO	41	53	78
LONG BEACH	10	10	52
LOS ANGELES	9	22	133
LOS ANGLES U	1	1	37
MT SHASTA R	250	540	588
OAKLAND	58	212	275
RED BLUFF	37	47	53
SACRAMENTO	32	51	93
SANDBERG U	98	259	232
SAN DIEGO	9	12	58
SAN FRANCISCO	101	417	362
SAN FRANCISCO U	73	546	586
SANTA CATALINA	45	166	75
SANTA MARIA	92	324	434
STOCKTON	38	53	77
COLORADO			
ALAMOSA	607	1114	1082
COLORADO SPRINGS	366	711	622
DENVER	302	611	560
GRAND JUNCTION	209	347	343
PUEBLO	273	456	380
CONNECTICUT			
BRIDGEPORT	307	369	373
HARTFORD	426	572	477
NEW HAVEN	376	489	446
DELAWARE			
WILMINGTON	349	401	321
DIST.OF COLUMBIA			
WASH NATL AP	236	255	250
FLORIDA			
APALACHICOLA U	38	38	16
DAYTONA BEACH	10	10	0
FORT MYERS	0	0	0
JACKSONVILLE	38	38	12
KEY WEST	0	0	0
LAKELAND U	4	4	0
MIAMI	0	0	0
ORLANDO	1	1	0
PENSACOLA	48	48	19
TALLAHASSEE	58	58	28
TAMPA	5	5	0
WEST PALM BEACH	0	0	0
GEORGIA			
ATHENS	171	173	127
ATLANTA	176	179	145
AUGUSTA	119	119	78
COLUMBUS	105	105	87
MACON	131	133	71
ROME	202	212	185
SAVANNAH	92	92	47
IDAHO			
BOISE	266	537	547
IDAHO FALLS 42NW R	610	1233	986
IDAHO FALLS 46W R	553	1180	943
LEWISTON	266	477	526
POCATELLO	440	909	665
ILLINOIS			
CAIRO U	195	220	200
CHICAGO O HARE	370	545	510
CHICAGO MIDWAY	350	475	407
MOLINE	363	499	443
PEORIA	391	509	419
ROCKFORD	392	557	529
SPRINGFIELD	321	388	363
INDIANA			
EVANSVILLE	283	327	286
FORT WAYNE	380	499	492
INDIANAPOLIS	355	439	406
SOUTH BEND	411	591	489
IOWA			
BURLINGTON	326	446	415
DES MOINES	310	478	471
DUBUQUE	437	656	649
SIOUX CITY	297	568	486
WATERLOO	412	683	597
KANSAS			
CONCORDIA	205	348	333
DODGE CITY	175	305	284
GOODLAND	303	614	468
TOPEKA	253	327	327
WICHITA	179	253	262
KENTUCKY			
COVINGTON	362	443	366
LEXINGTON	346	407	293
LOUISVILLE	304	351	302
LOUISIANA			
ALEXANDRIA	112	118	56
BATON ROUGE	64	65	31
LAKE CHARLES	50	52	19
NEW ORLEANS	54	54	19
SHREVEPORT	78	81	47
MAINE			
CARIBOU	737	1364	1211
PORTLAND	532	876	768
MARYLAND			
BALTIMORE	336	375	312
MASSACHUSETTS			
BLUE HILL OBS R	422	605	511
BOSTON	371	546	385
NANTUCKET	434	649	459
PITTSFIELD	572	922	827
WORCESTER	486	724	637
MICHIGAN			
ALPENA	620	1173	1026
DETROIT	419	538	447
DETROIT M WAYNE CO	510	704	449
DETROIT WILLOW RUN	517	755	447
FLINT	481	720	680
GRAND RAPIDS	462	662	605
HOUGHTON LAKE	593	1091	
LANSING	493	737	597
MARQUETTE U	547	1138	907
MUSKEGON	402	558	560
SAULT STE MARIE	671	1363	1060
MINNESOTA			
DULUTH	617	1408	1142
INTERNATIONAL FALLS	643	1425	1247
MINNEAPOLIS	447	862	747
ROCHESTER	463	844	719
ST CLOUD	499	1005	849
MISSISSIPPI			
JACKSON	129	138	59
MERIDIAN	131	139	81
VICKSBURG U	75	88	53
MISSOURI			
COLUMBIA	227	282	305
KANSAS CITY	175	219	259
ST JOSEPH	189	234	351
ST LOUIS	286	342	311
SPRINGFIELD	269	318	268
MONTANA			
BILLINGS	327	896	694
GLASGOW	389	943	956
GREAT FALLS	355	1020	882
HAVRE	443	1070	982
HELENA	478	1139	985
KALISPELL	602	1370	1124
MILES CITY	375	914	688
MISSOULA	555	1196	1062
NEBRASKA			
GRAND ISLAND	284	566	495
LINCOLN U	227	425	382
NORFOLK	330	662	517
NORTH PLATTE	335	691	569
OMAHA	257	431	422
SCOTTSBLUFF	353	723	597
VALENTINE	355	781	679
NEVADA			
ELKO	452	881	829
ELY	485	1017	897
LAS VEGAS	17	32	78
RENO	383	746	824
WINNEMUCCA	417	787	780
NEW HAMPSHIRE			
CONCORD	556	911	738
MT WASHINGTON OBS	1164	2997	2806
NEW JERSEY			
ATLANTIC CITY	368	465	290
ATLANTIC CITY U	284	315	259
NEWARK	339	400	278
TRENTON U	330	399	321
NEW MEXICO			
ALBUQUERQUE	217	273	241
CLAYTON	292	461	382
RATON	416	622	594
ROSWELL	200	234	220
SILVER CITY	198	243	189
NEW YORK			
ALBANY	421	601	597
BINGHAMTON	558	859	759
BUFFALO	525	716	637
NEW YORK U	239	306	263
J.F. KENNEDY	289	361	284
NEW YORK LA GUARDIA	280	311	250
ROCHESTER	496	695	581
SYRACUSE	521	742	581
NORTH CAROLINA			
ASHEVILLE	344	390	369
CAPE HATTERAS R	135	135	78
CHARLOTTE	194	201	130
GREENSBORO	230	248	225
RALEIGH	208	220	185
WILMINGTON	102	102	74
NORTH DAKOTA			
BISMARCK	479	1106	861
FARGO	544	1099	858
WILLISTON	494	1139	936
OHIO			
AKRON	442	572	486
CINCINNATI OBS	299	355	302
CLEVELAND	418	558	523
COLUMBUS	330	415	437
DAYTON	371	452	394
MANSFIELD	500	697	542
TOLEDO	486	699	539
YOUNGSTOWN	481	671	557
OKLAHOMA			
OKLAHOMA CITY	129	157	179
TULSA	122	137	176
OREGON			
ASTORIA	295	772	861
BURNS U	423	910	774
EUGENE	288	468	563
MEACHAM	379	1117	1076
MEDFORD	231	348	450
PENDLETON	226	413	461
PORTLAND	227	404	502
SALEM	293	531	517
SEXTON SUMMIT R	251	711	776
PENNSYLVANIA			
ALLENTOWN	432	536	443
ERIE	441	587	518
HARRISBURG	357	408	361
PHILADELPHIA	342	401	351
PITTSBURGH	518	666	489
PITTSBURGH U	393	459	351
READING U	320	379	311
SCRANTON	471	612	585
WILLIAMSPORT	484	663	495
RHODE ISLAND			
BLOCK ISLAND	405	522	401
PROVIDENCE	395	526	484
SOUTH CAROLINA			
CHARLESTON	95	95	59
CHARLESTON U	64	64	34
COLUMBIA	138	140	84
GNVLE-SPARTANBURG	186	192	139
SOUTH DAKOTA			
ABERDEEN	447	946	766
HURON	436	896	694
RAPID CITY	312	803	680
SIOUX FALLS	408	852	674
TENNESSEE			
BRISTOL	292	316	287
CHATTANOOGA	215	230	161
KNOXVILLE	200	213	201
MEMPHIS	162	184	148
NASHVILLE	198	224	188
OAK RIDGE	279	301	231
TEXAS			
ABILENE	67	71	99
AMARILLO	191	264	223
AUSTIN	58	60	3[illegible]
BROWNSVILLE	8	8	0
CORPUS CHRISTI	22	22	0
DALLAS	74	80	62
DEL RIO	16	19	31
EL PASO	107	111	84
FORT WORTH	60	62	65
GALVESTON U	5	5	0
HOUSTON U	16	19	0
HOUSTON	20	22	6
LUBBOCK	94	116	192
MIDLAND	96	107	87
PORT ARTHUR	43	43	22
SAN ANGELO	76	76	68
SAN ANTONIO	62	64	31
VICTORIA	28	30	6
WACO	72	74	43
WICHITA FALLS	120	133	99
UTAH			
MILFORD	399	666	542
SALT LAKE CITY	317	576	500
WENDOVER	329	529	420
VERMONT			
BURLINGTON	558	917	839
VIRGINIA			
LYNCHBURG	317	359	274
NORFOLK	195	202	136
RICHMOND	275	306	250
ROANOKE	287	334	280
WASHINGTON			
OLYMPIA	356	758	759
SEATTLE TACOMA	261	523	671
SPOKANE	377	800	695
STAMPEDE PASS R	573	1562	1658
TATOOSH ISLAND R	346	1291	1286
WALLA WALLA U	203	340	397
YAKIMA	378	652	606
WEST VIRGINIA			
BECKLEY	468	592	
CHARLESTON	382	455	317
ELKINS	497	640	569
HUNTINGTON	337	406	320
PARKERSBURG U	341	397	324
WISCONSIN			
GREEN BAY	485	807	736
LA CROSSE	456	781	621
MADISON	486	813	713
MILWAUKEE	438	663	735
WYOMING			
CASPER	401	966	738
CHEYENNE	397	909	803
LANDER	395	942	784
SHERIDAN	372	946	814

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

OCTOBER 1965

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				ø ALL OTHER			
								†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS
Alabama *																													
Alaska *																													
Arizona *																													
Arkansas *																													
California										1	0	3	0																
Colorado																		0	0	°4	C								
Connecticut *																													
Delaware										0	0	4	0																
Florida																										0	0	7	C
Georgia										0	0	3	0													0	0	R 4	0
Hawaii *																													
Idaho *																													
Illinois *																													
Indiana	1	1	0	0	4					1	0	3	0																
Iowa						0	0	4	4	0	0	4	5																
Kansas																4												R 4	5
Kentucky											2	?																	
Louisiana *																													
Maine *																													
Maryland	1	1	0	0	4					0	1	4	0																
Massachusetts										0	0	4	0																
Michigan	1	1	0	0	4																								
Minnesota														0	0	3	0												
Mississippi						0	0	1	3	0	0	4	0																
Missouri						0	0	3	0																				
Montana *																													
Nebraska *																													
Nevada *																													
New Hampshire										0	0	4	0																
New Jersey *																													
New Mexico *																													
New York											2	5	4																
North Carolina	2	1	1	4	0					0	0	4	0													0	0	4	4
North Dakota *																													
Ohio *																													
Oklahoma																										0	0	5	5
Oregon *																													
Pacific Area																										208	?	°5	C
Pennsylvania										0	0	4	0	0	0	3	0												
Puerto Rico														2	1	0	0												
Rhode Island *																													
South Carolina	4	1	0	0	5					0	0	3	0																
South Dakota *																													
Tennessee *																													
Texas	6	2	0	0	4	0	0	3	4																				
Utah *																													
Vermont										0	0	4	0																
U. S. Virgin Is. *																													
Virginia	1	1	0	0	3																								
Washington												4																	
West Virginia										0	0	2	0																
Wisconsin														0	0	4	0									0	0	H 5	0
Wyoming *																													

C Crop damage
° Includes crop damage
R Rain
H Heavy rain

* No occurrence of storms or unusual weather phenomena.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
ø For breakdown of "All Others", and for detailed listing of other storms, see the U. S. Weather Bureau monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:

1	Less than $50
2	$50 to $500
3	$500 to $5,000
4	$5,000 to $50,000
5	$50,000 to $500,000
6	$500,000 to $5,000,000
7	$5,000,000 to $50,000,000
8	$50,000,000 to $500,000,000
9	$500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

OCTOBER 1965

Flooding reported during October in continental United States was mostly light. The most extensive damages were from flash flooding in the Red Basin in extreme southwestern Oklahoma.

ATLANTIC SLOPE DRAINAGE

Light overflow occurred along the Ocmulgee River at Macon, Ga., on the 2d and 3d. This flooding was due to heavy rain on the 1st. Several stations reported amounts over 4 inches during the 24-hour period. Godfrey, Ga., reported a 24-hour total of 5.81 inches.

EAST GULF OF MEXICO DRAINAGE

Minor flooding occurred on the Apalachicola River at Blountstown, Fla., on the 8th. This overflow was due to 1 to 2 inches of rainfall on the 7th. The crests at other points were well below bankfull level. No damages were reported.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--The flooding in the Upper Mississippi Basin during October was a continuation of the flooding which began during September. This flooding was due to heavy rainfall on September 20, 21, and 26-29. Dubuque, Iowa, reported 7.01 inches during the 48-hour period ending September 21. Other stations reported rainfall amounts, generally 4 to 6 inches. The rainfall on September 26-29 was generally heavier over the upper portions of the Des Moines and Iowa-Cedar Basins in Iowa.

Most of the streams crested during September and were back within their banks on October 1. The Kickapoo River at Steuben, Wis., crested on October 2, 1.2 feet above flood level. It continued in flood until October 4. The Pecatonica at Shirland, Ill., and the Rock at Joslin, Ill., went out of their banks on September 22 and continued in flood until October 3 and 5, respectively. The Big Muddy River at Murphysboro, Ill., was in light flood from September 27 to October 1.

Stages slightly above flood level occurred in Iowa during the first part of October on the North Racoon at Jefferson, on the Des Moines at Des Moines, and on the Cedar River at Charles City and Waterloo.

The main stem of the Mississippi River in the reach at and below Keithsburg, Ill., crested September 25-29, generally 1 to 4 feet above flood stage. At Quincy, Ill., and Hannibal, Mo., the Mississippi reached the highest September level since September 1938. By the end of September, the Mississippi had receded within its banks as far downstream as Winfield, Mo. On October 1 it was back within its banks at all points.

Missouri Basin.--Sappa Creek at Oberlin, Kans., went out of its banks on September 29 and continued in flood until October 2. The crest on October 1 was nearly 2 feet above flood stage. Minor flooding occurred on Beaver Creek at Beaver City, Nebr., on October 1. The Little Blue River at Deweese, Nebr., went above flood stage on September 30 due to locally heavy rain and continued in flood until October 1.

High stages on the upper channel of the Big Blue River and on the West Fork from unusually heavy rainfall in September caused considerable overflow at Crete, Nebr., on October 1-5. Two to 4 inches of rain over west central and northwest Kansas and adjacent areas of southern Nebraska on the 17th and 18th caused minor flooding on Sappa and Prairie Dog Creeks and on the North Fork of the Solomon River. Much surface water accumulation resulted from the heavy rains in Scott County, Kans. A 10-square mile temporary lake from 1 to 5 feet deep formed south of Scott City at the lower end of the non-contributing White Woman Creek. Losses were comparatively light with flooding generally confined to normal overflow areas and limited reaches above reservoirs on the upper Republican and Solomon Rivers.

Heavy rain on the 14th and 15th produced flash floods on the Little Blue, the Lamine, and the Blackwater Rivers in Missouri. Substantial flooding occurred in the upper reaches of the Blackwater River.

Ohio Basin.--Heavy rain during the night of September 30 and October 1 over the upper French Broad Basin resulted in more than 3 feet of flooding at Rosman, N. C. The total rainfall at Rosman during the 24-hour period ending at 7 a.m., October 1 was 5.04 inches. An additional 0.96 inch was reported by noon on that date. East Fork, N. C., in the same general area, but in the headwaters of the Pigeon River reported 5.5 inches during the 24-hour period. Rainfall amounts tapered off downstream in the French Broad Basin to 0.81 inch at Hot Springs, N. C. Minor damage resulted from the flash flooding to a few low-lying homes and business establishments.

White Basin.--The Cache River at Patterson, Ark., continued in flood from September 12 to October 12, for a period of 30 days. Over 1200 acres of soybean and rice crops in low areas along the Prairie-Woodruff County line were destroyed.

Arkansas Basin.--Heavy rains in the headwaters of the Cimarron River on the 17th and 18th produced minor flooding at Waynoka, Okla., on the 21st. Downstream at Okeene and Dover, Okla., the streams rose to about bankfull stage. Farther downstream at Perkins, Okla., the crest was a little over one-half bankfull.

Red Basin.--Heavy rains, totaling 3 to 5 inches in southwestern Oklahoma, late on the 17th and early on the 18th, caused flash flooding of creeks and tributaries. Some schools were closed on the 18th due to the inundation of highways and secondary roads. Lowland flooding resulted in some losses of cattle. Cotton harvesting was halted for a few days due to the rain.

Heavy rains on the 19th- 21st resulted in flooding along the Washita at Carnegie and Anadarko, Okla., between the 19th and 22d. The most extensive damages reported were to real and personal property in the extreme southwestern counties. Damages to crops and livestock were minor.

WEST GULF OF MEXICO DRAINAGE

Brief heavy rains, up to 3 inches, on the 18th caused flash flooding on the extreme upper reaches of the Nueces and Frio Rivers in Texas. Bankfull stages and less occurred downstream.

FLOOD STAGE DATA

(All dates in October unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
ATLANTIC SLOPE DRAINAGE	Ft.			Ft.	
Ocmulgee: Macon, Ga.	18	2	3	19.7	3
EAST GULF OF MEXICO DRAINAGE					
Apalachicola: Blountstown, Fla.	15	8	8	15.2	8
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Root: Hokah, Minn.	47	Sep. 29	1	48.4	Sep. 30
Upper Iowa: Dorchester(nr), Iowa	14	Sep. 29	1	15.8	1
Kickapoo: Soldiers Grove, Wis.	723	Sep. 29	1	723.7	1
Gays Mills, Wis.	698	1	1	698.0	1
Steuben, Wis.	8	Sep. 30	4	9.2	2
Pecatonica: Shirland, Ill.	10E	Sep. 22	3	13.45	27
Rock: Joslin, Ill.	10	Sep. 22	5	#11.6	Sep. 24
Cedar: Charles City, Iowa	12	Sep. 29	1	15.25	Sep. 30
Waterloo, Iowa	15	2	2	15.1	2
Iowa: Wapello, Iowa	13	Sep. 21	1	16.0	Sep. 23
North Racoon: Jefferson, Iowa	10	Sep. 29	1	12.4	Sep. 30
Des Moines, Iowa (SE 14th St.)	21	2	3	21.2	2
Big Muddy: Murphysboro, Ill.	16	Sep. 27	1	16.9	29
Mississippi: Grafton, Ill.	18	Sep. 24	1	20.9	28
Lock and Dam #26 TW, Alton, Ill.	21	24	1	24.65	28
Chester, Ill.	27	25	1	29.8	28
Cape Girardeau, Mo.	32	26	1	33.6	29
Missouri Basin	Ft.			Ft.	
Beaver Creek: Beaver City, Nebr.	11	1	1	11.4	1
Sappa Creek: Oberlin, Kans.	11	Sep. 29 20	2 22	#12.85 #12.55	1 21
Beaver City(nr), Nebr.	16	17	18	16.75	17-18
Stamford, Nebr.	14	18	20	18.0	19
Prairie Dog Creek: Woodruff(nr), Kans.	18	19	19	19.8	19
North Fork Solomon: Lenora, Kans.	10	18	18	13.0	18
Little Blue: Deweese, Nebr.	8	Sep. 30	1	9.8	1
Big Blue: Crete, Nebr.	16	1	5	20.6	4
Little Blue: Lake City, Mo.	18	14	14	19.7	14
Lamine: Clifton City, Mo.	19	15	16	#21.3	16
Blackwater: Valley City, Mo.	20	15	16	E27.0	15
South Grand: Brownington, Mo.	19	18	18	19.1	18
Ohio Basin					
French Broad: Rosman, N. C.	8	1	1	11.1	1
White Basin					
Cache: Patterson, Ark.	7	Sep. 12	12	(8.6 (8.5	Sep. 18 Sep. 24
Arkansas Basin					
Cimarron: Waynoka, Okla.	8	21	21	8.3	21
Red Basin					
Washita: Carnegie, Okla.	18	19	21	#20.95	19
Anadarko, Okla.	19	21	22	19.75	21

* Provisional
# Highest Stage Observed
E Estimated

RAWINSONDE DATA

Average monthly values

OCTOBER 1965

ALBANY, N. Y.
1005 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	86	5.0	83	243	3.7
1000	31	125			263	4.9
950	31	547	6.4	67	263	10.2
900	31	989	4.8	64	273	15.3
850	31	1,454	2.6	61	274	20.0
800	31	1,943	.9	56	274	22.1
750	31	2,459	- 1.5	51	272	23.9
700	31	3,008	- 4.3	49	270	27.0
650	31	3,586	- 7.3	45	268	29.7
600	31	4,209	-10.7	37	270	32.4
550	30	4,865	-15.0	R34	271	36.1
500	30	5,584	-19.5	35	270	39.6
450	30	6,355	-24.7	R30	269	42.5
400	30	7,207	-30.4	R27	272	45.6
350	30	8,144	-36.8	R24	271	51.5
300	30	9,195	-43.5	R22	269	53.6
250	30	10,406	-49.2		274	60.2
200	30	11,858	-52.3		274	53.2
175	30	12,719	-53.8		272	50.9
150	30	13,705	-55.5		271	45.5
125	30	14,864	-57.0		269	35.9
100	30	16,270	-58.8		273	30.1
80	30	17,670	-58.3		271	20.0
70	30	18,512	-57.4		274	16.9
60	30	19,487	-57.2		277	15.5
50	29	20,644	-56.3		277	15.7
40	29	22,063	-55.7		275	13.8
30	29	23,906	-52.8		277	14.2
25	27	25,080	-52.0		276	16.1
20	26	26,532	-50.0		270	15.9
15	22	28,400	-48.1		268	17.9
10						
7						
5						

ALBUQUERQUE, N. MEX.
842 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,619	8.1	56	54	3.3
1000	31	171				
950	31	605				
900	31	1,063				
850	31	1,539				
800	31	2,045	11.7	35	312	3.5
750	31	2,582	9.2	36	307	5.2
700	31	3,151	5.9	35	310	7.2
650	31	3,751	1.8	33	321	8.4
600	31	4,394	- 2.4	31	321	8.0
550	31	5,070	- 6.6	R24	317	7.6
500	31	5,817	-11.7	R23	322	9.9
450	31	6,606	-17.4	R24	323	10.1
400	31	7,487	-24.2	R26	330	13.2
350	31	8,445	-31.9	R27	338	16.5
300	31	9,515	-40.5	R27	340	19.0
250	31	10,731	-49.7		339	20.8
200	31	12,165	-57.1		337	17.9
175	31	13,003	-60.1		322	15.7
150	31	13,959	-62.7		304	13.8
125	31	15,074	-65.5		306	14.4
100	30	16,426	-67.1		311	10.3
80	30	17,775	-65.8		315	7.4
70	29	18,592	-63.2		319	5.8
60	29	19,546	-60.9		330	3.9
50	29	20,684	-59.0		310	3.7
40	29	22,092	-56.6		286	4.9
30	29	23,928	-53.8		270	8.2
25	29	25,103	-52.5		269	9.7
20	28	26,548	-51.3		270	9.9
15	20	28,410	-50.0		283	15.3
10						
7						
5						

AMARILLO, TEXAS
895 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,095	9.5	66	238	4.9
1000	31	158				
950	31	591				
900	31	1,048				
850	31	1,524	13.3	44	241	8.2
800	31	2,032	11.3	41	282	6.2
750	31	2,565	8.3	38	302	[illegible]
700	31	3,135	4.5	38	323	7.0
650	31	3,730	.6	37	326	9.1
600	31	4,373	- 3.5	35	323	8.9
550	31	5,046	- 7.8	30	320	9.5
500	31	5,790	-12.9	29	327	13.2
450	31	6,576	-18.4	28	326	14.4
400	31	7,455	-24.9	28	325	16.3
350	31	8,411	-32.4	27	323	17.1
300	31	9,479	-40.9	26	331	18.5
250	31	10,695	-49.5		318	18.1
200	31	12,129	-56.9		290	17.3
175	31	12,970	-59.5		281	19.6
150	31	13,927	-62.8		283	18.1
125	30	15,045	-65.5		287	16.9
100	30	16,395	-67.2		295	11.3
80	30	17,747	-65.1		293	8.7
70	30	18,563	-63.2		300	5.2
60	30	19,515	-61.1		281	5.4
50	30	20,652	-59.1		275	5.2
40	30	22,059	-56.9		272	5.2
30	30	23,891	-54.4		270	7.6
25	30	25,062	-53.0		268	11.3
20	28	26,506	-51.5		273	11.5
15	21	28,364	-49.7		282	16.1
10	15	31,006	-47.6		275	14.8
7	14	33,386	-44.6		269	16.5
5	11	35,680	-39.1			

ANCHORAGE, ALASKA
994 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	29	- 1.4	67	1	3.9
1000	31	- 7				
950	31	402	- 1.4	62	[illegible]	8.5
900	31	831	- 2.7	64	36	8.4
850	31	1,283	- 4.5	65	79	6.2
800	31	1,759	- 7.0	70	112	6.2
750	31	2,259	-10.1	68	137	9.4
700	31	2,789	-13.1	61	150	9.7
650	31	3,347	-16.3	56	159	8.9
600	31	3,948	-20.2	54	161	9.1
550	31	4,585	-24.4	50	167	9.5
500	31	5,275	-28.8	48	174	10.1
450	31	6,017	-34.1	48	184	10.7
400	31	6,836	-40.0	50	186	12.2
350	31	7,736	-46.1		192	13.0
300	31	8,747	-51.9		203	16.7
250	31	9,918	-54.9		219	18.3
200	31	11,352	-51.7		229	21.0
175	31	12,220	-50.7		232	21.8
150	31	13,224	-50.6		234	22.9
125	31	14,411	-50.7		238	24.7
100	31	15,865	-50.7		241	26.8
80	31	17,316	-51.4		244	28.2
70	31	18,182	-51.6		245	29.9
60	31	19,181	-52.1		247	30.5
50	31	20,360	-52.7		250	32.4
40	30	21,801	-52.8		253	32.4
30	30	23,654	-53.5		257	35.4
25	28	24,843	-52.8		257	36.3
20	26	26,286	-52.5		256	35.9
15	19	28,146	-52.2		266	42.9
10						
7						
5						

* ANNETTE, ALASKA
1003 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	37	7.9	84	144	8.2
1000	31	66			145	8.4
950	31	488	5.9	83	165	17.1
900	31	929	3.1	87	178	20.4
850	31	1,391	.4	85	189	22.5
800	31	1,875	- 2.3	81	203	23.1
750	31	2,385	- 5.1	74	208	26.4
700	31	2,925	- 8.2	73	209	28.2
650	31	3,494	-11.7	68	212	29.9
600	31	4,107	-15.8	62	213	32.2
550	31	4,752	-20.1	64	215	33.6
500	31	5,458	-24.9	59	218	36.1
450	31	6,213	-30.0	55	223	38.9
400	31	7,048	-35.8	52	227	40.4
350	31	7,964	-41.8	58	240	41.2
300	31	8,994	-48.1		243	44.7
250	31	10,182	-52.0		241	49.7
200	29	[illegible]	-53.8		241	44.5
175	28	12,482	[illegible]		236	45.6
150	28	13,473	-53.6		239	41.4
125	28	14,644	-54.2		239	37.7
100	28	16,074	-54.3		243	34.0
80	28	17,502	-54.8		246	28.6
70	28	18,354	-54.7		248	23.5
60	27	19,341	-54.5		249	21.0
50	27	20,507	-55.0		255	18.3
40	27	21,932	-55.1		256	18.3
30	25	23,774	-53.6		266	18.3
25	21	24,937	-53.8		271	18.8
20	19	26,376	-53.7		276	20.2
15	16	28,248	-51.9		277	19.2
10	10	30,890	-50.7			
7						
5						

ATHENS, GA.
989 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	246	10.3	87	360	2.7
1000	31	155				
950	31	586	13.8	62	36	5.2
900	31	1,041	12.2	56	347	1.0
850	31	1,519	10.4	52	269	5.4
800	31	2,022	8.4	43	274	9.7
750	31	2,555	6.0	37	280	9.9
700	31	3,116	3.1	34	284	12.0
650	31	3,707	- .3	32	283	13.2
600	31	4,350	- 4.0	29	290	15.3
550	31	5,026	- 7.8	27	276	22.1
500	31	5,768	-12.1	25	269	25.6
450	31	6,560	-17.7	26	268	27.8
400	31	7,438	-24.0	27	264	32.8
350	31	8,399	-30.9	27	262	37.7
300	31	9,474	-39.1	31	261	43.3
250	31	10,700	-47.8		261	50.7
200	31	12,146	-55.3		261	58.9
175	31	12,992	-58.6		264	54.8
150	31	13,951	-62.5		265	51.7
125	31	15,067	-65.6		267	40.6
100	29	16,418	-67.3		267	29.7
80	28	17,764	-64.8		273	18.8
70	28	18,582	-62.6		273	12.6
60	28	19,537	-60.3		266	11.5
50	28	20,680	-57.6		266	11.5
40	26	22,095	-54.9		274	11.8
30	25	23,944	-52.3		273	13.2
25	25	25,127	-50.7		265	16.1
20	24	26,583	-49.7		264	20.0
15	13	28,471	-48.2		262	28.2
10						
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* BARROW, ALASKA
1006 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	8	-12.9	81	167	3.1
1000	31	57			136	2.3
950	31	450	-11.8	86	176	4.5
900	31	862	-13.3	77	197	4.5
850	31	1,296	-14.9	73	221	4.3
800	31	1,753	-16.8	72	230	4.7
750	31	2,237	-18.7	63	239	5.6
700	31	2,748	-21.3	63	236	6.0
650	31	3,292	-24.1	60	236	7.0
600	31	3,873	-27.5	59	225	7.8
550	31	4,492	-31.4	56	223	9.7
500	31	5,164	-36.0	56	220	11.1
450	31	5,886	-40.8	51	220	13.2
400	31	6,682	-46.3		218	14.2
350	31	7,558	-52.0		222	16.3
300	31	8,547	-55.7		224	18.5
250	31	9,708	-54.8		223	19.0
200	31	11,144	-52.5		227	18.8
175	31	12,007	-52.2		230	19.4
150	31	13,004	-52.4		232	18.5
125	31	14,181	-53.0		237	19.8
100	31	15,617	-53.8		235	21.2
80	31	17,047	-54.7		239	24.3
70	29	17,903	-55.3		241	25.6
60	29	18,884	-56.0		242	26.6
50	29	20,040	-56.8		244	28.2
40	29	21,450	-57.6		246	31.7
30	28	23,275	-58.1		247	34.0
25	28	24,423	-58.1		251	34.0
20	27	25,944	-57.3		253	37.9
15	27	27,663	-57.2		253	40.0
10	21	30,237	-55.5		256	48.0
7	8	32,589	-54.1			

BARTER IS., ALASKA
1006 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	15	-12.5	89	245	3.9
1000	31	63			265	3.5
950	31	459	-10.5	79	293	4.5
900	31	873	-11.4	76	283	5.1
850	31	1,310	-13.1	75	279	5.4
800	31	1,771	-14.6	70	274	5.1
750	31	2,257	-16.4	68	242	6.4
700	31	2,776	-18.5	65	242	7.8
650	31	3,324	-21.0	58	239	10.9
600	31	3,914	-24.0	56	235	12.4
550	31	4,542	-28.0	54	233	15.0
500	31	5,223	-32.6	56	234	17.7
450	31	5,953	-37.7	55	232	19.4
400	31	6,761	-43.3	52	229	23.1
350	31	7,648	-49.3		230	26.6
300	31	8,646	-54.9		230	30.1
250	30	9,812	-56.5		230	29.9
200	30	11,241	-52.6		233	26.2
175	30	12,104	-52.3		237	27.4
150	29	13,103	-52.4		238	27.4
125	29	14,282	-52.4		241	25.1
100	29	15,723	-53.1		239	25.6
80	28	17,155	-54.1		241	29.1
70	28	18,009	-54.7		244	28.7
60	28	18,993	-55.2		244	31.1
50	28	20,155	-56.0		247	33.0
40	27	21,573	-56.4		251	36.3
30	27	23,396	-57.0		252	40.6
25	26	24,548	-57.1		257	45.3
20	24	25,952	-57.0		257	49.6
15	18	27,767	-55.9		256	62.7
10						
7						

BETHEL, ALASKA
999 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	29	39	- 5.9	85	17	4.1
1000	29	32			356	4.3
950	29	435	- 5.2	71	28	10.3
900	29	859	- 6.9	72	19	8.5
850	29	1,304	- 8.5	67	6	7.2
800	29	1,774	-10.2	56	359	7.6
750	29	2,268	-12.5	48	358	6.4
700	29	2,793	-15.4	47	341	6.8
650	29	3,346	-18.7	44	328	7.2
600	28	3,940	-22.6	47	316	7.0
550	28	4,566	-26.8	45	305	7.6
500	28	5,255	-31.2	48	293	6.2
450	28	5,983	-36.3	44	273	8.4
400	28	6,801	-42.0	50	275	9.9
350	27	7,692	-47.7		262	12.0
300	27	8,696	-52.6		260	12.4
250	27	9,869	-54.2		263	15.3
200	26	11,314	-51.4		265	19.4
175	25	12,183	-50.8		264	19.6
150	25	13,187	-50.7		265	20.0
125	25	14,375	-50.8		262	22.0
100	25	15,827	-50.7		258	25.6
80	24	17,279	-51.1		257	26.6
70	24	18,145	-51.7		257	29.5
60	24	19,146	-52.3		258	29.5
50	24	20,324	-52.6		255	33.6
40	21	21,763	-52.7		256	34.8
30	19	23,625	-52.6		253	38.9
25	19	24,804	-52.0		258	41.6
20	18	26,248	-51.3		256	44.5
15	10	28,154	-51.1			
10						
7						

BISMARCK, N. DAK.
957 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	505	4.0	68	314	2.7
1000	31	141				
950	31	562			292	3.5
900	31	1,007	9.1	46	308	11.1
850	31	1,480	7.9	42	315	17.1
800	31	1,977	5.2	45	318	20.8
750	31	2,500	2.4	42	314	23.5
700	31	3,056	- .8	40	309	27.6
650	31	3,639	- 4.0	39	308	29.3
600	31	4,272	- 7.6	38	309	35.0
550	31	4,939	-11.9	38	307	36.1
500	31	5,667	-16.7	36	305	38.7
450	31	6,442	-22.2	34	305	41.6
400	31	7,336	-28.5	33	304	45.1
350	31	8,249	-35.4	R31	306	49.1
300	31	9,305	-43.0		307	54.0
250	31	10,511	-51.3		304	57.1
200	31	11,940	-56.6		305	56.7
175	31	12,783	-57.9		303	52.4
150	31	13,752	-58.8		301	44.5
125	31	14,895	-59.7		301	37.9
100	31	16,285	-60.5		301	33.0
80	31	17,679	-59.9		303	21.6
70	31	18,512	-59.7		304	20.0
60	31	19,479	-58.8		308	14.4
50	31	20,625	-58.2		306	12.8
40	30	22,029	-57.4		320	10.5
30	29	23,855	-55.7		[illegible]	9.7
25	28	25,016	-54.8		323	8.5
20	27	26,453	-53.0		312	10.7
15	21	28,336	-50.5		304	13.8
10	5	31,045	-44.9			
7						

BOISE, IDAHO
921 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	868	8.1	60	133	4.5
1000	31	178				
950	31	607				
900	31	1,057	12.9	43	125	3.8
850	31	1,537	12.6	35	225	1.7
800	31	2,043	9.7	35	275	5.4
750	31	2,572	6.4	36	280	10.1
700	31	3,138	3.0	35	273	12.8
650	31	3,729	- .2	32	267	15.2
600	31	4,371	- 4.3	R28	268	18.6
550	31	5,044	- 8.8	R27	271	22.5
500	31	5,784	-13.4	R24	270	25.3
450	31	6,574	-18.9	R24	285	27.6
400	31	7,445	-25.2	R24	277	29.3
350	31	8,400	-32.6	R23	279	31.5
300	31	9,467	-41.1	R22	291	31.3
250	31	10,682	-50.1		297	31.3
200	31	12,112	-57.7		282	30.1
175	31	12,949	-60.6		281	31.5
150	31	13,904	-62.3		280	29.7
125	31	15,025	-64.3		280	27.8
100	31	16,387	-64.4		289	22.0
80	31	17,754	-63.4		291	14.8
70	31	18,575	-62.4		294	10.3
60	30	19,526	-60.9		298	8.9
50	29	20,664	-59.2		304	9.1
40	29	22,066	-58.1		316	7.8
30	27	23,884	-56.2		326	7.0
25	24	25,051	-54.9		323	6.4
20	23	26,485	-53.2		328	5.8
15	16	28,346	-51.3		6	10.1
10						
7						
5						

* BROWNSVILLE, TEXAS
1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	7	17.5	91	335	2.7
1000	31	142	20.5	80	4	3.3
950	31	582	18.4	75	55	3.7
900	31	1,048	15.8	70	47	2.5
850	31	1,532	13.6	61	346	2.1
800	31	2,042	11.5	48	341	2.9
750	31	2,575	9.1	43	330	4.3
700	31	3,149	6.4	34	318	6.2
650	31	3,749	3.3	31	296	6.6
600	31	4,399	- .5	30	286	8.0
550	31	5,083	- 4.9	31	274	8.2
500	31	5,833	- 9.8	31	268	11.7
450	31	6,634	-15.1	30	272	15.2
400	31	7,521	-21.5	30	262	20.0
350	31	8,490	-28.8	36	253	26.8
300	31	9,576	-36.6	30	252	34.0
250	31	10,815	-45.6		251	42.7
200	31	12,269	-55.3		251	49.1
175	31	13,110	-60.6		252	44.5
150	30	14,054	-66.2		252	41.8
125	30	15,145	-71.0		253	33.8
100	30	16,456	-73.8		255	22.3
80	29	17,771	-69.4		272	8.4
70	28	18,571	-66.2		330	2.1
60	27	19,517	-62.2		88	4.1
50	27	20,651	-59.4		108	5.6
40	27	22,057	-56.5		85	7.0
30	27	23,895	-53.6		90	6.4
25	27	25,072	-51.9		84	5.8
20	27	26,524	-49.7		67	8.9
15	26	28,420	-47.5		84	8.5
10	23	31,117	-44.6		123	4.7
7	15	33,534	-41.4		209	6.4
5	8	35,849	-35.6			

BUFFALO, N. Y.
989 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	218	6.7	82	225	4.3
1000	31	125				
950	31	549	7.0	74	244	11.1
900	31	991	4.6	75	261	15.9
850	31	1,455	2.6	70	269	19.6
800	31	1,944	.7	60	269	21.6
750	31	2,461	- 1.4	56	275	24.3
700	31	3,007	- 4.1	54	276	26.6
650	31	3,588	- 7.0	53	277	28.6
600	31	4,210	-10.6	51	275	30.7
550	31	4,872	-14.8	48	276	[illegible]
500	31	5,589	-19.1	49	279	35.4
450	31	6,362	-24.2	42	279	39.9
400	31	7,217	-30.1	42	278	42.3
350	31	8,153	-37.1	42	276	40.6
300	31	9,203	-44.1		274	44.7
250	31	10,409	-50.4		269	44.5
200	31	11,853	-53.2		267	47.6
175	31	12,711	-54.3		265	44.9
150	31	13,694	-56.4		267	41.4
125	31	14,847	-57.6		263	35.4
100	31	16,251	-58.6		269	28.9
80	31	17,652	-58.7		268	20.6
70	31	18,490	-58.4		269	18.6
60	31	19,460	-57.5		272	16.3
50	31	20,613	-56.8		279	14.6
40	31	22,027	-56.1		281	14.0
30	30	23,859	-54.1		275	16.7
25	30	25,032	-52.9		282	17.1
20	29	26,478	-51.1		275	19.2
15	17	28,343	-49.2		272	21.2
10						
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5						

*CANTON IS., PACIFIC AREA
+ 1008 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	4	30.5	68	76	4.9
1000	31	78	29.0	67	79	6.8
950	31	526	23.9	69	90	8.4
900	31	1,003	21.0	65	91	8.4
850	31	1,496	18.5	57	92	8.5
800	31	2,014	15.9	52	83	8.7
750	31	2,557	13.1	46	81	9.3
700	31	3,138	10.2	42	76	12.0
650	31	3,747	6.8	39	81	13.0
600	31	4,403	3.0	38	79	14.8
550	31	5,098	- .7	33	83	15.3
500	31	5,859	- 4.8	30	85	18.1
450	31	6,678	- 9.5	27	84	18.1
400	31	7,581	-15.1	27	86	15.3
350	31	8,577	-21.7	25	84	13.4
300	31	9,694	-30.1	25	81	8.5
250	31	10,965	-40.4	23	75	5.4
200	30	12,446	-52.9		101	3.9
175	30	13,293	-60.0		116	3.1
150	30	14,237	-67.5		112	4.3
125	30	15,313	-75.3		98	2.5
100	30	16,590	-78.4		283	5.4
80	30	17,877	-73.5		269	11.3
70	30	18,662	-71.1		[illegible]	11.5
60	30	19,579	-68.0		96	6.4
50	30	20,684	-64.4		90	32.4
40	29	22,065	-60.0		90	53.4
30	29	23,882	-55.1		89	64.3
25	28	25,056	-51.6		88	65.3
20	28	26,515	-48.4		88	69.3
15	27	28,434	-41.4		89	53.4
10	18	31,226	-35.1		256	18.3
7	7	33,714	-30.8			
5						

* CAPE HATTERAS, N. C.
1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	4	15.8	78	360	3.7
1000	31	142	16.7	66	14	6.2
950	31	578	13.8	66	360	5.1
900	31	1,032	10.9	62	[illegible]	3.1
850	31	1,507	8.7	57	257	[illegible]
800	31	2,008	7.2	45	254	10.9
750	31	2,536	5.4	39	[illegible]	13.6
700	31	3,099	2.6	36	265	15.7
650	31	3,692	0.0	30	[illegible]	19.8
600	31	4,333	- 3.4	30	269	23.7
550	31	5,006	- 7.4	31	261	[illegible]
500	31	5,752	-12.3	[illegible]	261	[illegible]
450	31	6,542	[illegible]	29	261	[illegible]
400	31	7,422	[illegible]	32	261	41.6
350	31	8,383	[illegible]	30	261	49.3
300	31	[illegible]	-38.7	34	261	[illegible]
250	31	10,689	-47.2		[illegible]	65.5
200	31	[illegible]	-55.7		261	[illegible]
175	31	12,980	-59.3		261	63.3
150	31	[illegible]	-62.1		262	52.8
125	31	15,057	-65.3		262	44.9
100	31	[illegible]	-66.6		[illegible]	[illegible]
80	31	17,766	-64.1		264	20.2
70	31	18,588	-61.8		270	14.6
60	31	19,546	-59.7		[illegible]	10.5
50	[illegible]	20,694	-57.1		265	13.8
40	30	22,113	-54.8		260	12.6
30	30	[illegible]	-52.2		275	13.6
25	30	25,146	-50.7		[illegible]	12.9
20	29	26,604	-49.4		276	13.4
15	28	28,493	-47.8		270	15.3
10	24	31,185	-45.4		267	22.9
7	6	[illegible]	-43.3			
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

OCTOBER 1965

* CARIBOU, ME.
989 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	191	2.6	90	262	4.5
1000	31	99				
950	31	515	2.9	79	259	8.0
900	31	952	1.2	78	271	12.8
850	31	1,411	- .5	82	278	16.3
800	31	1,894	- 2.0	78	276	18.1
750	31	2,405	- 4.0	66	276	21.0
700	31	2,948	- 7.0	65	272	24.9
650	31	3,520	-10.4	59	270	27.8
600	31	4,135	-14.1	58	266	29.7
550	31	4,791	-18.0	58	267	32.2
500	31	5,498	-22.6	50	263	32.6
450	31	6,264	-27.5	42	265	37.3
400	31	7,103	-33.2	39	262	40.4
350	31	8,030	-38.9	35	258	48.2
300	30	9,074	-45.0	32	257	55.0
250	30	10,281	-48.7		259	52.8
200	29	11,737	-50.9		259	52.8
175	28	12,605	-52.5		260	49.1
150	29	13,596	-54.1		257	44.9
125	28	14,762	-55.4		261	37.1
100	28	16,182	-56.1		262	31.7
80	28	17,597	-56.4		265	24.1
70	28	18,443	-56.5		268	22.0
60	28	19,421	-56.6		269	19.4
50	28	20,576	-56.7		267	14.8
40	25	21,999	-55.9		275	12.8
30	24	23,829	-54.6		273	14.6
25	23	24,995	-53.7		268	15.0
20	23	26,432	-52.1		270	17.5
15	23	28,306	-49.5		274	19.8
10	19	30,983	-46.3		272	22.5
7						

CHARLESTON, S. C.
1016 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	13	13.8	88	8	3.7
1000	31	143	16.4	78	30	5.6
950	31	583	15.7	65	39	6.0
900	31	1,038	13.3	63	360	2.1
850	31	1,518	11.2	55	271	4.7
800	31	2,023	9.2	48	265	9.3
750	31	2,556	6.7	44	268	11.8
700	31	3,120	4.1	40	267	14.2
650	31	3,716	.8	37	264	16.3
600	31	4,360	- 2.7	36	263	20.0
550	31	5,042	- 6.6	R36	263	22.9
500	31	5,784	-11.1	R37	261	26.6
450	31	6,582	-16.3	R34	259	27.6
400	31	7,464	-22.7	R34	258	31.7
350	31	8,430	-30.0	R33	261	36.3
300	31	9,510	-38.2	R33	262	40.6
250	31	10,742	-46.9		261	48.8
200	31	12,192	-55.6		262	55.9
175	31	13,035	-59.7		268	54.8
150	31	13,991	-63.0		268	47.8
125	31	15,103	-66.8		268	41.8
100	31	16,445	-68.2		267	29.9
80	31	17,793	-65.0		274	16.3
70	31	18,609	-63.4		266	12.6
60	31	19,561	-60.7		271	10.1
50	31	20,702	-57.5		269	10.7
40	31	22,119	-54.9		274	5.8
30	31	23,971	-51.8		276	7.0
25	27	25,161	-50.3		271	7.4
20	26	26,618	-49.2		257	6.6
15	15	28,517	-47.8		271	9.9
10						
7						

* COLD BAY, ALASKA
998 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	30	2.0	83	312	4.9
1000	31	11			321	10.3
950	31	422	.3	77	327	11.7
900	31	855	- 2.9	83	329	12.2
850	31	1,306	- 5.7	82	323	11.8
800	31	1,779	- 8.3	79	320	12.8
750	31	2,274	-11.1	67	320	14.2
700	31	2,804	-14.0	56	324	14.0
650	31	3,358	-17.0	47	322	13.8
600	31	3,961	-20.3	47	317	14.6
550	31	4,593	-24.5	50	308	14.0
500	31	5,287	-29.3	48	300	14.2
450	31	6,023	-34.2	43	302	15.7
400	31	6,847	-39.5	41	301	18.1
350	31	7,751	-44.9		299	20.8
300	31	8,769	-49.6		296	23.1
250	31	9,959	-49.9		296	25.8
200	31	11,424	-48.5		288	32.1
175	31	12,303	-48.5		284	32.1
150	30	13,319	-48.9		282	30.7
125	30	14,515	-49.3		276	32.4
100	30	15,977	-49.7		274	29.7
80	30	17,434	-50.3		274	28.2
70	29	18,299	-50.9		270	27.8
60	29	19,301	-51.3		271	28.6
50	29	20,483	-51.4		270	27.0
40	29	21,929	-51.9		272	27.6
30	29	23,793	-51.5		269	25.6
25	29	24,975	-51.3		273	25.1
20	28	26,426	-50.3		270	25.8
15	27	28,310	-49.9		268	25.8
10	22	30,973	-48.6		267	29.1
7	13	33,356	-47.7		278	32.1

COLUMBIA, MO.
989 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	238	9.8	76	198	2.3
1000	31	149				
950	31	575	12.1	54	259	7.2
900	31	1,030	10.7	48	289	11.3
850	31	1,505	9.4	43	294	14.2
800	31	2,006	7.1	43	292	15.2
750	31	2,532	4.4	41	295	16.5
700	31	3,093	1.1	41	298	18.1
650	31	3,680	- 2.3	39	303	20.2
600	31	4,317	- 6.1	40	301	22.5
550	31	4,983	-10.4	35	302	21.8
500	31	5,720	-14.9	29	298	23.5
450	31	6,501	-20.5	32	296	26.4
400	31	7,372	-26.5	29	297	26.4
350	31	8,322	-33.9	29	296	30.3
300	31	9,384	-41.6	32	294	33.2
250	31	10,598	-49.7		290	37.9
200	31	12,035	-56.0		285	42.7
175	31	12,879	-58.5		283	41.0
150	31	13,842	-61.1		284	37.5
125	31	14,967	-63.4		287	30.5
100	31	16,333	-64.2		287	26.0
80	31	17,704	-62.9		290	17.7
70	31	18,527	-61.7		293	14.8
60	31	19,485	-60.4		295	12.0
50	31	20,625	-58.9		305	10.3
40	31	22,031	-57.1		294	11.1
30	30	23,865	-54.4		282	14.6
25	29	25,039	-52.7		277	17.5
20	29	26,486	-51.2		283	20.0
15	28	28,366	-49.4		276	18.8
10	14	31,012	-47.1			
7						

CORPUS CHRISTI, TEXAS
1016 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	27	6	20.7	80	357	4.3
1000	27	140	20.3	79	17	5.8
950	27	578	17.4	79	31	5.4
900	27	1,043	15.2	76	12	4.1
850	27	1,528	13.7	66	31	3.1
800	27	2,038	11.9	63	15	3.9
750	27	2,576	9.0	60	334	4.3
700	27	3,146	6.3	56	324	5.6
650	27	3,747	3.0	55	308	7.8
600	27	4,396	- .6	51	301	8.5
550	27	5,080	- 4.7	50	293	10.1
500	27	5,831	- 9.5	48	285	12.6
450	27	6,630	-15.2	46	276	12.9
400	27	7,518	-21.7	46	271	15.7
350	27	8,487	-28.9	45	260	20.2
300	27	9,571	-37.1	42	254	26.2
250	27	10,806	-46.3		252	32.1
200	27	12,260	-54.9		251	35.7
175	27	13,103	-60.0		252	36.5
150	27	14,054	-65.0		253	31.9
125	26	15,158	-69.1		254	26.2
100	24	16,483	-71.5		255	20.8
80	19	17,814	-67.0		256	13.6
70	18	18,620	-64.1		256	6.0
60	18	19,573	-61.1		215	2.7
50	18	20,712	-58.5		132	2.1
40	18	22,123	-56.1		126	2.9
30	18	23,967	-52.5		10	1.6
25	15	25,133	-51.9		8	2.7
20	14	26,582	-50.0		14	3.9
15	12	28,467	-48.5		312	3.1
10	10	31,146	-45.3			
7	6	33,536	-45.3			

DAYTON, OHIO
982 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	297	7.6	85	226	2.9
1000	31	144				
950	31	572	9.2	71	241	9.1
900	31	1,017	7.6	66	266	12.4
850	31	1,488	6.1	55	272	15.3
800	31	1,983	4.3	50	276	18.1
750	31	2,505	2.0	50	281	20.6
700	31	3,062	- .7	51	283	22.7
650	31	3,651	- 4.2	51	281	25.1
600	31	4,278	- 7.7	42	278	25.6
550	31	4,948	-11.9	38	276	28.2
500	31	5,674	-16.4	33	276	28.4
450	31	6,456	-21.9	29	275	29.1
400	31	7,316	-28.3	30	278	31.3
350	31	8,260	-35.2	35	276	35.7
300	31	9,317	-43.0	30	276	42.3
250	31	10,527	-50.1		272	49.5
200	31	11,966	-55.6		269	52.1
175	31	12,814	-56.9		272	50.3
150	31	13,785	-59.3		273	44.7
125	31	14,921	-61.5		275	38.1
100	31	16,302	-62.1		274	29.7
80	31	17,683	-61.1		278	22.9
70	31	18,512	-60.3		278	19.0
60	30	19,474	-59.2		280	15.5
50	30	20,619	-58.1		283	13.2
40	30	22,028	-56.0		284	12.2
30	30	23,867	-53.4		275	18.3
25	30	25,044	-51.5		276	19.8
20	26	26,508	-49.7		268	23.3
15	24	28,401	-48.7		274	23.7
10	12	31,061	-46.9			
7						
5						

DEL RIO, TEXAS
981 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	27	314	15.1	83	100	3.9
1000	27	147				
950	27	584	17.3	69	131	8.4
900	27	1,047	15.8	61	154	9.1
850	27	1,531	14.5	50	178	6.2
800	27	2,042	12.9	38	214	2.5
750	27	2,576	9.8	34	318	4.1
700	27	3,151	5.9	33	317	6.2
650	27	3,750	2.1	32	309	6.8
600	27	4,395	- 2.1	32	319	8.2
550	27	5,075	- 6.1	30	307	9.3
500	27	5,822	-10.6	R26	276	10.5
450	27	6,620	-16.5	R24	264	14.2
400	27	7,501	-22.9	R28	261	17.1
350	27	8,466	-29.8	R25	260	19.4
300	27	9,546	-37.9	R24	255	21.8
250	27	10,778	-46.8		254	25.8
200	27	12,227	-55.4		252	32.6
175	27	13,071	-59.4		255	34.0
150	27	14,027	-63.5		257	33.6
125	27	15,133	-68.0		260	28.2
100	27	16,465	-70.3		269	17.3
80	27	17,798	-67.5		276	8.5
70	27	18,608	-65.1		292	4.1
60	27	19,555	-61.7		205	1.0
50	27	20,692	-58.8		79	1.2
40	26	22,098	-56.6		70	5.1
30	26	23,937	-53.3		64	4.5
25	25	25,112	-52.1		69	3.1
20	23	26,567	-50.0		346	1.0
15	20	28,454	-47.8		59	1.6
10						
7						
5						

DENVER, COLO.
841 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,611	5.5	60	199	4.7
1000	31	174				
950	31	600				
900	31	1,053				
850	31	1,527				
800	31	2,031	11.7	37	279	4.7
750	31	2,567	8.8	36	320	7.4
700	31	3,135	5.2	35	314	9.9
650	31	3,733	1.1	35	319	12.6
600	31	4,374	- 3.3	37	323	15.5
550	31	5,054	- 7.9	34	325	16.5
500	31	5,792	-12.5	31	322	18.8
450	31	6,583	-18.2	30	319	19.0
400	31	7,457	-24.5	28	316	20.4
350	31	8,415	-31.9	30	316	21.2
300	31	9,485	-40.5	27	323	22.7
250	31	10,703	-49.5		322	24.7
200	31	12,136	-57.7		318	26.8
175	31	12,973	-60.4		314	26.2
150	31	13,930	-61.7		308	25.6
125	27	15,064	-64.9		308	23.1
100	27	16,420	-65.7		305	16.3
80	27	17,780	-64.5		305	12.2
70	26	18,598	-62.1		313	10.3
60	26	19,556	-60.2		318	7.8
50	26	20,697	-59.1		315	7.4
40	25	22,097	-56.9		315	5.6
30	25	23,928	-55.3		309	7.6
25	23	25,108	-53.2		300	10.1
20	22	26,553	-51.8		292	12.2
15	17	28,433	-49.9		275	18.8
10	11	31,123	-47.5			
7						
5						

DODGE CITY, KANS.
928 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	792	9.6	80	260	4.3
1000	31	158				
950	31	589				
900	31	1,042	14.2	53	263	5.8
850	31	1,524	13.0	42	271	5.6
800	31	2,032	11.0	38	292	5.1
750	31	2,565	7.8	38	308	7.0
700	31	3,132	4.1	37	323	7.6
650	31	3,726	- .1	38	315	9.7
600	31	4,367	- 4.1	35	315	12.4
550	30	5,046	- 8.4	33	317	14.4
500	30	5,783	-13.3	30	318	15.9
450	30	6,571	-18.8	31	322	18.6
400	30	7,446	-25.3	35	324	22.7
350	30	8,401	-32.6	34	325	24.9
300	30	9,468	-41.0	37	322	25.3
250	30	10,684	-49.9		314	24.5
200	29	12,118	-57.2		299	24.9
175	29	12,958	-59.7		296	25.6
150	29	13,916	-62.1		293	24.9
125	29	15,035	-65.0		294	21.6
100	29	16,389	-66.0		297	17.3
80	29	17,746	-64.6		296	11.3
70	29	18,564	-63.1		297	8.5
60	29	19,515	-61.1		309	7.6
50	28	20,651	-59.4		307	6.8
40	27	22,054	-57.3		290	7.4
30	27	23,982	-54.9		284	11.3
25	27	25,052	-53.0		277	11.8
20	23	26,489	-51.4		277	15.5
15	20	28,365	-50.1		271	19.0
10	5	31,071	-47.6			
7						
5						

EL PASO, TEXAS
886 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,193	10.4	48	353	.6
1000	31	167				
950	31	602				
900	31	1,060				
850	31	1,542	16.0	31	168	1.7
800	31	2,054	13.4	31	248	2.7
750	31	2,590	9.8	32	313	3.1
700	31	3,164	5.6	32	342	3.7
650	31	3,762	1.3	30	6	4.7
600	31	4,405	- 2.9	R28	349	4.7
550	31	5,082	- 6.9	R23	335	6.0
500	31	5,829	-12.0	R20	352	7.4
450	31	6,621	-17.8	R22	350	10.3
400	31	7,499	-24.5	R26	348	11.3
350	31	8,458	-31.6	R26	347	12.8
300	31	9,530	-40.1	R25	341	14.9
250	31	10,751	-49.1		321	14.8
200	30	12,190	-56.4		297	20.4
175	30	13,031	-59.6		291	19.2
150	30	13,988	-62.4		288	20.2
125	30	15,105	-65.6		295	16.7
100	30	16,450	-68.2		300	12.2
80	30	17,791	-66.7		304	7.2
70	30	18,603	-64.1		313	3.9
60	30	19,553	-61.1		290	2.7
50	29	20,693	-58.7		277	3.5
40	29	22,100	-56.5		250	2.9
30	29	23,936	-53.9		273	3.3
25	29	25,109	-52.6		229	2.7
20	28	26,557	-51.2		283	6.4
15	21	28,450	-49.3		301	3.9
10	12	31,143	-46.3		315	12.2
7	10	33,516	-42.9			
5	7	35,781	-39.2			

ELY, NEV.
814 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,908	.1	53	191	7.4
1000	31	220				
950	31	644				
900	31	1,091				
850	31	1,557				
800	31	2,049	8.4	42	182	4.7
750	31	2,585	8.9	31	37	.6
700	31	3,153	5.8	28	283	4.7
650	31	3,756	2.1	R26	290	6.6
600	31	4,397	- 1.8	R24	288	8.2
550	31	5,077	- 6.5	R22	292	12.0
500	31	5,822	-11.7	R22	289	14.0
450	31	6,615	-17.8	R23	285	15.2
400	31	7,491	-24.8	R24	287	15.9
350	31	8,447	-32.3	R24	290	17.1
300	31	9,516	-40.8	R28	289	17.9
250	31	10,731	-50.3		285	19.8
200	31	12,158	-58.6		283	18.8
175	31	12,992	-61.1		292	18.6
150	31	13,945	-63.3		298	20.2
125	31	15,058	-66.1		295	19.2
100	31	16,408	-66.9		301	14.8
80	30	17,755	-65.4		308	9.9
70	29	18,562	-64.5		318	8.5
60	28	19,516	-62.3		327	6.6
50	28	20,648	-59.9		349	4.5
40	28	22,046	-58.0		341	5.2
30	28	23,868	-55.4		307	5.4
25	26	25,034	-53.9		294	7.4
20	26	26,471	-52.2		286	8.5
15	24	28,319	-50.9		280	12.2
10	13	30,979	-49.0		305	12.4
7	11	33,341	-46.8			
5	5	35,559	-45.4			

EMPALME, MEXICO
1011 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	12	19.2	57	21	4.1
1000	30	106	24.0	48	24	3.9
950	30	552	25.7	30	39	4.5
900	30	1,030	23.5	25	21	5.8
850	30	1,525	19.9	26	26	3.7
800	30	2,043	15.9	26	87	1.7
750	30	2,584	12.0	26	157	2.1
700	30	3,160	7.8	28	152	2.9
650	30	3,761	3.5	29	115	2.7
600	30	4,411	- .2	25	64	1.9
550	30	5,094	- 4.8	22	7	4.5
500	30	5,843	-10.1	23	356	6.8
450	30	6,640	-16.2	25	338	7.4
400	29	7,521	-22.7	22	317	9.1
350	29	8,486	-30.0	25	321	13.4
300	29	9,564	-38.5	24	303	16.9
250	29	10,792	-47.7		291	19.8
200	29	12,237	-55.7		280	29.3
175	29	13,079	-59.7		279	31.1
150	29	14,033	-64.2		284	29.1
125	29	15,137	-68.2		284	22.5
100	28	16,465	-70.9		293	16.7
80	28	17,793	-68.4		310	6.8
70	27	18,596	-65.2		331	4.1
60	23	19,550	-61.6		39	3.5
50	22	20,688	-59.2		90	5.1
40	22	22,095	-56.6		87	7.2
30	21	23,928	-54.4		79	4.3
25	12	25,102	-51.9		44	6.4
20	9	26,559	-49.7			
15						
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5						

* FAIRBANKS, ALASKA
988 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	135	-10.4	77	303	1.4
1000	31	41				
950	31	438	- 8.8	78	60	3.1
900	31	856	- 9.2	81	116	4.1
850	31	1,298	- 9.6	74	147	4.7
800	31	1,766	-10.5	71	183	4.3
750	31	2,259	-11.9	66	205	6.2
700	31	2,787	-14.8	64	207	8.4
650	31	3,340	-17.9	60	210	9.5
600	31	3,939	-21.5	59	214	11.7
550	31	4,568	-25.7	57	214	13.8
500	31	5,260	-30.3	54	222	16.3
450	31	5,994	-35.4	50	223	19.0
400	31	6,812	-41.3	49	219	22.0
350	31	7,707	-47.5		221	23.7
300	31	8,712	-53.2		225	27.0
250	31	9,875	-56.0		231	27.4
200	31	11,303	-52.8		230	26.6
175	31	12,167	-52.0		232	25.8
150	31	13,165	-51.9		231	26.4
125	31	14,347	-51.8		234	26.4
100	31	15,792	-52.2		238	28.7
80	31	17,234	-52.5		240	31.1
70	31	18,095	-53.1		242	33.0
60	31	19,086	-53.5		245	33.6
50	30	20,257	-53.9		246	35.9
40	27	21,698	-54.5		252	40.4
30	27	23,539	-54.6		253	42.5
25	25	24,709	-54.4		252	42.7
20	22	26,143	-54.2		258	45.6
15	19	27,984	-53.7		260	52.1
10	7	30,634	-50.2			
7						
5						

FLINT, MICH.
987 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	234	7.2	80	239	4.1
1000	31	123				
950	31	548	7.3	70	257	9.3
900	31	990	5.5	69	275	13.8
850	31	1,457	3.6	65	279	16.3
800	31	1,948	1.7	65	278	19.2
750	31	2,464	- .8	60	280	24.1
700	31	3,016	- 3.4	54	280	26.6
650	31	3,595	- 6.5	52	284	29.7
600	31	4,222	- 9.6	48	286	31.5
550	31	4,883	-13.7	45	287	35.0
500	31	5,608	-18.6	42	282	35.7
450	31	6,361	-24.0	42	285	40.0
400	31	7,237	-30.1	35	281	41.6
350	31	8,175	-36.8	33	281	41.8
300	31	9,225	-44.1		280	43.7
250	30	10,423	-51.0		278	46.8
200	30	11,862	-53.8		280	49.0
175	29	12,715	-54.6		282	48.0
150	29	13,698	-56.1		283	44.1
125	29	14,851	-57.9		281	37.3
100	29	16,254	-59.0		279	28.7
80	29	17,653	-58.8		284	22.9
70	29	18,492	-58.4		287	18.5
60	29	19,463	-57.7		286	14.6
50	29	20,615	-57.0		288	13.8
40	29	22,030	-56.3		284	11.7
30	28	23,872	-53.7		292	15.7
25	27	25,046	-52.5		290	16.7
20	26	26,490	-50.8		280	21.2
15	25	28,377	-48.4		281	25.8
10	13	31,024	-46.1			
7						
5						

FORT WORTH, TEXAS
998 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	180	13.8	77	208	1.4
1000	31	163			316	2.7
950	31	602	16.2	59	176	2.9
900	31	1,058	14.3	55	187	3.3
850	31	1,539	12.1	49	262	2.3
800	31	2,045	10.0	42	310	3.7
750	31	2,578	7.1	39	305	5.2
700	31	3,143	4.1	35	314	7.0
650	31	3,739	.6	33	315	8.4
600	31	4,380	- 3.4	36	311	8.7
550	31	5,055	- 7.8	36	302	10.5
500	31	5,797	-13.0	32	301	12.0
450	31	6,587	-18.1	28	290	13.4
400	31	7,462	-24.2	30	280	15.9
350	31	8,422	-31.3	29	276	18.3
300	31	9,496	-39.2	33	272	20.6
250	31	10,721	-48.0		270	25.3
200	31	12,164	-56.2		260	30.3
175	31	13,005	-59.9		266	31.7
150	30	13,961	-63.3		265	28.7
125	30	15,072	-66.7		267	26.0
100	28	16,405	-68.2		273	21.0
80	28	17,749	-66.5		281	12.0
70	27	18,561	-63.8		284	7.4
60	27	19,515	-61.1		289	5.6
50	27	20,653	-58.6		282	6.6
40	27	22,062	-56.9		285	7.6
30	26	23,896	-54.1		272	9.7
25	26	25,070	-52.5		272	10.7
20	26	26,517	-51.1		272	13.4
15	23	28,402	-49.3		268	10.7
10	7	31,105	-46.0			
7						
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb.)	GLASGOW, MONT. 935 MB						* GRAND JUNCTION, COLO. 857 MB						* GREAT FALLS, MONT. 889 MB						GREEN BAY, WIS. 991 MB						GREENSBORO, N. C. 986 MB					
					Wind						Wind						Wind						Wind						Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	31	696	5.1	58	73	1.0	31	1,474	8.4	59	120	3.7	31	1,123	7.7	57	228	9.9	29	210	6.0	84	297	2.5	31	273	8.7	88	323	.6
1000	31	144					31	173					31	142					29	139					31	158				
950	31	566					31	606					31	571					29	554	6.6	67	288	9.7	31	587	11.6	65	354	3.9
900	31	1,015	11.0	42	290	7.6	31	1,062					31	1,026					29	997	4.8	62	298	13.2	31	1,037	10.0	60	325	4.7
850	31	1,491	9.6	36	297	15.3	31	1,538			115	4.7	31	1,499	10.9	35	243	17.9	29	1,462	3.1	60	298	18.3	31	1,511	7.9	54	290	7.0
800	30	1,992	6.3	39	294	18.1	31	2,045	10.8	42	113	5.4	31	2,001	7.7	38	260	17.9	29	1,951	1.2	53	305	19.6	31	2,010	6.5	44	280	9.9
750	30	2,513	2.9	42	293	20.8	31	2,579	8.6	40	45	2.3	31	2,530	4.4	39	269	17.9	29	2,467	- 1.3	45	305	22.3	31	2,539	4.7	36	274	10.9
700	30	3,074	.1	37	292	25.4	31	3,148	5.2	40	336	3.7	31	3,089	1.1	42	274	22.0	29	3,017	- 3.8	39	303	25.6	31	3,099	2.1	32	270	13.6
650	30	3,658	- 3.1	35	292	26.6	31	3,746	1.2	36	306	6.4	31	3,681	- 1.8	36	280	26.0	29	3,593	- 6.7	38	299	28.4	31	3,692	- 1.2	30	272	16.5
600	30	4,294	- 6.8	33	297	29.9	31	4,389	- 2.8	32	306	9.7	31	4,315	- 6.0	37	281	28.6	29	4,220	-10.2	38	300	33.2	31	4,329	- 5.0	33	273	19.8
550	30	4,957	-11.0	31	296	35.7	31	5,069	- 7.0	27	312	11.8	31	4,988	-10.5	47	280	31.5	29	4,876	-14.1	36	297	35.5	31	5,007	- 9.2	30	270	21.6
500	30	5,693	-15.9	32	295	35.0	31	5,811	-11.7	27	315	14.0	31	5,719	-15.2	42	277	36.3	29	5,603	-18.6	32	296	37.5	31	5,740	-13.6	27	269	25.1
450	30	6,468	-21.3	36	298	41.6	31	6,607	-17.5	28	313	16.1	31	6,503	-20.5	39	277	38.3	29	6,374	-24.0	R29	297	39.2	31	6,528	-19.0	26	268	28.9
400	30	7,338	-27.3	35	296	47.0	31	7,481	-24.2	30	311	17.1	31	7,371	-26.6	40	275	39.2	29	7,230	-30.1	R28	297	44.5	31	7,403	-25.0	27	265	34.0
350	30	8,284	-34.7	R33	298	49.5	30	8,441	-32.0	30	309	18.3	31	8,320	-33.9	44	273	44.9	29	8,167	-37.0	R30	296	48.4	31	8,360	-31.9	26	264	39.4
300	30	9,342	-42.9	R26	299	55.0	30	9,509	-40.9	30	312	19.6	31	9,382	-42.3	41	278	50.5	29	9,218	-43.8	R30	303	50.7	31	9,433	-39.7	31	263	45.5
250	30	10,547	-52.0		299	60.8	30	10,722	-50.3		319	21.6	31	10,590	-51.3		280	53.2	29	10,424	-50.5		302	52.4	31	10,658	-48.0		266	51.5
200	30	11,968	-58.2		298	55.0	30	12,149	-58.6		322	20.6	31	12,014	-58.1		283	53.6	29	11,862	-55.0		298	50.3	31	12,105	-55.3		266	57.5
175	30	12,806	-59.6		298	50.5	30	12,982	-61.4		318	21.0	31	12,852	-59.9		282	48.4	29	12,713	-56.2		296	48.6	31	12,951	-58.5		267	56.7
150	30	13,768	-60.6		300	46.2	30	13,932	-63.3		308	21.0	31	13,811	-61.1		282	44.5	29	13,690	-57.4		296	47.4	31	13,914	-61.1		268	49.0
125	29	14,899	-60.7		297	39.6	29	15,042	-65.3		312	17.5	31	14,941	-62.3		285	38.1	29	14,839	-58.4		296	36.5	30	15,042	-64.4		270	38.9
100	29	16,284	-61.5		295	30.3	29	16,393	-66.5		314	15.3	29	16,308	-62.2		283	29.5	29	16,240	-58.8		297	31.7	30	16,400	-65.5		271	29.7
80	29	17,670	-60.6		298	24.1	29	17,746	-65.3		320	11.8	29	17,692	-60.8		283	19.2	29	17,640	-58.7		299	25.4	30	17,760	-63.7		269	18.8
70	28	18,500	-59.8		300	19.2	29	18,560	-63.4		315	7.6	28	18,522	-60.3		290	15.3	29	18,478	-58.0		299	22.0	30	18,582	-61.9		273	17.3
60	28	19,463	-59.1		310	15.0	29	19,512	-61.6		315	7.4	26	19,486	-59.4		296	14.8	29	19,452	-57.5		303	15.3	30	19,540	-60.0		280	13.4
50	27	20,609	-58.4		305	10.9	29	20,647	-59.9		327	6.0	24	20,631	-58.9		298	12.0	29	20,603	-57.5		307	12.6	30	20,684	-57.8		273	12.6
40	25	22,012	-57.6		309	8.7	29	22,046	-58.1		308	5.6	23	22,040	-57.8		310	8.5	27	22,013	-56.3		302	9.5	29	22,098	-55.3		271	14.2
30	23	23,838	-55.9		315	7.2	27	23,867	-55.6		305	7.0	22	23,861	-56.0		316	6.8	26	23,848	-54.5		306	9.7	29	23,945	-52.6		277	17.7
25	23	25,000	-54.8		329	7.0	26	25,035	-54.2		292	8.2	22	25,023	-55.2		319	8.7	26	25,020	-53.0		302	11.8	27	25,122	-51.1		275	18.1
20	22	26,431	-53.6		324	8.7	26	26,471	-52.6		281	12.2	19	26,461	-53.7		320	9.7	26	26,464	-51.3		292	14.2	23	26,565	-49.9		269	23.3
15	17	28,283	-51.7		325	9.7	22	28,343	-50.6		293	12.8	19	28,317	-52.0		318	9.1	20	28,337	-49.7		290	19.6	13	28,432	-48.4		271	33.2
10							18	31,029	-48.3		296	13.0	14	30,972	-49.1		311	8.0	11	30,988	-47.5									
7							10	33,420	-45.5				6	33,397	-43.5															

	GUAM, MARIANA IS. 998 MB						HILO, HAWAII 1013 MB						HUNTINGTON, W. VA. 989 MB						* INTERNAT. FALLS, MINN. 970 MB						JACKSON, MISS. 1007 MB					
SURFACE	31	111	24.6	94	76	1.0	31	11	21.3	85	229	4.9	31	246	7.3	86	181	2.3	31	360	3.9	78	253	2.7	31	94	12.4	91	12	1.6
1000	31	88					31	126	22.6	77	241	4.3	31	152					31	112					31	154	14.6	78	46	2.5
950	31	539	23.3	90	63	2.9	31	574	19.6	82	89	1.6	31	578	10.0	67	228	7.6	31	528	4.2	73	242	5.8	31	586	15.0	62	58	3.9
900	31	1,012	20.7	82	44	2.1	31	1,036	16.3	85	98	2.9	31	1,027	8.2	63	254	11.5	31	971	4.3	70	275	13.8	31	1,047	13.6	53	341	[illegible]
850	31	1,505	18.1	79	17	1.4	31	1,521	13.4	85	102	2.7	31	1,498	6.9	54	274	13.4	31	1,435	2.3	66	293	16.9	31	1,527	11.9	47	322	3.7
800	31	2,023	15.5	76	46	1.6	31	2,031	11.1	74	140	3.5	31	1,995	5.1	49	278	15.3	31	1,923	.4	59	302	17.3	31	2,032	9.5	39	315	4.5
750	31	2,569	13.2	63	60	2.3	31	2,575	9.5	57	158	2.9	31	2,517	2.8	51	279	17.9	31	2,437	- 2.1	57	301	20.8	31	2,563	7.1	32	305	6.2
700	31	3,147	10.0	56	74	2.3	31	3,140	7.8	41	123	.6	31	3,077	.1	48	284	19.2	31	2,985	- 4.7	57	298	23.5	31	3,130	3.9	34	309	7.4
650	31	3,759	6.5	50	61	3.3	31	3,749	5.2	31	286	1.2	31	3,664	- 3.0	47	284	22.0	31	3,562	- 7.8	57	303	26.0	31	3,723	.7	30	304	10.3
600	31	4,412	2.6	49	58	4.3	31	4,399	1.8	25	267	4.3	31	4,299	- 6.6	40	282	23.5	31	4,184	-11.1	55	297	29.5	31	4,367	- 3.1	33	293	11.8
550	31	5,110	- 1.5	47	78	4.5	31	5,090	- 2.6	23	276	5.2	31	4,967	-10.5	33	280	23.1	31	4,840	-15.1	54	300	32.6	31	5,042	- 7.4	34	292	13.4
500	31	5,864	- 5.6	39	75	5.8	31	5,845	- 7.6	25	270	7.2	31	5,702	-15.2	29	275	24.7	31	5,563	-19.9	53	303	34.6	31	5,787	-12.1	31	286	16.9
450	30	6,684	-10.6	36	73	5.4	31	6,657	-13.0	24	271	9.3	31	6,483	-20.5	R26	272	27.2	31	6,326	-25.3	50	301	36.7	31	6,577	-17.6	28	279	19.4
400	30	7,580	-16.2	30	77	5.1	31	7,545	-19.3	25	266	12.4	31	7,353	-26.8	R26	272	31.3	31	7,182	-31.4	49	302	40.4	31	7,457	-23.6	28	276	22.0
350	30	8,571	-23.0	30	87	3.9	31	8,523	-26.9	27	266	17.7	31	8,303	-33.6	R27	270	36.5	31	8,113	-38.4	46	304	46.0	31	8,419	-30.7	28	272	26.6
300	30	9,682	-31.5	34	140	2.9	31	9,617	-35.0	26	269	26.2	31	9,367	-41.1	R32	267	41.8	31	9,157	-45.5		306	48.4	31	9,495	-38.8	35	268	30.7
250	30	10,944	-41.8		174	4.3	31	10,864	-44.5		267	31.9	31	10,586	-48.7		269	47.2	31	10,354	-51.5		302	50.9	31	10,724	-47.4		264	38.1
200	30	12,413	-54.4		181	5.2	31	12,324	-55.1		269	36.1	31	12,030	-54.9		270	51.5	31	11,789	-55.0		298	46.0	31	12,170	-55.7		263	48.4
175	30	13,255	-61.2		153	4.9	31	13,166	-60.9		268	36.3	31	12,879	-57.0		268	49.3	31	12,641	-55.4		298	45.5	30	13,014	-59.5		262	47.2
150	29	14,195	-68.6		104	8.2	31	14,110	-67.0		271	33.0	31	13,850	-59.4		270	48.6	31	13,622	-56.1		295	40.0	30	13,969	-63.6		266	42.7
125	29	15,265	-76.2		91	14.6	31	15,196	-72.1		277	23.9	31	14,983	-61.6		271	41.2	31	14,779	-56.8		297	32.8	30	15,078	-67.1		265	34.4
100	28	16,536	-79.8		92	15.3	31	16,498	-74.6		276	11.1	31	16,361	-62.6		270	30.7	31	16,187	-57.9		300	27.6	30	16,416	-69.6		272	24.5
80	26	17,809	-75.1		94	17.3	31	17,806	-70.6		67	3.3	31	17,740	-61.4		272	22.1	31	17,593	-58.4		298	21.6	29	17,759	-65.6		278	11.8
70	25	18,589	-71.3		91	19.4	30	18,603	-67.9		84	8.9	31	18,569	-60.6		276	18.5	31	18,432	-58.3		303	18.8	29	18,573	-63.8		279	6.8
60	25	19,516	-65.7		95	23.3	30	19,535	-64.7		96	13.2	30	19,530	-58.8		276	15.0	31	19,403	-58.2		309	15.9	29	19,525	-61.2		279	6.0
50	25	20,635	-62.3		96	28.6	30	20,659	-60.8		87	18.8	30	20,678	-57.5		280	14.0	31	20,551	-57.9		311	16.7	29	20,664	-58.4		277	6.2
40	25	22,023	-59.2		90	39.4	30	22,058	-57.4		89	23.3	30	22,095	-55.3		276	15.3	28	21,964	-57.3		318	14.0	29	22,078	-55.1		298	6.8
30	25	23,846	-54.3		89	49.1	29	23,890	-54.3		91	28.6	30	23,945	-51.9		270	16.5	25	23,794	-56.0		310	12.0	28	23,921	-53.0		286	6.4
25	23	25,024	-51.2		90	53.2	28	25,066	-52.3		89	31.5	30	25,129	-50.9		272	18.3	24	24,958	-55.1		328	10.7	28	25,103	-50.9		280	7.0
20	20	26,484	-47.9		98	50.9	27	26,517	-49.6		89	30.5	28	26,588	-49.2		273	18.5	20	26,396	-53.3		309	12.0	28	26,559	-49.5		274	8.0
15	18	28,397	-45.1		85	41.6	22	28,406	-47.7		90	29.3	27	28,481	-47.7		269	20.0	15	28,295	-49.3		292	16.5	14	28,396	-49.3		273	20.4
10	8	31,140	-41.9				8	31,091	-45.1				19	31,157	-45.3		270	25.6	13	30,954	-46.1		295	17.3						
7													7	33,510	-43.6															

	* JACKSONVILLE, FLA. 1017 MB						JOHN F. KENNEDY INT. ARPT.NY 1016 MB						JOHNSTON IS., PACIFIC AREA 1013 MB						KEY WEST, FLORIDA 1014 MB						KING SALMON, ALASKA 998 MB					
SURFACE	31	5	17.4	90	339	3.3	31	5	10.1	72	289	5.8	31	3	26.3	78	94	12.0	25	3	24.7	80	65	2.5	31	15	- 5.5	85	360	5.6
1000	31	148	18.9	82	5	5.1	31	139	9.6	63	291	7.6	31	115	25.3	80	88	14.0	25	127	23.8	83	70	2.7	31	- 5			357	4.9
950	31	590	17.5	73	32	5.8	31	565	8.4	60	281	12.2	31	567	21.7	87	81	16.1	25	569	20.5	87	82	4.1	31	400	- 3.0	67	25	10.5
900	31	1,050	14.7	69	4	2.7	31	1,010	6.5	56	277	13.6	31	1,035	18.7	83	84	15.9	25	1,042	18.4	72	119	2.5	31	828	- 4.9	66	26	10.9
850	31	1,532	12.4	58	273	4.7	31	1,478	4.2	54	267	15.7	31	1,525	16.1	77	87	13.4	25	1,532	16.1	63	158	2.3	31	1,276	- 6.6	64	25	[illegible]
800	31	2,038	10.4	46	264	7.6	31	1,970	2.5	47	265	18.8	31	2,040	13.4	79	85	11.5	25	2,045	13.5	57	229	1.7	31	1,747	- 8.9	58	18	6.2
750	31	2,574	8.1	41	263	10.7	31	2,492	.4	45	266	22.1	31	2,580	11.5	58	80	10.1	25	2,586	11.0	49	253	3.1	31	2,247	-11.1	50	7	6.0
700	31	3,140	5.1	41	266	11.8	31	3,041	- 2.2	38	267	25.3	31	3,159	9.1	40	73	7.8	25	3,161	8.3	44	253	6.2	31	2,772	-13.7	48	8	5.1
650	31	3,740	1.7	43	266	13.8	31	3,626	- 5.3	37	266	29.1	31	3,763	6.7	30	69	5.6	25	3,764	4.6	41	252	9.1	31	3,329	-16.8	45	358	3.1
600	31	4,382	- 1.8	39	262	16.3	31	4,250	- 8.9	33	269	33.6	31	4,422	2.5	27	66	4.7	25	4,419	.8	40	254	10.9	31	3,929	-20.6	45	349	3.5
550	31	5,061	- 5.9	38	263	19.6	31	4,919	-13.0	R32	271	35.4	31	5,116	- 1.6	25	50	4.9	25	5,110	- 2.9	33	256	12.2	31	4,565	-24.7	47	340	4.1
500	31	5,809	-10.6	32	257	22.5	31	5,640	-17.1	R28	271	40.0	31	5,874	- 6.3	20	53	5.6	25	5,863	- 7.5	33	260	15.3	31	5,255	-29.3	45	305	3.1
450	31	6,609	-15.9	34	263	25.6	31	6,418	-22.4	R29	267	45.1	31	6,682	-11.9	23	45	7.2	25	6,672	-12.8	31	259	18.3	31	5,995	-34.6	43	253	3.3
400	31	7,489	-22.1	31	261	29.9	31	7,277	-28.2	R28	268	47.6	31	7,582	-18.2	21	18	6.2	25	7,568	-18.7	28	255	21.8	31	6,813	-40.2	40	237	5.4
350	31	8,457	-29.2	29	261	36.9	31	8,221	-35.1	R27	267	53.2	31	8,566	-25.0	28	301	7.4	25	8,550	-25.6	23	257	25.1	31	7,712	-46.0		225	6.0
300	31	9,540	-37.2	26	264	42.5	31	9,279	-42.7	R33	266	56.3	31	9,668	-33.4	24	284	13.2	25	9,650	-34.1	21	259	28.4	31	8,725	-51.4		241	6.6
250	31	10,776	-46.0		261	51.9	31	10,489	-49.5		265	59.8	31	10,922	-43.2		277	19.6	25	10,902	-44.0		259	36.1	31	9,902	-53.2		264	12.2
200	31	12,227	-55.8		261	60.4	31	11,935	-54.1		270	59.8	31	12,387	-54.6		270	26.4	24	12,363	-56.1		256	36.5	30	11,348	-50.1		256	[illegible]
175	30	13,068	-60.5		265	57.7	31	12,787	-55.9		270	55.4	31	13,230	-60.8		267	26.8	24	13,200	-62.5		261	36.5	30	12,221	-49.7		262	21.8
150	30	14,018	-65.1		265	52.6	31	13,763	-58.2		269	48.4	31	14,173	-67.5		272	22.5	24	14,138	-68.4		264	37.7	30	13,229	-49.6		261	22.5
125	30	15,117	-69.4		271	43.3	31	14,905	-60.3		266	41.4	31	15,253	-74.2		275	13.4	23	15,220	-73.1		269	25.3	30	14,421	-49.8		260	24.1
100	28	16,443	-71.0		273	26.8	31	16,290	-61.4		267	34.6	31	16,541	-77.1		318	3.5	23	16,518	-74.9		277	15.5	29	15,876	-49.6		259	25.1
80	28	17,773	-67.4		278	11.7	31	17,675	-60.5		267	26.6	31	17,836	-72.6		72	9.1	23	17,824	-70.9		314	5.4	29	17,335	-50.5		256	27.2
70	28	18,583	-64.1		290	5.8	29	18,506	-59.1		268	21.6	31	18,626	-68.7		76	13.8	23	18,622	-66.7		79	2.5	29	18,205	-50.5		258	28.6
60	28	19,534	-61.1		284	4.5	29	19,476	-57.9		267	18.6	31	19,557	-64.9		88	18.5	23	19,563	-62.3		85	6.0	29	19,208	-51.5		260	28.9
50	28	20,676	-57.8		272	2.9	29	20,628	-56.7		268	15.5	31	20,678	-61.3		93	22.7	23	20,699	-58.7		99	9.1	29	20,391	-51.8		262	29.5
40	28	22,090	-55.4		273	4.3	29	22,046	-55.2		269	16.1	31	22,073	-58.1		88	29.3	23	22,110	-55.9		89	11.3	29	21,837	-51.8		262	30.1
30	28	23,936	-52.2		278	2.7	28	23,893	-52.3		267	21.2	31	23,900	-54.4		85	38.3	23	23,951	-52.8		82	14.8	29	23,704	-51.5		262	30.9
25	27	25,120	-50.7		294	3.9	28	25,074	-51.5		272	21.0	29	25,073	-52.2		86	43.1	23	25,131	-51.1		81	14.4	27	24,879	-51.4		264	32.8
20	25	26,577	-49.3		284	4.7	26	26,524	-50.2		273	21.4	29	26,526	-49.7		89	43.7	22	26,591	-49.2		88	13.4	22	26,332	-51.6		265	37.3
15	24	28,466	-48.0		266	5.2	19	28,395	-48.3		273	25.4	24	28,421	-47.0		90	36.7	20	28,489	-47.1		68	10.9	9	28,214	-50.8			
10	21	31,151	-45.4		270	13.0	5	30,875	-49.5				6	31,124	-43.8				19	31,189	-43.3		97	11.7						
7	10	33,541	-41.8																14	33,598	-40.4		174	5.1						
5	5	35,837	-36.8																											

See reference note at end of table

RAWINSONDE DATA

Average monthly values

OCTOBER 1965

KOROR, CAROLINE IS.
+ 1007 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	30	28.3	80	259	1.9
1000	31	95	27.2	75	262	3.1
950	31	541	23.0	73	289	5.1
900	31	1,018	20.3	67	282	6.6
850	31	1,510	17.8	62	259	6.2
800	31	2,027	15.3	56	274	4.5
750	31	2,570	12.7	51	250	2.3
700	31	3,149	9.8	45	174	1.0
650	31	3,760	6.3	42	172	1.7
600	31	4,414	2.6	39	86	1.4
550	31	5,110	- 1.1	35	89	3.5
500	31	5,867	- 5.3	30	81	4.1
450	31	6,693	-10.1	30	91	4.5
400	31	7,586	-16.1	26	82	4.5
350	31	8,578	-23.1	23	84	4.5
300	31	9,688	-31.4	21	74	3.7
250	31	10,952	-41.5		74	6.6
200	31	12,425	-53.8		81	6.0
175	31	13,269	-60.7		85	8.5
150	31	14,211	-67.7		95	12.2
125	31	15,289	-74.2		96	16.9
100	31	16,570	-78.5		92	12.8
80	31	17,852	-74.8		77	8.4
70	31	18,634	-71.0		78	10.3
60	31	19,554	-67.5		88	18.5
50	31	20,660	-64.4		91	32.6
40	30	22,036	-60.6		91	50.1
30	30	23,845	-55.7		92	63.7
25	26	25,016	-52.4		93	64.5
20	22	26,474	-48.7		91	69.3
15	7	28,395	-44.0			
10						
7						

KOTZEBUE, ALASKA
1005 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	5	- 8.9	78	92	7.6
1000	31	44			81	5.8
950	31	440	- 8.5	74	132	6.2
900	31	861	-10.1	75	169	4.1
850	31	1,300	-11.7	66	222	3.3
800	31	1,763	-13.8	62	242	3.3
750	31	2,252	-16.3	59	246	5.1
700	31	2,768	-18.9	54	248	6.6
650	31	3,318	-22.2	51	267	7.8
600	31	3,903	-25.9	49	263	9.3
550	31	4,524	-30.1	47	257	11.7
500	31	5,201	-34.6	44	256	14.2
450	31	5,924	-39.6	40	251	14.6
400	31	6,725	-45.0		247	16.7
350	31	7,607	-50.3		247	17.9
300	31	8,603	-54.8		245	19.4
250	31	9,768	-54.7		247	21.4
200	31	11,203	-52.3		251	20.0
175	31	12,068	-51.9		248	19.8
150	31	13,067	-51.9		247	19.8
125	31	14,247	-52.2		248	21.0
100	31	15,690	-52.6		244	21.4
80	31	17,129	-53.1		248	25.1
70	31	17,986	-53.9		249	26.6
60	31	18,977	-54.4		251	27.0
50	31	20,144	-54.9		251	31.3
40	30	21,575	-55.3		251	33.8
30	30	23,411	-55.0		253	36.9
25	30	24,575	-55.2		253	40.2
20	29	25,998	-54.8		252	47.6
15	20	27,826	-54.6		256	52.4
10						
7						

KWAJALEIN, MARSHALL IS.
1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	4	27.3	79	84	4.5
1000	30	89	26.9	79	86	5.2
950	30	542	23.9	85	90	7.0
900	30	1,015	21.1	82	91	7.6
850	30	1,510	18.6	79	89	7.0
800	30	2,030	16.1	75	83	6.4
750	30	2,577	13.3	72	85	6.2
700	30	3,156	10.2	68	89	7.2
650	30	3,769	6.5	70	96	7.4
600	30	4,423	2.5	69	100	8.0
550	30	5,122	- 1.5	63	102	8.9
500	30	5,876	- 5.8	60	101	9.9
450	30	6,695	-10.7	59	103	8.7
400	30	7,591	-16.2	58	100	8.7
350	30	8,586	-21.7	55	97	9.5
300	30	9,703	-30.3	47	99	7.8
250	30	10,970	-40.9	40	93	8.0
200	30	12,448	-53.2	34	84	7.2
175	30	13,294	-60.8	34	91	5.4
150	30	14,235	-68.6	34	89	6.8
125	29	15,306	-75.9		73	8.9
100	25	16,580	-79.4		82	8.7
80	21	17,960	-75.2		85	7.4
70	19	18,643	-72.3		91	10.3
60	18	19,556	-67.8		87	19.8
50	16	20,648	-64.1		89	35.5
40	14	22,026	-60.0		88	50.5
30	12	23,843	-55.6		91	58.3
25	12	25,013	-52.0		91	56.9
20	11	26,473	-48.5		86	65.1
15	9	28,375	-44.8			
10	7	31,125	-37.4			
7	5	33,591	-35.2			

LAKE CHARLES, LA.
1017 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	5	14.8	86	27	3.9
1000	31	152	17.8	69	51	6.8
950	31	591	16.7	58	72	5.4
900	31	1,050	14.5	52	75	2.7
850	31	1,532	12.9	47	335	.8
800	31	2,040	10.8	39	301	1.7
750	31	2,571	8.0	33	327	3.3
700	31	3,142	5.0	29	315	6.4
650	31	3,740	1.8	R29	311	8.5
600	31	4,385	- 2.0	R31	298	8.7
550	31	5,067	- 6.1	R29	283	11.1
500	31	5,812	-11.0	R28	273	13.2
450	31	6,609	-16.5	R27	273	17.1
400	31	7,491	-22.4	R26	267	19.2
350	31	8,458	-29.6	R29	262	22.7
300	31	9,540	-37.4	R29	258	27.8
250	31	10,776	-46.2		253	36.9
200	31	12,229	-55.2		255	45.6
175	31	13,073	-59.4		257	46.2
150	31	14,029	-63.6		258	39.2
125	31	15,137	-67.6		257	31.5
100	31	16,472	-69.2		266	22.9
80	31	17,808	-67.4		279	12.6
70	31	18,619	-63.8		284	6.8
60	31	19,572	-60.8		279	4.5
50	31	20,714	-58.1		264	2.9
40	31	22,128	-55.7		311	2.5
30	30	23,974	-52.4		329	1.6
25	30	25,158	-50.7		270	1.9
20	29	26,621	-49.0		273	4.7
15	25	28,509	-47.8		272	6.4
10	12	31,159	-46.3			
7						

LANDER, WYO.
833 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,696	5.4	54	244	1.7
1000	31	174				
950	31	604				
900	31	1,055				
850	31	1,530				
800	31	2,032	10.6	30	270	1.4
750	31	2,564	7.9	29	320	4.3
700	31	3,132	4.4	28	304	7.8
650	31	3,725	.5	26	294	13.2
600	31	4,370	- 3.4	R24	297	17.1
550	31	5,046	- 7.6	R23	296	18.6
500	31	5,789	-12.8	R25	294	22.3
450	31	6,577	-18.5	R25	293	24.9
400	31	7,454	-25.0	R27	291	28.2
350	31	8,410	-32.6	R26	292	29.3
300	31	9,477	-41.2	R29	295	28.4
250	31	10,691	-50.5		301	34.4
200	31	12,117	-58.7		302	34.6
175	30	12,949	-61.1		301	32.6
150	30	13,904	-62.3		298	31.1
125	30	15,024	-64.2		298	29.5
100	30	16,385	-65.5		301	22.0
80	30	17,751	-63.0		299	14.2
70	30	18,574	-62.1		307	11.1
60	30	19,531	-60.4		302	9.7
50	30	20,670	-59.4		298	6.2
40	30	22,071	-58.0		313	6.6
30	27	23,896	-55.6		312	6.8
25	26	25,062	-54.3		301	6.4
20	24	26,495	-53.0		285	10.7
15	15	28,352	-51.1		275	11.7
10						
7						

LAS VEGAS, NEV.
940 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	660	14.6	24	252	4.9
1000	31	132				
950	31	573				
900	31	1,035	20.8	R18	360	4.3
850	31	1,527	18.6	R19	8	5.8
800	31	2,043	15.2	R20	18	3.5
750	31	2,579	11.0	R23	46	1.6
700	31	3,156	6.8	R25	102	.2
650	31	3,759	3.2	R23	274	1.9
600	31	4,404	- .9	R24	314	4.7
550	31	5,085	- 5.5	R21	320	7.0
500	31	5,833	-10.9	R21	328	7.6
450	31	6,630	-17.2	R22	334	8.7
400	31	7,506	-24.2	R24	313	9.7
350	31	8,465	-31.7	R26	319	12.2
300	31	9,536	-39.9	R29	326	11.3
250	31	10,756	-49.1		318	11.7
200	31	12,190	-57.8		308	14.2
175	31	13,026	-60.4		304	18.1
150	31	13,981	-62.6		307	19.4
125	31	15,098	-65.3		300	16.7
100	30	16,451	-67.3		313	14.2
80	30	17,797	-66.4		327	8.5
70	30	18,607	-64.7		345	6.4
60	30	19,553	-62.3		4	5.1
50	30	20,685	-59.7		5	3.5
40	29	22,089	-57.2		330	2.9
30	29	23,919	-54.6		290	4.9
25	28	25,089	-52.9		289	7.2
20	27	26,537	-51.4		285	8.0
15	25	28,421	-49.9		274	13.4
10	5	31,202	-45.7			
7						
5						

* LIHUE, HAWAII
1011 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	36	21.8	86	38	4.5
1000	30	132	22.9	79	41	6.2
950	30	578	19.7	82	59	9.9
900	30	1,043	16.5	81	60	9.3
850	30	1,528	13.5	82	69	8.2
800	30	2,037	11.2	70	73	6.2
750	30	2,577	10.2	50	77	3.1
700	30	3,148	8.0	42	336	.8
650	30	3,751	4.9	37	326	1.7
600	30	4,405	1.5	32	295	3.7
550	30	5,091	- 2.7	31	291	5.8
500	30	5,850	- 7.8	31	294	6.6
450	30	6,655	-13.3	32	291	8.9
400	30	7,548	-19.7	31	292	11.1
350	30	8,525	-27.1	30	291	12.8
300	30	9,617	-35.5	30	292	16.9
250	30	10,861	-45.0		286	21.0
200	30	12,317	-55.3		273	26.6
175	30	13,159	-60.5		274	28.4
150	30	14,107	-66.0		276	23.7
125	30	15,197	-71.4		283	16.9
100	29	16,507	-73.3		308	9.5
80	28	17,823	-70.1		27	2.1
70	27	18,622	-67.0		90	6.0
60	27	19,560	-63.2		85	9.1
50	26	20,691	-60.3		84	13.4
40	26	22,092	-57.0		86	17.7
30	25	23,930	-53.9		91	21.0
25	25	25,106	-52.1		89	24.1
20	25	26,557	-50.3		91	22.9
15	24	28,444	-48.0		86	20.0
10	21	31,129	-45.6		91	11.8
7	14	33,538	-40.9		102	2.5
5	7	35,983	-35.0			

LITTLE ROCK, ARK.
1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	79	10.4	84	303	2.1
1000	31	159	13.0	69	283	1.7
950	31	594	14.8	51	319	1.9
900	31	1,050	12.7	51	316	4.1
850	31	1,529	11.3	43	312	5.4
800	31	2,033	9.0	42	314	7.0
750	31	2,565	6.4	35	312	8.0
700	31	3,128	3.2	34	318	8.9
650	31	3,722	.1	28	311	10.1
600	31	4,362	- 3.8	R27	296	12.0
550	31	5,035	- 7.8	R28	293	14.4
500	31	5,780	-12.1	R26	291	16.5
450	31	6,566	-17.9	R31	290	19.4
400	31	7,448	-24.4	R30	283	21.0
350	31	8,408	-31.3	R29	281	26.0
300	31	9,481	-39.4	R32	276	29.9
250	31	10,705	-48.0		273	36.7
200	31	12,150	-55.4		276	38.9
175	31	12,995	-58.8		275	38.9
150	31	13,954	-62.2		274	36.9
125	31	15,071	-65.5		278	30.3
100	30	16,419	-66.6		280	23.1
80	30	17,774	-64.7		288	15.5
70	30	18,592	-63.0		294	11.3
60	30	19,546	-61.0		284	7.0
50	30	20,686	-58.3		271	7.4
40	30	22,097	-56.0		276	12.8
30	30	23,941	-52.7		269	12.6
25	30	25,122	-51.4		271	14.6
20	30	26,576	-49.8		275	14.6
15	27	28,474	-47.8		267	16.1
10	11	31,155	-45.8			
7						
5						

MCGRATH, ALASKA
992 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	103	-10.9	74	347	2.7
1000	31	39				
950	31	439	- 8.8	79	40	6.6
900	31	855	- 8.9	77	53	6.8
850	31	1,297	- 9.3	71	47	4.1
800	31	1,765	-10.6	63	15	2.3
750	31	2,258	-12.4	57	338	1.6
700	31	2,785	-14.9	52	286	2.1
650	31	3,337	-18.0	48	252	3.7
600	31	3,937	-21.5	48	236	4.1
550	31	4,569	-25.5	47	224	6.0
500	31	5,259	-30.0	48	219	9.1
450	31	5,995	-35.3	48	234	9.3
400	31	6,814	-41.0	48	241	10.1
350	31	7,710	-47.0		230	15.0
300	31	8,718	-52.4		224	19.2
250	31	9,890	-54.5		235	19.2
200	31	11,327	-51.5		244	17.5
175	31	12,196	-50.8		244	18.8
150	31	13,201	-50.4		247	19.8
125	31	14,391	-50.3		249	20.6
100	31	15,845	-51.0		245	23.9
80	31	17,295	-51.1		249	26.8
70	31	18,162	-51.3		252	28.7
60	31	19,162	-51.5		251	30.3
50	31	20,343	-52.0		255	32.2
40	31	21,786	-52.5		255	35.2
30	29	23,650	-52.6		257	36.7
25	28	24,928	-52.6		257	40.8
20	28	26,268	-52.5		258	44.1
15	23	28,143	-52.3		261	46.4
10	9	30,767	-50.9			
7						
5						

MAJURO, MARSHALL IS.
+ 1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	3	28.7	80	75	2.9
1000	31	89	27.4	76	78	3.3
950	31	538	23.2	76	104	3.9
900	31	1,013	20.5	73	112	4.3
850	31	1,506	18.1	69	113	4.7
800	31	2,024	15.6	64	109	5.2
750	31	2,570	13.0	60	101	5.8
700	31	3,148	9.9	57	92	6.8
650	31	3,760	6.4	54	99	6.6
600	31	4,414	2.5	56	102	8.4
550	31	5,110	- 1.3	52	106	9.3
500	31	5,868	- 5.4	48	102	10.1
450	31	6,689	- 9.9	43	101	9.5
400	31	7,589	-15.3	37	96	9.5
350	31	8,585	-22.1	34	84	9.3
300	31	9,700	-30.4	30	77	8.7
250	31	10,970	-40.5	29	88	8.0
200	31	12,450	-53.3		91	7.6
175	31	13,296	-60.4		88	9.5
150	31	14,239	-68.3		101	9.9
125	31	15,311	-76.2		87	10.3
100	30	16,582	-79.6		79	8.2
80	30	17,863	-74.1		84	7.2
70	30	18,646	-70.5		94	8.9
60	29	19,567	-67.3		92	16.1
50	29	20,675	-64.2		93	31.9
40	27	22,053	-60.2		90	48.6
30	24	23,871	-55.3		90	59.6
25	21	25,038	-51.4		90	64.3
20	16	26,507	-48.1		91	65.7
15	7	28,409	-43.0			
10						
7						
5						

MARCUS IS., N. PACIFIC
+ 1011 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	9	28.4	77	133	7.2
1000	30	106	27.1	76	130	8.5
950	30	556	23.0	75	127	11.7
900	30	1,029	20.2	67	136	12.0
850	30	1,522	17.8	59	138	11.3
800	30	2,038	15.3	54	132	9.1
750	30	2,583	12.7	48	149	9.3
700	30	3,160	9.7	40	135	9.3
650	30	3,772	6.3	36	145	7.8
600	30	4,423	2.4	36	157	8.4
550	30	5,120	- 1.6	32	170	6.4
500	30	5,874	- 6.0	31	190	6.8
450	30	6,688	-10.8	28	193	7.6
400	30	7,589	-16.6	27	203	8.5
350	30	8,579	-23.6	27	210	7.4
300	30	9,687	-31.9	26	230	6.6
250	30	10,949	-41.6	23	259	8.0
200	30	12,424	-53.3		287	8.5
175	30	13,272	-59.4		283	10.3
150	30	14,223	-65.2		266	5.2
125	30	15,317	-71.3		265	1.2
100	30	16,618	-75.6		101	6.6
80	30	17,916	-72.9		101	13.8
70	30	18,704	-69.5		100	15.9
60	30	19,633	-64.8		101	16.9
50	30	20,759	-60.1		94	17.1
40	29	22,162	-56.8		93	17.9
30	26	24,004	-52.3		108	17.1
25	21	25,191	-50.1		104	16.7
20	12	26,655	-48.0		110	13.8
15	5	28,547	-45.6			
10						
7						

* MEDFORD, OREG.
973 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	411	6.7	86	193	.8
1000	31	173				
950	31	603	11.4	72	177	.8
900	31	1,053	13.1	56	175	2.9
850	31	1,533	12.2	45	205	5.1
800	31	2,039	9.7	40	233	8.4
750	31	2,570	6.8	32	237	11.8
700	31	3,135	3.8	34	249	13.6
650	31	3,734	.1	33	251	16.1
600	31	4,371	- 3.6	30	250	20.0
550	31	5,049	- 8.2	33	255	24.5
500	31	5,787	-12.9	30	258	28.0
450	31	6,576	-18.6	32	259	28.9
400	31	7,450	-24.9	32	256	31.5
350	31	8,407	-32.2	33	254	31.1
300	31	9,476	-40.4	38	260	32.6
250	30	10,699	-49.6		260	34.6
200	30	12,131	-58.1		260	37.3
175	29	12,967	-60.7		264	35.5
150	29	13,922	-62.5		265	36.3
125	29	15,041	-64.7		263	28.7
100	29	16,399	-65.1		269	21.4
80	29	17,761	-63.5		273	14.0
70	29	18,583	-62.1		285	8.7
60	27	19,536	-60.7		303	4.9
50	27	20,673	-59.5		317	6.2
40	27	22,073	-58.2		338	5.2
30	27	23,892	-55.9		342	5.8
25	27	25,054	-54.5		347	7.8
20	27	26,487	-53.1		2	6.8
15	26	28,348	-51.2		348	7.6
10	17	31,011	-48.3		304	11.5
7						

MERIDA, MEXICO
1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	11	20.9	98	80	3.9
1000	31	137	23.3	88	91	5.4
950	31	585	21.8	80	104	6.6
900	31	1,055	19.1	76	96	5.4
850	31	1,546	16.5	72	94	4.5
800	31	2,061	13.7	69	100	2.9
750	31	2,596	11.0	66	128	2.3
700	31	3,176	8.1	56	145	2.1
650	31	3,778	4.9	52	143	2.5
600	31	4,435	1.5	47	200	2.5
550	31	5,119	- 2.3	42	230	3.7
500	31	5,883	- 6.6	38	232	6.6
450	31	6,690	-11.5	33	235	9.1
400	31	7,594	-17.6	31	240	12.6
350	31	8,580	-24.1	28	242	16.1
300	31	9,687	-32.2	24	242	23.9
250	30	10,946	-42.3		240	26.6
200	30	12,415	-54.3		247	28.2
175	30	13,258	-60.8		244	28.6
150	30	14,200	-67.4		253	25.6
125	30	15,280	-73.9		255	19.2
100	30	16,572	-76.1		249	8.0
80	30	17,876	-70.7		98	4.3
70	29	18,675	-66.7		86	5.6
60	29	19,617	-62.4		86	10.1
50	29	20,752	-58.7		85	15.2
40	28	22,162	-55.9		92	17.9
30	27	24,009	-51.9		89	22.9
25	25	25,199	-49.7		81	23.9
20	19	26,661	-47.5		89	27.0
15	10	28,574	-46.1			
10						
7						

* MIAMI, FLA.
1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	4	22.5	88	348	2.5
1000	31	129	23.0	85	16	2.3
950	31	579	20.7	82	108	1.9
900	31	1,043	18.0	76	144	1.9
850	31	1,531	15.2	70	208	2.9
800	31	2,044	12.9	62	237	4.1
750	31	2,585	10.2	57	246	6.2
700	31	3,156	7.7	45	248	8.7
650	31	3,760	4.2	41	251	10.9
600	31	4,410	.4	38	251	12.8
550	31	5,099	- 3.5	38	258	13.8
500	31	5,851	- 8.1	36	258	16.7
450	31	6,658	-13.2	36	257	20.6
400	31	7,550	-19.0	32	261	24.3
350	31	8,531	-25.9	31	261	28.9
300	31	9,629	-34.4	30	262	33.8
250	31	10,878	-44.1		266	40.6
200	31	12,338	-55.4		269	46.2
175	31	13,177	-61.7		268	44.5
150	31	14,117	-68.0		275	42.3
125	31	15,199	-73.0		276	30.7
100	31	16,496	-75.0		271	17.5
80	31	17,802	-70.8		304	6.4
70	30	18,599	-66.8		19	1.6
60	30	19,542	-62.0		84	2.5
50	29	20,678	-59.2		92	3.5
40	29	22,086	-56.4		94	6.0
30	29	23,926	-53.1		90	10.5
25	29	25,105	-51.5		84	10.5
20	26	26,566	-48.9		101	9.9
15	24	28,455	-47.3		89	4.3
10	17	31,156	-44.4		137	2.1
7	6	33,546	-40.5			

* MIDLAND, TEXAS
919 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	874	11.0	74	179	1.4
1000	31	155				
950	31	585				
900	31	1,045	15.3	50	169	4.3
850	31	1,531	15.1	40	200	5.6
800	31	2,042	12.4	37	299	3.9
750	31	2,576	9.2	33	318	8.0
700	31	3,148	5.4	36	336	8.2
650	31	3,747	1.4	35	342	7.0
600	31	4,388	- 3.1	39	334	6.2
550	31	5,066	- 7.2	34	317	7.8
500	31	5,809	-12.0	31	307	8.4
450	31	6,601	-18.0	31	314	10.1
400	31	7,477	-24.4	30	308	11.3
350	31	8,436	-31.6	29	292	11.5
300	31	9,509	-39.3	28	283	14.0
250	31	10,733	-48.4		274	18.5
200	31	12,174	-56.1		264	23.1
175	31	13,016	-59.4		265	25.4
150	31	13,972	-63.2		267	22.1
125	31	15,085	-66.0		271	19.8
100	31	16,430	-68.6		284	13.6
80	31	17,772	-66.4		285	7.4
70	30	18,585	-63.8		287	4.7
60	30	19,538	-61.1		286	3.5
50	30	20,675	-59.0		280	4.1
40	29	22,081	-57.0		266	4.5
30	28	23,913	-54.3		287	6.0
25	28	25,085	-53.0		264	6.4
20	26	26,534	-51.3		272	8.2
15	25	28,410	-49.1		278	9.9
10	20	31,085	-45.9		301	14.4
7	7	33,543	-41.0			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

OCTOBER 1965

MONTERREY, MEXICO
967 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	423	16.4	85	315	2.3
1000	31	139				
950	31	578	17.5	74	355	1.0
900	31	1,040	15.7	69	7	1.6
850	31	1,523	13.8	59	359	1.0
800	31	2,033	12.2	43	351	3.5
750	31	2,570	9.6	36	330	3.1
700	31	3,140	6.3	33	316	4.5
650	31	3,739	2.4	36	293	6.2
600	31	4,386	- 1.2	31	281	6.0
550	31	5,070	- 5.2	24	274	5.1
500	31	5,818	- 9.8	24	259	8.0
450	31	6,619	-15.5	24	257	11.1
400	31	7,502	-21.9	23	257	15.0
350	31	8,470	-29.1	23	254	19.6
300	31	9,553	-37.2	20	250	25.1
250	31	10,790	-45.9		251	34.8
200	31	12,244	-55.3		247	49.3
175	31	13,086	-60.3		249	46.4
150	31	14,035	-65.6		250	37.9
125	31	15,129	-70.2		250	30.9
100	30	16,443	-72.4		253	19.6
80	30	17,764	-68.3		264	9.7
70	30	18,569	-65.5		318	1.4
60	29	19,516	-61.9		99	4.7
50	29	20,652	-59.2		109	6.6
40	29	22,060	-56.6		101	3.5
30	27	23,900	-52.9		67	6.6
25	26	25,083	-51.4		74	8.5
20	25	26,538	-49.2		70	8.9
15	12	28,414	-48.1			
10						
7						
5						
4						

MONTGOMERY, ALA.
1011 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	61	12.4	92	360	2.3
1000	31	153	14.4	79	32	4.3
950	31	591	15.0	63	49	5.4
900	31	1,046	13.5	56	330	3.7
850	31	1,526	11.7	46	298	4.9
800	31	2,031	9.3	42	296	6.6
750	31	2,566	6.7	35	291	7.8
700	31	3,129	3.9	33	289	8.4
650	31	3,726	.5	30	292	10.7
600	31	4,366	- 3.2	R28	289	12.8
550	31	5,045	- 7.1	R26	281	16.7
500	31	5,788	-11.6	R24	280	20.4
450	31	6,585	-17.1	R26	276	22.9
400	31	7,462	-23.3	R28	275	24.9
350	31	8,426	-30.5	R27	267	29.5
300	31	9,504	-38.3	R26	264	36.3
250	31	10,735	-46.7		261	46.0
200	31	12,186	-55.1		260	54.4
175	31	13,031	-59.1		264	54.2
150	30	13,989	-63.2		265	48.0
125	30	15,099	-66.9		263	41.6
100	30	16,439	-68.7		267	30.9
80	30	17,782	-65.7		278	15.5
70	30	18,596	-63.8		273	10.3
60	30	19,550	-60.6		268	8.0
50	30	20,693	-57.8		268	8.4
40	30	22,110	-55.0		288	5.4
30	29	23,960	-52.3		280	6.0
25	29	25,145	-50.2		279	5.1
20	28	26,603	-49.4		279	7.2
15	28	28,496	-47.5		267	12.0
10	26	31,182	-45.8		269	17.9
7	20	33,596	-40.7		264	23.3
5	14	35,868	-38.3			
4						

* NANTUCKET, MASS.
1014 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	14	9.4	84	257	5.4
1000	31	128	10.5	73	255	8.5
950	31	549	8.9	65	259	13.4
900	31	1,000	6.9	59	260	15.2
850	31	1,469	4.5	55	264	18.5
800	31	1,961	2.4	55	266	20.4
750	31	2,477	- .1	53	263	21.8
700	31	3,030	- 3.0	48	264	24.3
650	31	3,608	- 5.8	40	264	28.9
600	31	4,237	- 9.4	38	264	33.6
550	31	4,899	-13.2	29	263	33.2
500	31	5,626	-17.6	28	259	38.5
450	31	6,402	-22.4	28	257	43.5
400	31	7,264	-28.1	28	254	49.3
350	31	8,210	-34.3	27	259	52.3
300	31	9,272	-41.7	27	256	55.2
250	31	10,489	-49.0		260	53.8
200	31	11,936	-53.8		262	55.0
175	30	12,792	-56.3		262	50.1
150	29	13,776	-58.6		260	46.6
125	29	14,915	-61.1		259	41.4
100	29	16,298	-61.6		258	34.2
80	29	17,681	-60.6		259	26.4
70	29	18,514	-59.5		261	21.8
60	29	19,480	-58.5		261	18.8
50	29	20,628	-57.2		263	18.8
40	28	22,043	-55.8		265	18.8
30	24	23,881	-53.9		265	20.2
25	24	25,055	-52.3		267	21.6
20	24	26,503	-50.5		266	21.0
15	23	28,402	-48.2		264	21.4
10	20	31,069	-45.6		265	32.2
7	6	33,400	-43.6			
5						
4						

* NASHVILLE, TENN.
998 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	177	9.6	86	182	.2
1000	31	159			75	1.6
950	31	587	11.7	63	221	2.7
900	31	1,039	10.1	56	285	4.5
850	31	1,513	8.5	48	308	8.9
800	30	2,013	6.6	44	303	10.3
750	30	2,541	4.3	40	299	12.4
700	30	3,100	1.5	38	296	14.2
650	30	3,689	- 2.1	37	290	16.1
600	30	4,325	- 5.9	34	287	18.8
550	30	4,994	- 9.7	30	290	21.9
500	30	5,732	-14.1	27	285	25.4
450	30	6,514	-19.5	26	283	28.0
400	30	7,388	-25.9	28	280	30.3
350	30	8,342	-32.6	28	277	34.9
300	30	9,410	-40.2	26	279	39.8
250	30	10,630	-48.4		275	44.1
200	30	12,074	-55.0		268	47.8
175	30	12,922	-57.8		266	47.6
150	30	13,886	-61.0		269	44.5
125	30	15,008	-64.4		273	35.5
100	30	16,368	-65.1		274	27.8
80	30	17,734	-63.0		278	17.5
70	30	18,557	-61.7		282	14.6
60	30	19,514	-59.7		280	11.8
50	30	20,659	-57.9		273	11.5
40	30	22,074	-55.5		277	9.3
30	30	23,920	-52.9		273	14.6
25	30	25,100	-50.9		276	15.2
20	28	26,560	-49.9		269	14.6
15	28	28,449	-47.8		270	16.7
10	26	31,142	-45.9		262	19.6
7	18	33,532	-41.8		257	21.2
5	11	35,848	-37.3			
4	5	37,490	-35.7			

NOME, ALASKA
1004 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	7	- 4.6	74	7	1.9
1000	31	37			335	4.5
950	31	436	- 5.3	72	163	2.3
900	31	864	- 8.0	79	184	1.7
850	31	1,306	-10.3	71	260	2.7
800	31	1,771	-12.5	64	295	5.1
750	30	2,255	-14.8	55	265	5.4
700	30	2,782	-17.3	48	277	5.6
650	30	3,325	-20.5	45	273	7.6
600	30	3,922	-24.3	46	282	7.8
550	30	4,539	-28.7	46	280	8.5
500	30	5,226	-33.4	49	269	11.8
450	30	5,948	-38.5	41	268	14.8
400	30	6,759	-43.8	45	276	16.7
350	30	7,644	-49.5		279	19.4
300	30	8,642	-54.0		273	22.1
250	30	9,8[illegible]9	-53.8		260	21.4
200	30	11,248	-52.1		261	21.0
175	30	12,115	-51.2		258	20.8
150	30	13,117	-51.1		255	21.4
125	30	14,302	-51.1		260	21.[illegible]
100	30	15,752	-51.3		260	24.3
80	30	17,196	-52.5		257	25.6
70	29	18,056	-53.1		258	27.8
60	29	19,049	-53.3		257	29.7
50	29	20,221	-53.7		261	31.5
40	29	21,651	-54.4		260	35.0
30	29	23,494	-54.3		257	40.0
25	27	24,663	-54.3		264	41.8
20	23	26,086	-53.9		260	49.2
15	16	27,946	-53.0		261	52.6
10	6	30,551	-51.5			
7						
5						
4						

* NORTH PLATTE, NEBR.
920 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	848	4.6	85	289	2.3
1000	31	157				
950	31	579				
900	31	1,025	10.7	58	301	5.2
850	31	1,504	11.9	43	309	8.4
800	31	2,010	9.8	39	309	11.3
750	31	2,542	6.5	40	306	15.2
700	31	3,105	2.9	42	312	18.6
650	31	3,700	- 1.0	41	316	21.0
600	31	4,334	- 5.4	38	315	22.9
550	31	5,004	- 9.7	35	315	24.7
500	31	5,742	-14.2	32	317	26.2
450	31	6,530	-20.0	32	314	28.2
400	31	7,395	-26.5	33	316	30.7
350	31	8,345	-33.7	33	313	31.9
300	31	9,408	-41.9	35	317	33.0
250	31	10,619	-50.3		313	35.2
200	31	12,048	-57.9		310	35.4
175	31	12,885	-59.5		307	35.7
150	31	13,844	-61.7		305	33.2
125	31	14,968	-63.5		302	28.2
100	31	16,232	-64.7		304	21.8
80	31	17,700	-62.9		303	15.5
70	31	18,523	-62.1		309	11.8
60	31	19,480	-60.6		318	10.3
50	31	20,620	-59.1		316	8.9
40	31	22,023	-57.5		313	8.9
30	30	23,853	-55.2		297	10.9
25	30	25,021	-53.8		290	11.5
20	27	26,460	-52.4		296	10.1
15	24	28,347	-49.6		288	12.6
10	15	30,981	-47.9		293	14.8
7	8	33,323	-45.6			

* OAKLAND, CALIF.
1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	6	14.5	78	245	.6
1000	31	144	15.7	68	246	1.0
950	31	581	17.4	51	332	1.4
900	31	1,043	17.5	36	342	2.9
850	31	1,530	15.9	28	331	3.3
800	31	2,042	13.2	27	307	3.5
750	31	2,576	10.1	26	276	5.2
700	31	3,152	7.0	25	262	6.8
650	31	3,753	3.5	24	261	8.7
600	31	4,403	- .4	23	259	11.3
550	31	5,080	- 5.0	23	255	12.8
500	31	5,837	-10.7	24	256	14.0
450	31	6,629	-17.1	29	258	13.6
400	31	7,512	-23.9	30	260	15.5
350	31	8,473	-31.5	33	261	16.1
300	31	9,545	-40.0	38	267	18.3
250	31	10,767	-48.7		281	18.6
200	31	12,205	-57.1		286	25.1
175	31	13,043	-60.1		284	26.6
150	31	13,999	-62.9		285	24.5
125	31	15,112	-66.1		282	19.8
100	31	16,458	-67.7		282	15.2
80	31	17,805	-65.8		289	9.9
70	30	18,619	-64.3		296	5.8
60	30	19,566	-62.2		327	3.7
50	30	20,698	-60.0		353	3.7
40	30	22,096	-58.0		350	3.5
30	30	23,920	-55.4		348	5.2
25	30	25,095	-53.9		333	5.1
20	29	26,519	-52.7		296	7.4
15	26	28,394	-50.5		284	11.5
10	19	31,034	-48.4		273	15.5
7	[illegible]	33,334	-46.7			

OKLAHOMA CITY, OKLA.
972 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	392	12.4	75	213	2.7
1000	31	155				
950	31	589	15.2	56	211	4.7
900	31	1,046	14.0	46	224	7.4
850	31	1,527	12.1	42	261	5.6
800	31	2,032	9.8	36	280	4.5
750	31	2,561	6.8	36	300	4.3
700	31	3,130	3.5	36	325	5.2
650	31	3,721	- .2	37	324	7.2
600	31	4,364	- 4.2	37	312	7.0
550	31	5,036	- 8.4	36	324	6.8
500	31	5,778	-13.2	33	316	8.5
450	31	6,564	-18.8	32	309	9.5
400	31	7,440	-25.1	31	291	14.0
350	30	8,399	-32.0	36	279	18.8
300	30	9,470	-40.0	33	272	23.1
250	30	10,691	-48.8		269	26.0
200	30	12,131	-56.7		261	28.7
175	30	12,971	-59.6		265	30.9
150	30	13,928	-62.8		268	28.2
125	30	15,042	-65.8		276	23.5
100	30	16,393	-66.7		281	17.5
80	29	17,746	-65.1		295	13.6
70	29	18,562	-63.4		302	7.2
60	29	19,515	-61.1		281	5.6
50	29	20,652	-59.2		290	7.4
40	28	22,056	-56.8		287	8.9
30	27	23,889	-54.1		279	12.0
25	22	25,069	-52.8		277	13.4
20	21	26,515	-51.4		282	14.2
15	12	28,417	-48.4			
10						
7						

OMAHA, NEBR.
969 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	403	8.5	77	234	2.3
1000	31	144				
950	31	570	11.3	64	261	4.5
900	31	1,024	12.5	48	297	11.1
850	31	1,502	10.3	45	305	14.8
800	31	2,005	8.0	39	309	17.1
750	31	2,533	4.9	38	304	18.8
700	31	3,094	1.5	43	299	20.4
650	31	3,684	- 2.2	46	300	22.7
600	31	4,319	- 5.9	43	302	24.9
550	31	4,989	-10.4	44	300	27.2
500	31	5,723	-14.9	36	304	28.6
450	31	6,505	-20.4	38	306	30.1
400	31	7,375	-26.5	34	305	33.0
350	31	8,324	-33.9	34	304	31.3
300	31	9,386	-41.7	31	305	32.4
250	31	10,599	-50.1		300	37.5
200	31	12,031	-56.7		302	40.9
175	31	12,873	-58.1		301	37.1
150	30	13,841	-59.6		294	33.6
125	30	14,974	-62.1		296	29.9
100	30	16,347	-63.0		300	24.7
80	30	17,723	-61.8		300	18.8
70	30	18,551	-60.7		305	17.1
60	29	19,509	-59.6		285	9.1
50	28	20,650	-58.8		314	9.9
40	28	22,057	-56.9		309	8.4
30	27	23,890	-54.6		296	12.8
25	26	25,060	-53.1		298	14.6
20	23	26,497	-51.5		284	16.5
15	16	28,380	-49.4		283	19.2
10	5	31,012	-47.4			
7						

* PEORIA, ILL.
993 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	200	7.0	89	239	2.1
1000	31	144				
950	31	571	10.4	61	275	9.9
900	31	1,018	8.7	53	291	14.4
850	31	1,490	7.2	45	291	17.5
800	31	1,987	5.1	44	293	18.5
750	31	2,514	2.3	45	294	21.0
700	31	3,072	- .5	42	294	22.5
650	31	3,654	- 3.9	46	296	25.3
600	31	4,281	- 7.4	39	297	27.0
550	31	4,950	-11.5	34	299	28.2
500	31	5,678	-16.3	34	296	30.5
450	31	6,455	-21.8	34	298	34.4
400	31	7,318	-27.7	32	297	37.7
350	31	8,265	-34.5	29	296	37.7
300	31	9,325	-42.2	30	295	43.1
250	31	10,536	-50.5		294	45.1
200	31	11,969	-55.8		295	48.0
175	31	12,817	-57.0		291	47.[illegible]
150	31	13,789	-59.2		290	44.1
125	31	14,925	-61.2		291	35.[illegible]
100	31	16,307	-61.9		291	27.0
80	31	17,690	-60.8		295	20.0
70	31	18,522	-59.9		300	16.3
60	31	19,488	-59.0		296	12.6
50	31	20,634	-58.1		296	11.[illegible]
40	31	22,044	-56.7		303	10.5
30	31	23,879	-54.0		289	14.8
25	30	25,058	-52.5		287	17.3
20	30	26,506	-50.7		284	16.9
15	29	28,391	-48.5		279	19.[illegible]
10	26	31,067	-45.4		275	17.5
7	9	33,430	-43.6			

* PITTSBURGH, PA.
975 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	353	6.4	85	227	3.9
1000	31	144				
950	31	571	8.2	70	238	8.9
900	31	1,013	6.5	65	264	14.0
850	31	1,481	4.4	65	272	16.3
800	31	1,973	2.6	58	278	19.0
750	31	2,497	.7	52	277	22.1
700	31	3,045	- 1.9	50	280	23.9
650	31	3,631	- 4.7	45	279	26.0
600	31	4,257	- 8.2	42	280	29.5
550	31	4,924	-12.5	39	279	31.5
500	31	5,650	-17.0	38	283	34.4
450	31	6,428	-22.3	35	282	37.7
400	30	7,289	-28.6	33	282	40.6
350	30	8,231	-35.6	32	278	42.5
300	30	9,286	-43.1	34	274	48.0
250	30	10,495	-50.1		273	52.6
200	30	11,936	-54.4		269	57.9
175	30	12,788	-56.2		267	50.0
150	30	13,762	-58.5		268	45.[illegible]
125	30	14,903	-60.4		269	37.9
100	30	16,290	-61.0		270	29.9
80	30	17,676	-60.1		270	21.2
70	30	18,510	-59.5		270	17.3
60	29	19,472	-58.8		272	15.7
50	29	20,618	-57.8		279	14.8
40	29	22,030	-55.9		279	15.5
30	29	23,869	-53.4		280	16.5
25	29	25,045	-52.0		280	16.9
20	29	26,493	-50.9		280	18.1
15	29	28,375	-48.5		279	20.2
10	28	31,053	-45.8		270	23.9
7	14	33,508	-42.6		274	20.0

PONAPE, CAROLINE IS.
+ 1005 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	28	39	28.6	79	360	1.6
1000	28	80	28.0	77	340	1.0
950	28	529	24.0	74	231	3.5
900	28	1,008	21.0	71	238	3.9
850	28	1,502	18.3	66	262	4.3
800	28	2,020	15.8	61	273	3.5
750	28	2,568	13.0	54	240	2.1
700	28	3,144	10.1	50	236	.6
650	28	3,757	6.8	48	76	1.6
600	28	4,411	3.0	48	102	2.1
550	28	5,107	- .9	44	95	2.7
500	28	5,867	- 4.9	39	113	5.1
450	28	6,688	- 9.5	33	109	5.6
400	28	7,591	-15.1	31	108	5.4
350	28	8,587	-22.0	29	89	6.4
300	28	9,703	-30.3	25	86	8.2
250	28	10,973	-40.4	23	78	8.9
200	28	12,453	-53.0		75	12.2
175	28	13,301	-60.1		63	13.4
150	28	14,245	-67.8		64	14.0
125	27	15,322	-75.1		71	13.6
100	26	16,599	-79.1		71	8.4
80	25	17,878	-73.6		71	7.8
70	25	18,664	-70.8		84	7.6
60	25	19,583	-67.3		91	16.[illegible]
50	25	20,692	-63.9		91	32.2
40	25	22,071	-60.5		88	51.1
30	20	23,899	-55.3		89	58.3
25	17	25,065	-51.6		91	62.9
20	12	26,524	-46.9			
15						
10						
7						

PORTLAND, ME.
1012 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	20	5.2	82	270	3.1
1000	31	121			276	6.8
950	31	543	6.7	62	284	8.9
900	31	986	4.8	63	272	10.3
850	31	1,451	2.7	63	268	14.8
800	31	1,940	.9	55	257	20.0
750	31	2,456	- 1.6	53	255	22.5
700	31	3,004	- 4.6	48	257	26.0
650	31	3,580	- 7.8	44	258	30.1
600	31	4,2[illegible]2	-11.4	37	258	33.4
550	31	4,860	-15.5	R33	258	37.5
500	31	5,579	-20.0	R31	257	42.5
450	31	6,347	-24.9	R27	261	44.9
400	31	7,201	-30.8	R27	259	47.8
350	31	8,137	-37.1	R25	259	54.0
300	31	9,189	-43.1	R22	255	58.9
250	31	10,401	-48.7		255	62.2
200	31	11,856	-52.2		255	60.0
175	31	12,716	-54.0		256	53.6
150	31	13,7[illegible]1	-56.2		258	50.1
125	31	14,855	-57.8		259	42.3
100	30	16,255	-58.0		257	34.4
80	29	17,662	-58.3		261	25.4
70	29	18,504	-57.4		263	19.8
60	29	19,478	-57.4		263	15.9
50	29	20,632	-56.7		262	15.3
40	27	22,040	-55.5		268	14.4
30	27	23,880	-53.5		270	13.0
25	25	25,050	-52.6		268	15.7
20	22	26,508	-50.3		268	16.3
15	12	28,418	-47.7		273	16.3
10	5	31,118	-42.6			
7						

RAPID CITY, S. DAK.
907 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	966	7.8	58	325	5.6
1000	31	147				
950	31	574				
900	31	1,025			321	7.2
850	31	1,502	11.1	37	318	11.5
800	31	2,006	8.4	36	320	15.3
750	31	2,532	5.6	37	317	17.5
700	31	3,097	2.3	38	313	20.6
650	31	3,684	- 1.3	36	311	23.3
600	31	4,326	- 5.2	37	306	26.4
550	31	4,996	- 9.6	36	306	27.8
500	31	5,734	-14.2	R32	305	32.6
450	31	6,518	-20.0	R30	304	36.7
400	31	7,387	-26.3	30	307	38.5
350	31	8,339	-33.5	R31	308	40.8
300	31	9,402	-42.0	R29	310	43.5
250	31	10,611	-51.1		308	44.1
200	31	12,038	-58.0		308	42.7
175	31	12,874	-59.7		307	42.3
150	31	13,835	-60.6		305	36.5
125	31	14,964	-62.6		301	32.1
100	31	16,337	-63.2		302	24.9
80	31	17,711	-62.1		306	16.3
70	31	18,538	-61.0		303	13.2
60	31	19,498	-60.2		305	11.1
50	28	20,639	-58.9		312	9.9
40	27	22,042	-57.6		316	7.4
30	26	23,865	-55.7		305	7.0
25	25	25,030	-54.2		302	9.1
20	22	26,454	-52.9		297	9.[illegible]
15	14	28,341	-49.7		281	10.7
10	5	31,070	-45.8			
7						

ST. CLOUD, MINN.
977 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	316	5.2	81	273	2.3
1000	31	126				
950	31	549	7.6	67	[illegible]	5.2
900	31	974	7.2	58	307	12.8
850	31	1,463	5.7	51	306	16.9
800	31	1,958	3.6	47	302	19.0
750	31	2,478	1.1	44	305	21.6
700	31	3,0[illegible]	- 1.8	39	30[illegible]	24.5
650	31	3,615	- 5.0	42	304	27.0
600	31	4,245	- 9.0	44	301	28.4
550	31	4,915	-13.0	42	[illegible]	32.1
500	31	5,63[illegible]	-17.5	40	307	35.0
450	31	6,41[illegible]	-22.8	37	308	38.3
400	31	7,271	-28.9	R34	[illegible]	[illegible]
350	31	8,213	-35.9	R33	306	42.3
300	31	9,267	-43.7		306	45.1
250	31	10,471	-51.3		304	[illegible]
200	31	11,902	-56.6		[illegible]	47.[illegible]
175	31	12,748	-56.6		302	40.8
150	31	13,724	-57.6		303	40.4
125	31	14,871	-59.1		302	33.2
100	30	16,265	-59.6		302	27.[illegible]
80	30	17,663	-58.9		306	22.7
70	30	18,5[illegible]	-58.7		307	18.3
60	30	19,471	-58.0		311	16.5
50	30	20,62[illegible]	-58.2		314	13.6
40	30	22,03[illegible]	-56.8		317	11.7
30	29	23,961	-54.8		315	[illegible]
25	29	25,031	-53.3		311	11.8
20	28	26,469	-52.1		304	13.0
15	23	28,319	-50.6		292	17.5
10	10	31,021	-47.7			
7	5	33,397	-45.0			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

OCTOBER 1965

ST. PAUL IS., ALASKA
1004 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	10	2.0	84	337	5.8
1000	31	40			328	10.1
950	31	448	-1.4	82	349	7.2
900	31	880	-4.8	87	352	6.4
850	31	1,328	-7.2	79	335	6.4
800	31	1,798	-9.3	66	333	8.0
750	31	2,295	-11.7	57	330	8.7
700	31	2,821	-14.6	53	321	10.3
650	31	3,379	-17.5	53	327	11.7
600	31	3,974	-21.1	55	320	12.0
550	31	4,606	-25.2	53	307	13.8
500	31	5,296	-29.8	51	310	15.7
450	31	6,035	-35.1	49	308	17.1
400	31	6,852	-40.5	45	302	20.4
350	31	7,751	-45.8		301	21.2
300	31	8,766	-50.3		298	22.0
250	31	9,949	-52.1		299	27.6
200	31	11,399	-50.4		291	33.6
175	31	12,271	-50.1		287	34.0
150	31	13,279	-49.9		286	35.0
125	31	14,469	-50.4		284	33.6
100	31	15,923	-50.8		281	33.4
80	31	17,375	-50.9		277	33.8
70	30	18,239	-51.3		276	32.4
60	30	19,241	-51.4		273	34.0
50	30	20,424	-51.8		270	34.4
40	30	21,871	-51.9		269	33.8
30	28	23,738	-51.8		271	37.1
25	27	24,923	-50.8		269	36.3
20	26	26,375	-50.8		268	38.9
15	19	28,240	-50.2		271	42.2
10	7	30,976	-46.2			
7						
5						

SALEM, OREG.
1012 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	61	9.2	93	180	2.9
1000	31	159	10.9	85	182	3.5
950	31	589	12.5	68	200	6.2
900	31	1,043	11.9	59	213	9.1
850	31	1,520	10.0	52	228	12.2
800	31	2,021	7.4	45	231	14.6
750	31	2,544	4.7	41	235	16.3
700	31	3,109	1.6	40	240	20.0
650	31	3,697	-1.4	36	248	22.9
600	31	4,337	-5.1	33	249	26.4
550	31	5,009	-9.7	36	250	28.6
500	31	5,744	-14.6	37	253	31.9
450	31	6,527	-19.6	R33	254	35.9
400	31	7,400	-25.6	R30	255	38.7
350	31	8,354	-32.6	R33	255	41.6
300	31	9,421	-40.8	33	255	42.7
250	31	10,635	-49.9		256	45.8
200	31	12,065	-58.2		259	46.0
175	31	12,900	-60.0		259	43.5
150	31	13,859	-61.5		260	43.7
125	31	14,983	-63.3		261	37.3
100	31	16,350	-63.7		264	23.7
80	31	17,724	-62.2		265	16.5
70	30	18,548	-61.1		265	14.4
60	30	19,507	-60.0		276	9.9
50	29	20,644	-59.6		[illegible]	7.0
40	29	22,045	-58.2		308	5.8
30	27	23,867	-55.7		316	6.6
25	26	25,031	-54.7		335	7.4
20	25	26,464	-53.6		335	8.9
15	17	28,352	-51.3		319	9.5
10	6	30,949	-48.6			
7						
5						

SALT LAKE CITY, UTAH
876 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,288	5.8	67	138	5.1
1000	31	189				
950	31	615				
900	31	1,064				
850	31	1,541	12.8	38	161	5.6
800	31	2,050	11.5	31	191	4.9
750	31	2,582	8.5	30	246	3.9
700	31	3,152	4.[illegible]	30	287	6.6
650	31	3,752	1.1	R28	296	9.7
600	31	4,391	-2.9	R26	297	12.2
550	31	5,072	-6.9	R26	290	15.3
500	31	5,813	-11.9	R25	291	18.3
450	31	6,609	-17.8	R26	287	20.4
400	31	7,481	-24.6	R28	291	20.0
350	31	8,438	-32.1	R24	291	20.6
300	31	9,507	-40.5	R23	292	20.8
250	31	10,723	-49.9		293	22.9
200	31	12,152	-58.4		298	23.5
175	31	12,986	-61.0		301	23.1
150	31	13,939	-62.7		300	22.7
125	31	15,057	-64.9		299	20.[illegible]
100	31	16,412	-66.0		303	18.1
80	31	17,768	-64.8		303	11.8
70	31	18,585	-63.1		312	9.5
60	31	19,538	-61.2		320	6.8
50	30	20,672	-59.5		328	6.0
40	28	22,074	-58.0		308	7.0
30	27	23,894	-55.4		305	5.4
25	27	25,060	-54.1		296	7.8
20	24	26,504	-52.3		289	8.7
15	19	28,368	-50.7		294	11.8
10	7	31,131	-46.3			
7						
5						

SAN ANTONIO, TEXAS
990 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	243	14.2	89	354	2.5
1000	31	161				
950	31	599	16.6	68	66	2.7
900	31	1,058	14.5	66	105	2.5
850	31	1,540	13.1	54	1	1.0
800	31	2,048	11.2	42	303	.4
750	31	2,583	8.3	39	303	3.5
700	31	3,151	4.9	34	305	5.6
650	31	3,746	1.4	32	309	7.4
600	31	4,392	-2.4	31	306	8.5
550	31	5,072	-6.6	R30	284	9.5
500	31	5,817	-10.9	R29	277	13.2
450	31	6,613	-16.4	R27	271	15.0
400	31	7,494	-23.3	R25	271	17.9
350	31	8,458	-30.1	R24	265	21.0
300	31	9,538	-38.0	R25	262	24.7
250	31	10,769	-46.9		256	29.9
200	31	12,218	-55.6		255	36.9
175	31	13,060	-59.8		252	39.8
150	31	14,013	-64.1		257	37.3
125	31	15,118	-68.1		259	31.5
100	31	16,450	-69.5		264	19.0
80	30	17,782	-67.8		276	10.7
70	30	18,592	-64.2		262	5.6
60	30	19,542	-61.6		299	2.9
50	28	20,679	-58.8		27	.6
40	28	22,087	-56.5		64	1.4
30	26	23,929	-53.4		32	1.7
25	26	25,105	-52.0		39	1.9
20	25	26,566	-49.6		60	1.2
15	16	28,450	-48.0		256	4.9
10						
7						
5						

SAN DIEGO, CALIF.
1000 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	124	15.1	68	25	2.1
1000	31	125			21	2.7
950	31	569	21.0	36	28	2.7
900	31	1,034	20.4	24	39	2.1
850	31	1,525	18.7	19	67	1.7
800	31	2,042	15.6	20	40	1.0
750	31	2,583	12.1	21	353	1.2
700	31	3,159	8.2	R20	13	1.4
650	31	3,764	4.5	R18	349	2.7
600	31	4,414	.5	R17	1	4.5
550	31	5,096	-4.5	R19	355	7.0
500	31	5,850	-10.1	R20	347	8.4
450	31	6,644	-16.3	R20	335	8.5
400	31	7,528	-23.4	R23	321	9.9
350	31	8,491	-31.0	R25	319	12.0
300	30	9,566	-39.5	R28	313	14.6
250	30	10,789	-48.6		318	15.9
200	30	12,228	-56.6		305	20.6
175	30	13,069	-59.7		301	22.9
150	30	14,025	-63.0		299	22.9
125	30	15,138	-66.8		300	19.0
100	30	16,477	-69.1		307	12.4
80	30	17,813	-67.6		336	6.6
70	30	18,620	-65.4		1	4.5
60	30	19,564	-62.1		31	3.9
50	29	20,703	-59.1		26	2.3
40	29	22,109	-56.6		311	1.9
30	29	23,946	-53.7		262	3.5
25	29	25,121	-52.2		280	6.8
20	29	26,569	-51.[illegible]		279	8.2
15	26	28,444	-49.4		276	10.1
10	24	31,114	-47.4		282	12.8
7	23	33,484	-44.5		265	11.5
5	19	35,744	-41.4			

* SAN JUAN, P. R.
1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	6	25.2	86	166	2.5
1000	31	123	25.1	80	119	7.8
950	31	576	22.2	78	92	12.2
900	31	1,043	19.4	72	94	13.6
850	31	1,533	16.7	65	91	12.2
800	31	2,048	13.9	61	90	10.1
750	31	2,590	11.2	49	90	8.4
700	31	3,164	8.1	42	94	6.0
650	31	3,769	4.5	40	86	4.1
600	31	4,421	.9	36	78	4.5
550	31	5,108	-2.8	32	69	4.9
500	31	5,866	-7.3	29	63	6.2
450	31	6,674	-12.3	27	56	6.4
400	31	7,571	-18.3	24	46	5.6
350	31	8,554	-25.5	22	30	5.6
300	31	9,653	-33.9	22	9	9.3
250	31	10,904	-43.6		345	10.1
200	31	12,367	-55.1		338	14.6
175	31	13,207	-61.4		336	15.5
150	31	14,148	-67.5		326	18.8
125	31	15,233	-72.0		328	13.0
100	31	16,538	-74.1		351	6.2
80	31	17,844	-71.2		53	7.4
70	31	18,640	-67.8		7	8.9
60	30	19,580	-63.3		81	11.7
50	29	20,708	-60.2		86	18.8
40	29	22,113	-56.2		88	26.6
30	29	23,960	-51.7		93	34.2
25	28	25,149	-50.2		92	37.3
20	26	26,615	-47.8		90	36.1
15	24	28,532	-44.0		94	35.0
10	18	31,258	-42.0		91	30.5
7	8	33,673	-36.3			
5						

SAN NICOLAS, CALIF.
995 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	174	17.1	62	311	4.7
1000	31	128				
950	31	572	21.4	35	349	3.1
900	31	1,039	20.8	28	358	2.7
850	31	1,530	18.7	23	24	1.7
800	31	2,047	15.5	22	55	1.0
750	31	2,590	12.1	20	287	1.4
700	31	3,164	8.7	21	295	1.9
650	31	3,772	4.9	18	352	1.4
600	31	4,420	.7	18	9	2.1
550	31	5,111	-4.4	19	346	2.7
500	31	5,853	-10.5	19	330	4.5
450	31	6,654	-16.7	21	316	5.8
400	31	7,529	-22.6	25	310	8.4
350	31	8,494	-30.3	26	311	10.5
300	31	9,571	-39.1	30	315	12.8
250	31	10,794	-48.8	32	307	16.9
200	31	12,230	-56.9	30	299	21.0
175	31	13,069	-59.9	28	302	24.1
150	31	14,024	-63.6	27	297	22.3
125	31	15,135	-67.3		296	18.3
100	31	16,471	-69.7		306	12.2
80	31	17,803	-68.1		319	6.6
70	31	18,609	-65.9		359	4.7
60	31	19,552	-62.9		20	4.1
50	31	20,684	-59.3		8	2.9
40	29	22,088	-57.1		302	1.9
30	27	23,921	-54.3		276	1.6
25	27	25,093	-52.7		285	5.2
20	25	26,542	-50.7		279	7.0
15	25	28,422	-49.1		279	10.3
10	18	31,069	-47.7		287	12.6
7	11	33,388	-45.2		261	17.3
5	6	35,661	-43.3			

* SAULT STE. MARIE, MICH.
986 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	221	4.3	86	12	3.1
1000	31	105				
950	31	520	4.1	84	310	5.6
900	31	963	2.5	81	302	10.9
850	31	1,424	.7	74	298	14.4
800	31	1,909	-1.2	68	296	17.7
750	31	2,421	-3.2	64	294	20.2
700	31	2,966	-5.9	56	293	22.3
650	31	3,539	-9.1	54	289	23.9
600	31	4,158	-12.7	53	291	26.8
550	31	4,815	-16.5	50	293	30.5
500	31	5,528	-20.8	47	294	33.2
450	31	6,293	-25.7	40	294	36.3
400	31	7,141	-31.7	41	297	38.7
350	31	8,072	-38.2	37	295	41.6
300	31	9,116	-45.1		290	42.9
250	31	10,316	-50.7		285	46.0
200	31	11,761	-53.0		287	43.5
175	31	12,620	-53.7		286	42.7
150	31	13,610	-54.5		287	38.7
125	31	14,772	-56.0		287	33.2
100	31	16,188	-56.9		289	25.4
80	31	17,600	-56.9		293	21.8
70	31	18,444	-57.1		293	18.[illegible]
60	31	19,420	-57.0		296	17.1
50	31	20,576	-56.6		296	15.2
40	30	21,994	-56.1		299	12.8
30	29	23,926	-54.7		302	12.0
25	28	25,000	-53.3		291	12.2
20	28	26,442	-51.9		292	14.8
15	23	28,326	-49.1		277	17.7
10	18	30,989	-46.6		274	20.8
7	9	33,418	-42.7			
5						

SHEMYA, ALASKA
1006 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	27	38	5.2	83	285	7.2
1000	27	86			295	5.6
950	27	499	1.4	83	289	13.8
900	27	935	-1.5	80	290	16.1
850	27	1,389	-3.7	70	291	17.1
800	27	1,866	-5.5	63	291	18.5
750	27	2,365	-7.9	59	291	21.0
700	27	2,905	-10.3	51	287	23.1
650	27	3,464	-13.5	48	289	27.2
600	27	4,077	-16.7	47	285	29.9
550	27	4,718	-20.5	46	284	34.0
500	27	5,425	-25.1	46	285	38.7
450	27	6,176	-30.1	44	286	43.1
400	27	7,013	-35.6	41	285	49.0
350	27	7,930	-41.7	42	287	54.4
300	27	8,963	-46.6		286	67.4
250	27	10,162	-50.1		283	76.7
200	26	11,615	-52.3		283	72.7
175	26	12,478	-52.5		283	66.8
150	26	13,472	-53.2		283	60.0
125	26	14,644	-53.9		282	54.0
100	25	16,076	-54.1		281	48.2
80	24	17,508	-54.2		281	37.1
70	22	18,357	-54.1		281	38.1
60	22	19,347	-53.8		280	35.9
50	22	20,517	-53.8		279	31.1
40	22	21,951	-53.4		277	29.5
30	20	23,799	-53.0		279	25.9
25	19	24,963	-53.0		279	26.4
20	18	26,411	-51.8		276	23.3
15	17	28,275	-50.8		273	23.5
10	9	30,935	-47.7			
7						
5						

* SHREVEPORT, LA.
1009 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	79	13.4	92	358	1.4
1000	31	157	15.6	76	46	1.6
950	31	598	15.8	57	108	2.5
900	31	1,051	13.6	56	133	.8
850	31	1,531	11.5	49	312	1.7
800	31	2,036	9.5	40	312	4.5
750	31	2,571	6.8	34	308	6.8
700	30	3,134	3.6	35	308	7.8
650	30	3,733	.4	37	302	8.0
600	30	4,370	-3.3	38	295	10.3
550	30	5,050	-7.8	40	284	9.9
500	30	5,788	-12.4	36	283	13.2
450	30	6,582	-18.0	32	276	16.5
400	30	7,456	-24.0	29	274	19.2
350	30	8,416	-31.1	29	264	23.1
300	30	9,490	-39.0	39	263	28.0
250	30	10,716	-47.4		263	34.2
200	29	12,161	-55.6		261	36.5
175	29	13,003	-59.5		261	38.5
150	29	13,958	-63.5		263	36.1
125	29	15,066	-67.2		265	30.1
100	29	16,403	-68.9		271	22.1
80	29	17,742	-66.0		281	12.4
70	28	18,556	-64.2		285	7.8
60	28	19,503	-61.7		291	7.2
50	27	20,641	-58.8		292	4.7
40	27	22,047	-56.7		286	8.0
30	27	23,982	-53.8		284	8.0
25	27	25,057	-52.2		273	9.3
20	27	26,505	-50.7		271	12.0
15	26	28,384	-48.9		278	11.5
10	26	31,062	-46.4		271	17.3
7	12	33,449	-43.4		268	17.9
5	6	35,731	-39.1			

SPOKANE, WASH.
935 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	722	6.5	69	154	3.1
1000	31	167				
950	31	589				
900	31	1,047	10.7	56	200	9.1
850	31	1,516	9.4	49	226	12.2
800	31	2,016	6.6	49	239	15.0
750	31	2,536	3.7	43	250	17.7
700	31	3,100	.4	38	256	22.1
650	31	3,685	-3.3	40	259	24.5
600	31	4,320	-6.8	38	258	28.9
550	31	4,985	-11.0	40	263	32.4
500	31	5,720	-15.2	42	265	35.5
450	31	6,495	-21.0	39	264	40.2
400	31	7,369	-26.7	36	265	44.9
350	31	8,319	-33.7	34	267	48.8
300	31	9,382	-41.8	R28	268	51.5
250	31	10,592	-50.6		270	57.5
200	31	12,022	-57.3		271	56.5
175	31	12,862	-58.9		271	52.6
150	31	13,828	-59.7		272	47.4
125	30	14,966	-61.6		272	39.[illegible]
100	30	16,345	-62.4		272	29.9
80	30	17,726	-60.7		279	22.1
70	30	18,560	-59.5		282	16.5
60	29	19,521	-59.6		287	11.3
50	29	20,663	-58.1		291	10.9
40	28	22,072	-57.0		314	8.4
30	28	23,897	-55.6		323	6.4
25	24	25,066	-54.2		330	7.2
20	24	26,500	-52.8		324	9.1
15	17	28,365	-51.4		351	10.1
10						
7						
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SWAN ISLAND, W. I.
1011 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	10	26.6	85	70	5.1
1000	31	105	26.0	85	67	6.8
950	31	557	22.9	85	75	9.7
900	31	1,027	20.1	79	87	10.1
850	31	1,520	17.3	75	94	9.9
800	31	2,036	14.3	74	100	9.5
750	31	2,582	11.4	70	105	8.7
700	31	3,155	8.8	59	112	8.9
650	31	3,765	5.4	55	112	8.5
600	31	4,415	1.7	55	123	9.1
550	31	5,108	-1.8	44	122	8.7
500	31	5,865	-6.2	43	123	7.8
450	31	6,678	-11.0	37	122	4.9
400	31	7,577	-16.8	36	111	3.1
350	31	8,566	-23.5	36	74	2.3
300	31	9,674	-32.0	34	331	1.7
250	31	10,935	-42.3		301	2.3
200	31	12,402	-54.9		290	5.2
175	30	13,243	-62.1		291	9.0
150	29	14,183	-68.5		304	7.6
125	29	15,257	-74.7		321	5.6
100	28	16,544	-76.6		21	4.9
80	26	17,839	-73.1		83	9.3
70	26	18,628	-69.5		89	12.4
60	26	19,559	-64.7		89	16.9
50	26	20,684	-60.8		95	22.1
40	25	22,080	-57.8		93	26.2
30	24	23,914	-53.9		89	35.2
25	23	25,091	-51.1		90	40.8
20	23	26,548	-48.9		90	42.5
15	16	28,451	-46.1		91	36.3
10						
7						
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TAMPA, FLA.
1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	8	19.2	90	32	3.9
1000	31	138	20.4	79	39	6.2
950	31	583	18.8	72	57	3.9
900	31	1,045	16.3	64	191	1.6
850	31	1,530	13.9	56	238	3.5
800	31	2,039	11.6	48	250	5.6
750	31	2,579	9.4	41	254	6.0
700	31	3,147	6.4	40	261	8.0
650	31	3,753	3.2	35	263	10.5
600	31	4,397	-.5	34	262	13.4
550	31	5,085	-4.6	R32	262	17.3
500	31	5,833	-9.1	R30	261	20.0
450	31	6,643	-14.3	R29	259	24.3
400	31	7,527	-20.2	R31	261	30.7
350	31	8,502	-27.1	R31	256	36.7
300	31	9,595	-35.1	R27	256	42.2
250	31	10,842	-44.3		257	51.7
200	31	12,304	-54.8		260	57.5
175	31	13,147	-60.5		261	56.9
150	31	14,094	-65.8		262	49.5
125	31	15,188	-70.4		264	40.0
100	31	16,503	-72.6		269	25.6
80	31	17,821	-69.5		269	9.9
70	31	18,624	-65.7		266	4.9
60	31	19,571	-61.7		266	2.3
50	31	20,710	-58.1		139	1.0
40	31	22,125	-55.3		83	4.7
30	30	23,973	-52.2		87	6.6
25	30	25,157	-50.7		76	5.[illegible]
20	29	26,618	-48.5		93	5.4
15	28	28,524	-47.1		65	2.9
10	17	31,231	-43.9		282	4.3
7	11	33,657	-40.7		237	11.3
5	6	35,963	-36.9			

* TATOOSH IS., WASH
1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	31	11.5	90	123	6.8
1000	31	136	12.1	82	149	9.1
950	31	565	10.3	74	192	16.3
900	31	1,014	8.1	72	204	18.5
850	31	1,485	5.9	70	216	19.2
800	31	1,980	3.9	58	227	22.3
750	31	2,499	1.4	55	230	26.4
700	31	3,056	-1.7	54	236	28.7
650	31	3,638	-4.6	49	240	31.5
600	31	4,269	-8.2	53	243	33.8
550	30	4,931	-12.5	52	245	36.9
500	30	5,660	-17.2	52	247	41.4
450	30	6,434	-22.6	57	246	44.7
400	30	7,297	-28.3	55	246	49.5
350	30	8,241	-35.3	48	250	53.2
300	30	9,298	-43.1	35	252	58.1
250	30	10,503	-51.2		252	60.6
200	30	11,931	-57.2		249	59.2
175	30	12,772	-57.9		247	54.2
150	29	13,738	-58.7		251	50.5
125	26	14,879	-60.1		250	43.1
100	24	16,268	-60.4		254	36.1
80	22	17,658	-59.3		257	27.2
70	20	18,496	-58.9		262	23.7
60	20	19,466	-58.2		268	18.3
50	20	20,615	-58.0		272	12.4
40	20	22,024	-57.0		281	7.4
30	17	23,838	-55.7		318	7.6
25	16	25,013	-55.0		333	9.7
20	15	26,444	-53.3		349	13.4
15	9	28,334	-52.3			
10	5	31,016	-50.3			
7						
5						

TOPEKA, KANS.
986 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	269	8.4	83	255	1.4
1000	31	154				
950	31	582	13.0	58	246	5.2
900	31	1,037	12.4	50	291	8.5
850	31	1,515	10.6	48	302	10.3
800	31	2,018	8.6	42	300	12.6
750	31	2,545	5.6	41	300	15.0
700	31	3,111	2.4	38	307	16.3
650	31	3,699	-1.4	40	305	17.5
600	31	4,339	-5.7	41	310	20.4
550	31	5,007	-9.7	35	309	22.9
500	31	5,747	-14.4	33	309	21.4
450	31	6,527	-20.0	29	305	23.1
400	31	7,401	-26.4	31	306	24.9
350	31	8,351	-33.5	32	309	26.2
300	31	9,415	-41.5	29	310	29.3
250	31	10,631	-49.4		305	34.2
200	31	12,068	-56.6		292	36.9
175	31	12,909	-59.3		292	37.5
150	31	13,870	-61.3		290	32.2
125	31	14,994	-63.9		295	27.8
100	31	16,356	-64.3		294	23.1
80	30	17,722	-63.1		299	15.0
70	30	18,545	-61.8		302	12.2
60	30	19,503	-60.5		305	10.1
50	30	20,643	-59.0		308	9.3
40	30	22,050	-56.8		298	8.2
30	30	23,885	-54.0		287	10.9
25	30	25,060	-52.8		283	15.0
20	27	26,499	-51.5		284	16.1
15	24	28,375	-50.0		283	21.2
10	14	31,037	-45.9			
7						
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

OCTOBER 1965

TRUK, CAROLINE IS. + 1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	2	28.2	80	292	2.1
1000	31	92	27.2	78	275	2.5
950	31	540	23.5	76	255	5.6
900	31	1,016	20.8	70	272	7.6
850	31	1,510	18.2	64	281	8.4
800	31	2,028	15.8	58	284	7.6
750	31	2,572	13.0	55	277	5.6
700	31	3,152	9.8	54	275	3.5
650	31	3,762	6.5	53	240	2.9
600	31	4,418	2.8	51	174	2.1
550	31	5,112	-1.3	49	137	2.9
500	31	5,873	-5.3	44	124	4.3
450	31	6,690	-9.9	41	116	5.1
400	31	7,596	-15.4	35	91	5.2
350	31	8,592	-21.9	32	75	5.6
300	31	9,708	-30.3	30	86	7.6
250	31	10,978	-40.7	32	80	10.7
200	31	12,458	-53.0		72	14.0
175	31	13,306	-60.1		63	15.3
150	30	14,251	-67.4		63	18.1
125	30	15,332	-74.1		72	19.4
100	30	16,616	-78.2		89	10.9
80	30	17,902	-73.2		104	6.4
70	30	18,690	-69.6		103	7.8
60	29	19,617	-66.7		93	17.9
50	29	20,729	-63.2		93	34.0
40	29	22,113	-59.7		93	51.3
30	27	23,930	-54.3		95	59.2
25	26	25,107	-50.6		94	60.8
20	24	26,576	-47.5		94	62.0
15	19	28,484	-43.7		97	60.6
10	7	31,230	-39.8			
7						
5						

• TUCSON, ARIZ. 926 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	789	15.9	31	128	9.5
1000	31	125				
950	31	568				
900	31	1,030	21.1	27	129	10.1
850	31	1,522	18.8	27	119	5.8
800	31	2,038	15.3	27	94	3.9
750	31	2,573	11.5	27	80	2.1
700	31	3,154	7.5	28	58	2.9
650	31	3,753	3.2	27	37	1.4
600	31	4,403	-1.0	24	348	1.4
550	31	5,080	-5.6	24	324	3.7
500	31	5,832	-10.8	23	327	6.6
450	31	6,625	-17.0	26	345	8.5
400	31	7,506	-23.9	30	340	9.5
350	31	8,466	-31.4	31	350	10.7
300	31	9,538	-39.8	31	335	11.3
250	31	10,760	-48.6		319	15.5
200	31	12,198	-57.0		309	18.5
175	31	13,037	-60.3		304	20.2
150	31	13,992	-62.9		300	19.0
125	31	15,106	-66.0		300	17.7
100	31	16,449	-68.6		307	13.4
80	31	17,787	-67.2		320	8.9
70	31	18,596	-64.7		342	5.4
60	31	19,543	-61.6		353	3.3
50	31	20,681	-58.8		324	.8
40	29	22,082	-56.6		290	2.9
30	29	23,916	-54.3		270	6.2
25	29	25,089	-52.6		273	5.6
20	29	26,535	-51.0		262	8.5
15	26	28,407	-49.9		282	11.1
10	19	31,074	-46.5		285	14.0
7	7	33,457	-44.2			
5						

• VANDENBERG AFB, CALIF. 1003 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	113	13.3	76	[illegible]	[illegible]
1000	31	133			75	2.1
950	31	574	19.7	43	[illegible]	4.5
900	31	1,038	20.2	29	47	3.1
850	31	1,529	18.2	24	83	1.2
800	31	2,045	15.2	24	149	1.0
750	31	2,581	12.3	23	228	3.1
700	31	3,163	8.8	23	252	2.9
650	31	3,769	5.2	24	267	3.3
600	31	4,421	1.1	24	271	5.2
550	31	5,106	-3.8	24	280	5.6
500	31	5,860	-9.5	25	274	6.0
450	31	6,655	-16.1	27	279	6.8
400	31	7,539	-23.1	28	289	8.9
350	31	8,502	-30.9	33	292	10.7
300	31	9,576	-39.8	38	294	13.0
250	31	10,797	-49.1		302	[illegible]
200	31	12,233	-57.3		301	21.6
175	31	13,071	-60.1		301	22.9
150	31	14,027	-63.0		[illegible]	23.1
125	31	15,139	-66.5		[illegible]	20.0
100	31	16,482	-68.3		297	14.2
80	31	17,822	-67.2		316	7.8
70	31	18,629	-65.5		338	4.9
60	31	19,572	-62.7		31	4.1
50	31	20,702	-60.0		48	4.3
40	31	22,103	-57.1		9	2.7
30	30	23,931	-54.6		337	3.3
25	30	25,101	-53.1		292	4.9
20	30	26,545	-51.3		286	8.0
15	29	28,419	-49.8		278	9.7
10	27	31,082	-47.4		271	13.4
7	13	33,430	-44.6		280	16.7
5						

• WAKE IS., PACIFIC AREA 1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	5	26.7	82	88	10.9
1000	31	114	26.0	92	91	12.6
950	31	566	22.5	87	[illegible]	15.9
900	31	1,036	19.6	82	104	16.3
850	31	1,528	17.0	73	105	14.6
800	31	2,044	14.7	63	104	13.0
750	31	2,586	12.3	52	106	13.0
700	31	3,165	9.4	47	108	12.4
650	31	3,775	6.0	44	110	10.5
600	31	4,428	2.0	42	118	8.4
550	31	5,118	-1.9	41	122	8.4
500	31	5,877	-6.6	43	130	6.6
450	31	6,689	-11.8	39	131	6.0
400	31	7,587	-17.6	36	130	4.5
350	31	8,573	-24.5	34	191	3.3
300	31	9,678	-32.5	[illegible]	234	6.6
250	31	10,936	-42.4		[illegible]	12.4
200	30	[illegible]	-54.1		255	19.6
175	30	[illegible]	-60.3		262	18.8
150	30	[illegible]	-66.7		266	12.0
125	30	15,200	-73.7		232	[illegible]
100	25	16,568	-77.5		97	10.7
80	21	17,863	-73.7		88	18.8
70	20	18,649	-70.0		91	20.2
60	20	19,576	-65.5		92	21.4
50	19	20,694	-61.7		90	20.0
40	18	22,086	-58.5		86	22.5
30	18	23,913	-53.7		85	32.8
25	17	25,094	-51.3		88	35.0
20	17	26,554	-48.5		85	35.7
15	16	28,453	-46.7		[illegible]	34.4
10	15	31,161	-44.0		[illegible]	23.3
7	13	33,592	-38.9		50	10.1
5	5	35,890	-36.3			

• WALLOPS IS. VA. NASA 1018 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	3	10.9	81	[illegible]	[illegible]
1000	31	153	[illegible]	62	[illegible]	[illegible]
950	31	584	[illegible]	58	[illegible]	[illegible]
900	31	1,032	8.1	61	[illegible]	[illegible]
850	31	1,503	[illegible]	48	282	[illegible]
800	31	2,000	5.6	39	[illegible]	[illegible]
750	31	2,523	3.6	33	[illegible]	17.1
700	31	3,084	[illegible]	31	[illegible]	[illegible]
650	31	3,670	-2.4	45	[illegible]	24.5
600	31	4,307	-6.1	34	265	28.6
550	31	4,976	[illegible]	32	264	32.1
500	31	5,713	-14.6	32	[illegible]	36.5
450	31	6,496	-20.2	31	[illegible]	38.7
400	31	7,365	-26.4	[illegible]	266	41.8
350	31	8,317	-33.1	30	270	46.6
300	31	9,384	-40.7	31	[illegible]	49.5
250	31	10,605	-48.2		265	59.4
200	31	12,053	-54.7		[illegible]	64.1
175	31	12,901	-57.7		265	60.8
150	31	[illegible]	-59.7		267	53.0
125	31	15,000	-62.7		266	41.6
100	31	16,272	-63.2		[illegible]	[illegible]
80	31	17,747	-61.8		267	21.2
70	31	18,574	-60.8		[illegible]	19.8
60	30	19,538	-59.1		265	17.9
50	30	20,685	-56.9		270	16.3
40	30	22,104	-55.1		264	[illegible]
30	30	23,952	-52.4		269	18.6
25	27	25,131	-51.0		277	19.6
20	26	26,586	-49.6		[illegible]	18.5
15	19	28,460	-48.4		[illegible]	19.2
10	10	31,159	-45.3			
7	5	33,637	[illegible]			
5						

WASHINGTON, D. C. 1008 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	84	5.6	84	299	2.5
1000	31	152			298	3.5
950	31	582	9.2	64	281	[illegible]
900	31	1,024	6.9	63	285	12.9
850	31	1,493	5.4	58	286	14.2
800	31	1,988	4.3	45	280	15.0
750	31	2,512	2.1	46	279	17.1
700	31	3,065	-.5	44	273	20.0
650	31	3,651	-3.5	41	268	23.1
600	31	4,284	-7.0	39	265	26.8
550	31	4,952	-11.3	39	266	28.9
500	31	5,682	-16.1	37	270	31.1
450	31	6,466	-21.2	34	269	34.6
400	31	7,328	-27.0	33	267	38.7
350	31	8,278	-34.0	33	266	43.1
300	30	9,340	-41.8	29	267	43.1
250	30	10,555	-49.3		266	53.2
200	29	12,000	-54.5		264	55.4
175	29	12,850	-56.9		263	51.5
150	29	13,822	-59.3		261	46.8
125	29	14,956	-61.9		264	41.0
100	29	16,332	-62.6		266	29.1
80	27	17,713	-61.8		267	22.1
70	27	18,541	-61.0		268	17.5
60	27	19,500	-59.2		270	15.7
50	27	20,645	-57.8		279	13.2
40	27	22,056	-55.8		271	14.4
30	23	23,899	-52.9		279	19.8
25	21	25,081	-51.4		278	21.4
20	21	26,535	-49.7		280	21.2
15	17	28,391	-48.3		256	20.8
10	9	31,105	-46.0			

WINNEMUCCA, NEV. 874 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,310	1.7	49	151	3.1
1000	31	203				
950	31	624				
900	31	1,071				
850	31	1,540	12.8	31	119	2.3
800	31	2,049	12.0	26	243	2.1
750	31	2,578	8.6	25	247	5.4
700	31	3,152	5.0	27	256	8.0
650	31	3,749	1.3	R25	256	11.3
600	31	4,393	-2.5	R22	258	14.2
550	31	5,069	-6.8	R20	266	16.3
500	31	5,814	-12.0	R23	266	17.7
450	31	6,604	-17.7	R22	269	19.2
400	31	7,482	-24.5	R25	272	20.2
350	31	8,439	-32.2	R24	279	20.6
300	31	9,508	-40.7	R24	282	21.4
250	31	10,724	-49.8		282	22.3
200	31	12,156	-57.6		285	23.3
175	31	12,993	-60.5		281	24.1
150	31	13,948	-62.6		283	22.9
125	31	15,066	-65.2		282	22.3
100	31	16,420	-65.7		288	17.9
80	30	17,783	-64.4		291	11.1
70	28	18,599	-63.0		297	8.0
60	27	19,552	-61.4		322	7.0
50	25	20,681	-59.6		345	6.2
40	24	22,094	-57.8		349	6.9
30	23	23,916	-55.5		356	6.2
25	21	25,078	-53.9		323	5.2
20	20	26,515	-52.3		328	7.4
15	15	28,401	-50.1		295	6.9
10						

WINSLOW, ARIZ. 855 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,492	5.5	56	182	2.7
1000	31	193				
950	31	613				
900	31	1,064				
850	31	1,532			161	2.7
800	31	2,047	13.2	30	274	2.3
750	31	2,585	10.2	29	336	3.5
700	31	3,157	6.3	28	335	3.3
650	31	3,757	2.5	27	317	2.5
600	31	4,402	-1.8	26	315	[illegible]
550	31	5,080	-6.2	R25	318	8.5
500	31	5,827	-11.3	R22	324	7.9
450	31	6,619	-17.2	R24	324	9.7
400	31	7,499	-24.3	R25	327	10.3
350	31	8,457	-31.8	R26	325	10.9
300	31	9,528	-40.3	R24	336	11.7
250	31	10,746	-49.3		331	13.0
200	31	12,180	-57.8		316	15.5
175	31	13,016	-60.7		313	16.7
150	30	13,970	-62.8		314	17.5
125	30	15,086	-65.6		314	16.5
100	30	16,432	-68.0		320	12.2
80	30	17,776	-66.5		323	8.7
70	30	18,587	-64.6		340	7.2
60	29	19,535	-62.2		339	4.1
50	29	20,668	-59.8		323	3.1
40	29	22,072	-57.2		314	2.7
30	27	23,900	-55.1		273	6.8
25	27	25,069	-53.5		277	8.4
20	26	[illegible]	-51.9		279	9.7
15	22	28,397	-50.2		281	[illegible]
10						

YAKUTAT, ALASKA 997 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	12	3.3	[illegible]	112	6.2
1000	31	-15			109	7.2
950	31	405	4.0	78	123	14.4
900	31	841	1.2	80	145	17.5
850	31	1,299	-1.6	81	158	18.3
800	31	1,780	-4.6	78	165	17.1
750	31	2,286	-7.5	76	170	16.9
700	31	2,820	-10.6	74	170	17.7
650	31	3,385	-14.3	70	174	17.9
600	31	3,989	-18.2	68	180	18.8
550	31	4,630	-22.8	60	184	20.4
500	31	5,326	-27.6	56	190	23.7
450	31	6,071	-32.8	55	193	25.4
400	31	6,896	-38.9	53	199	27.2
350	31	7,799	-45.2	55	202	26.4
300	31	8,814	-51.2		205	27.2
250	31	9,991	-53.3		220	27.4
200	31	11,434	-51.4		228	29.9
175	31	12,301	-51.1		230	28.7
150	30	13,296	-51.0		235	29.3
125	29	14,480	-51.2		[illegible]	28.2
100	28	15,928	-51.3		236	29.1
80	23	17,366	-52.0		238	30.1
70	23	18,230	-52.4		244	28.7
60	23	19,226	-52.4		246	28.0
50	23	20,402	-53.3		251	29.1
40	23	21,838	-53.3		257	28.2
30	20	23,684	-53.4		259	30.7
25	18	24,853	-53.0		264	31.5
20	18	26,291	-53.1		263	37.7
15	15	28,161	-51.7		266	41.8
10	7	30,820	-51.1			

YAP, CAROLINE IS. + 1008 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	17	28.3	[illegible]	264	1.7
1000	31	89	27.5	81	264	2.7
950	31	[illegible]	23.6	79	273	3.5
900	31	1,014	20.5	74	292	1.9
850	31	1,507	[illegible]	69	284	1.0
800	31	2,025	15.3	64	225	.4
750	31	2,571	12.4	[illegible]	[illegible]	.8
700	31	3,147	9.6	51	[illegible]	1.6
650	31	3,757	6.3	45	94	2.3
600	31	4,411	2.5	42	45	2.1
550	31	5,101	-1.2	38	81	2.3
500	31	5,865	-5.4	35	95	4.7
450	31	6,680	-10.4	34	[illegible]	[illegible]
400	31	7,583	-16.2	31	88	4.1
350	31	8,574	-23.0	29	80	4.5
300	31	9,685	-31.3	25	72	4.9
250	31	10,950	-41.2		71	5.2
200	31	12,426	-53.5		77	7.8
175	31	13,270	-60.6		82	10.1
150	31	14,213	-67.7		77	14.4
125	31	15,290	-74.8		91	18.6
100	31	16,566	-79.1		93	[illegible]
80	31	17,846	-74.5		80	12.6
70	31	18,630	-70.9		81	15.2
60	31	19,551	-66.7		85	20.0
50	29	20,662	-63.3		88	33.2
40	29	22,043	-60.1		[illegible]	47.8
30	28	23,859	-55.0		88	59.6
25	27	25,031	-51.7		89	62.4
20	22	26,491	-47.8		[illegible]	64.1
15	14	28,417	-44.2			
10						

YUCCA FLAT, NEV. 884 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,196	5.9	30	322	2.3
1000	31	172				
950	31	[illegible]				
900	31	1,053				
850	31	1,531	17.2	21	355	3.7
800	31	2,046	14.7	21	71	1.2
750	31	2,579	11.1	22	70	1.4
700	31	3,158	7.3	22	286	1.4
650	31	3,757	3.5	R23	287	2.9
600	31	4,408	-.7	R20	307	6.0
550	31	5,085	-5.1	R18	308	8.2
500	31	5,838	-10.8	R20	319	9.5
450	31	6,629	-17.2	R22	313	11.1
400	31	7,509	-24.3	R23	309	10.5
350	31	8,469	-31.8	R25	304	13.0
300	31	[illegible]	-40.1	R30	304	13.0
250	31	10,759	-49.5		292	14.6
200	31	12,191	-57.8		302	16.5
175	31	13,028	-60.5		308	20.2
150	31	13,984	-62.5		307	20.6
125	30	15,102	-65.8		306	17.1
100	30	16,450	-67.2		304	10.9
80	30	17,799	-65.8		313	7.8
70	30	18,512	-64.2		318	5.1
60	29	19,565	-61.7		354	4.3
50	28	20,703	-59.2		354	3.5
40	28	22,108	-56.7		329	4.9
30	27	23,940	-54.2		305	4.3
25	26	25,110	-53.0		305	6.0
20	22	26,564	-50.9		291	8.5
15	18	28,457	-49.4		272	12.8
10	13	31,142	-47.7			

YUMA, ARIZ. 998 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	21	131	18.8	32	350	.6
1000	21	109				
950	21	557	26.5	25	25	3.3
900	21	1,033	24.2	[illegible]	48	2.7
850	21	1,529	20.9	23	49	.8
800	21	2,048	17.0	23	33	.8
750	21	2,590	13.3	24	147	1.6
700	21	3,170	9.2	24	163	1.6
650	21	3,773	5.2	23	116	.6
600	21	4,427	.8	22	11	3.5
550	21	5,108	-3.9	21	356	5.2
500	21	5,864	-9.3	22	350	5.1
450	21	6,660	-15.5	23	345	6.6
400	21	7,546	-22.7	28	339	9.7
350	21	8,509	-30.5	31	331	12.2
300	21	9,584	-39.4	32	326	12.2
250	21	10,805	-48.7		316	15.9
200	21	12,238	-57.9		308	19.2
175	21	13,074	-60.7		306	24.3
150	20	14,027	-63.2		298	[illegible]
125	17	15,138	-67.1		296	17.3
100	8	16,444	-68.3			
10						

Note: All observations scheduled at 1200, G C T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Relative humidity averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to low tracking angles, i. e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.
The temperature and wind values are based on 15 or more observations at the surface or [illegible] observations at a standard pressure level for temperature and 10 for wind. Relative humidity data are not published for standard pressure surfaces for which less than 5 observations are available.
Relative humidity data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from lithium chloride hygristors.
These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature in degrees Celsius, relative humidity in percent, and resultant winds in degrees and knots.

- * Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure and consequently height, at pressures lower than 50 mb. They were also equipped with carbon hygristors. These rawinsondes were carried aloft by special high-altitude balloons, in an effort to consistently reach higher altitudes.
- + Observations for these stations are scheduled at 0000 G C T.
- R More than half of the observations are from statistical values.

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun. OCTOBER 1965

ALBUQUERQUE, N. MEX.

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Oct. 1	0.92	1.00	----	----	1.43	1.28	1.14	1.00	0.91
2	.95	1.06	1.17	1.32	1.42	1.28	1.14	1.05	.92
3	.96	1.03	1.14	1.28	1.41	----	----	----	----
4	.93	1.04	1.15	1.30	1.41	1.27	1.10	.95	.86
5	.92	1.01	1.12	1.29	1.46	----	----	----	----
6	.90	1.04	----	1.30	1.35	1.24	1.13	1.02	.94
7	.98	1.09	1.17	1.32	----	----	----	----	----
8	.97	1.08	1.17	1.32	1.38	1.32	1.18	1.10	.97
9	.97	1.09	1.17	1.33	1.41	1.31	1.18	1.08	.96
10	----	----	----	----	----	----	1.15	1.05	.94
11	.91	1.03	1.13	1.27	----	1.25	----	----	----
12	.78	.92	1.03	1.18	1.36	1.22	1.02	.90	.75
13	----	----	----	----	1.31	----	----	----	----
14	.76	.82	1.06	1.22	----	1.25	1.09	.97	.79
15	.83	.98	1.06	1.21	1.36	----	----	----	----
19	.94	1.06	1.17	1.33	1.46	1.33	1.18	1.08	.94
20	----	----	----	----	1.47	1.36	1.18	----	.93
21	.93	1.05	1.17	1.33	1.44	1.28	1.17	.99	.84
22	----	----	----	----	1.46	----	----	1.08	.95
24	.95	1.08	1.21	1.33	1.44	1.33	1.21	1.09	.94
25	.99	1.11	1.21	1.33	1.42	1.27	1.13	.99	.85
26	1.01	1.09	1.20	1.32	1.36	1.26	1.06	----	----
27	.93	1.04	1.17	1.31	1.45	1.33	1.15	1.03	.92
28	.97	1.07	1.23	1.33	1.43	1.35	1.16	.99	.87
29	.92	1.03	1.18	1.34	1.39	1.32	1.20	1.06	.92
30	.95	1.06	1.20	1.36	1.43	1.37	1.23	1.09	.97
31	.98	1.08	1.22	1.37	1.45	1.32	1.18	1.02	.90
Averages	0.93	1.04	1.16	1.30	1.41	1.30	1.15	1.03	0.90

BLUE HILL OBS., MASS.

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
Oct. 2	0.94	1.04	1.16	1.30	1.40	1.28	1.13	0.99	0.87
3	.89	.99	1.06	1.21	----	----	----	----	----
11	.60	.76	.87	1.01	----	----	----	----	----
12	----	----	----	----	----	----	----	.89	.82
13	.83	.93	1.08	1.24	1.33	1.22	1.01	.89	.77
14	.60	.72	.84	1.04	1.13	----	----	----	----
19	----	----	----	----	1.01	.84	.60	.48	----
20	.48	.55	.72	.77	.99	.91	.89	.62	.53
25	----	----	----	----	1.30	1.27	1.06	.91	.71
28	----	.87	1.03	1.17	1.36	1.32	1.13	1.01	.89
29	.90	1.00	1.13	1.33	1.36	1.30	1.12	.98	.76
30	.88	.96	1.08	1.25	1.32	----	----	----	----
Averages	0.77	0.87	1.00	1.15	1.24	1.16	0.99	0.85	0.76

TUCSON, ARIZ.

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Oct. 1	0.86	----	----	----	----	----	----	----	----
2	----	----	1.09	----	----	1.23	----	0.94	0.83
3	.88	.96	1.08	----	----	----	1.02	.87	.77
5	----	----	----	----	----	----	----	----	.83
6	----	----	----	----	----	----	----	----	.79
7	.73	.88	.98	----	----	----	----	----	----
8	.85	.94	1.02	----	----	----	----	----	----
9	.78	.88	1.01	----	----	----	----	----	----
11	.76	.87	1.00	----	----	----	----	----	----
12	.76	.85	----	----	----	----	----	----	.77
14	.66	.77	----	----	----	----	----	----	----
18	.77	----	----	----	----	----	----	----	----
19	----	.94	----	----	----	----	----	----	----
20	.72	----	----	----	----	----	----	----	.79
21	----	----	----	----	----	----	.98	.84	.73
22	.91	----	----	----	----	----	----	----	----
23	1.00	1.13	----	----	----	----	----	----	1.00
24	.86	.98	1.11	1.27	----	----	----	----	.91
25	.93	1.09	----	----	----	----	----	----	----
26	----	1.05	----	----	----	----	----	----	----
27	.85	----	----	----	----	----	----	.95	----
28	.78	----	----	----	----	----	----	----	.72
29	.72	.86	----	----	----	----	----	----	----
30	.84	.95	----	----	----	----	----	.94	.83
31	.80	.93	1.07	----	----	----	----	----	----
Averages	0.81	0.95	1.05	----	----	----	1.00	0.90	0.89

MADISON, WIS.

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Oct. 11	----	S 1.01	S 1.12	S 1.26	----	----	----	----	----
15	I 0.98	M .93	S 1.04	S 1.24	S 1.30	----	----	----	----
23	----	----	S 1.14	----	----	S 1.26	----	----	----
25	----	----	----	----	S 1.25	S 1.27	S 1.09	S 0.96	S 0.80
26	S .92	----	----	----	----	----	----	----	----
27	----	----	----	S 1.35	S 1.33	S 1.29	----	----	----
28	M .97	M .91	S 1.19	----	S 1.36	----	----	----	----
Averages	0.96	0.95	1.12	1.28	1.31	1.27	1.09	0.96	0.80

OMAHA, NEBR.

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Oct. 1	----	HS0.97	HS1.11	HS1.26	HS1.37	HS1.23	HS1.04	HS0.92	HS0.82
2	HS0.85	HS .96	HS1.08	HS1.24	HS1.32	HS1.15	HM .93	HM .77	HM .63
3	HS .86	HS .95	HS1.06	HS1.12	HS1.34	HS1.19	HS1.06	HS .87	HS .79
4	----	----	----	----	HS1.29	HS1.12	HM .91	HM .78	HM .68
5	HS .80	HS .90	HS1.02	HS1.18	HS1.29	----	----	----	----
6	----	----	HS1.04	HS1.22	HS1.33	HS1.20	HS1.05	HS .90	HS .79
7	----	----	----	HS1.20	HS1.26	HM1.06	HM .94	HM .82	HM .75
8	HS .83	HS .92	HS1.04	HS1.25	HS1.34	HS1.25	HS1.06	----	----
9	----	----	----	HS1.28	HS1.35	HS1.21	HS1.06	HS .91	HS .81
10	HS .90	HS1.02	HS1.08	HS1.24	----	----	----	----	----
11	HS .85	HS .97	HS1.08	HS1.27	HS1.40	HS1.28	HS1.10	HS .98	HS .86
12	----	----	HS1.12	HS1.20	----	----	----	----	----
13	----	HS .99	----	----	----	----	----	----	----
21	.72	----	----	----	1.35	1.29	1.13	----	----
24	HS .91	HS1.02	HS1.13	HS1.29	HS1.35	HS1.28	HS1.13	HS1.01	----
27	HM .71	HM .81	HM1.04	HM1.10	HM1.21	HM1.17	HM .95	HM .88	HM .75
31	----	----	----	----	HS1.36	HS1.31	HS1.16	HS1.04	----
Averages	0.82	0.95	1.07	1.22	1.33	1.21	1.04	0.90	0.76

MAUNA LOA OBS., HAWAII

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	3.36	2.69	2.01	1.34	*	1.34	2.01	2.69	3.36
Oct. 1	----	----	----	(1.42)	(1.53)	1.38	1.26	(1.14)	1.09
2	1.09	1.18	1.28	1.41	1.55	1.40	1.27	1.18	1.09
3	1.13	1.22	1.32	1.44	1.56	‡	‡	‡	‡
4-7	Instrument malfunction								
9	1.09	1.17	1.28	1.41	----	----	----	----	----
10	(1.05)	(1.12)	(1.23)	----	----	----	----	----	----
11	1.15	1.23	1.33	1.45	----	----	----	----	----
12	1.10	----	----	----	----	----	----	----	----
14	(1.05)	(1.14)	(1.24)	(1.37)	(1.51)	----	----	----	----
16	----	----	----	----	----	----	1.28	1.17	----
17	1.16	1.24	1.33	1.46	1.58	1.42	1.30	1.20	1.11
18	1.14	1.21	1.33	1.44	----	----	----	----	----
20	1.10	1.17	1.28	1.41	1.54	1.38	(1.24)	(1.14)	(1.04)
21	----	----	----	----	1.59	----	----	1.24	1.15
22	1.16	1.24	1.34	1.46	1.58	1.44	1.32	1.22	1.15
23	1.17	1.26	1.36	1.47	1.60	1.47	1.34	1.25	1.17
24	1.19	1.26	1.37	1.49	1.60	‡	‡	‡	‡
25	‡	‡	‡	‡	‡	1.42	(1.28)	(1.22)	1.11
26	1.15	1.23	1.34	1.45	1.57	1.43	1.30	1.20	1.11
27	1.13	1.22	1.33	1.44	1.56	----	----	(1.13)	(1.04)
28	1.14	1.23	1.33	1.45	1.55	----	----	----	----
30	1.16	1.24	1.34	1.46	----	----	----	----	----
31	----	----	----	----	----	(1.40)	(1.27)	(1.19)	(1.08)
Averages	1.14	1.22	1.33	1.45	1.57	1.42	1.30	1.21	1.12

GUAM, M. I.

Date	A.M. 78.7°	A.M. 75.7°	A.M. 70.7°	A.M. 60.0°	*	P.M. 60.0°	P.M. 70.7°	P.M. 75.7°	P.M. 78.7°
Air mass	4.92	3.93	2.95	1.97	*	1.97	2.95	3.93	4.92
	No observations due to cloudiness								

HS	Slight haze	S	Slight haze - indeterminable
HM	Moderate haze	M	Moderate haze - indeterminable
( )	Clouds present	I	Intense haze - indeterminable
‡	Instrument malfunction	*	Values corresponding to true solar noon

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

OCTOBER 1965

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	502	500	466	497	496	487	487	499	474	414	---	448	421	---	427	331	74	150	374	353	384	351	361	374	358	347	327	385	385	394	377	395
AMES IOWA	442	427	437	372	385	240	269	399	401	296	399	335	379	162	154	175	258	338	86	57	141	305	309	372	343	319	313	312	286	241	319	299
ANNETTE ALASKA	198	---	---	---	---	---	---	214	266	168	72	191	19	163	121	98	93	103	42	75	43	32	99	60	60	24	37	99	94	---	---	103
APALACHICOLA FLORIDA	439	525	486	472	162	43	452	508	492	487	469	473	294	301	311	487	454	477	212	208	281	380	474	470	484	471	459	452	442	225	289	393
ARGONNE NAT. LAB.	214	403	421	260	378	225	214	139	105	366	360	300	325	277	205	283	276	297	284	100	81	69	151	296	308	313	313	318	298	253	297	262
ASTORIA OREGON	357	345	107	56	99	189	331	193	362	336	88	88	236	145	276	155	261	117	162	177	280	241	270	228	233	239	44	159	197	226	109	203
ATLANTA GEORGIA	386	495	533	447	309	133	236	499	480	496	420	396	424	379	443	413	392	191	80	80	147	364	218	455	444	432	419	416	419	397	404	366
BARROW ALASKA	55	121	108	75	62	81	---	59	59	42	54	46	43	76	83	56	34	50	34	20	45	37	19	28	11	10	34	42	16	29	16	48
BETHEL ALASKA	140	58	82	241	231	132	97	139	131	195	204	154	64	110	109	149	83	137	174	155	45	39	131	90	64	63	100	20	25	35	75	112
BISMARCK N.DAK.	383	410	390	367	232	375	374	371	362	---	366	346	167	327	326	291	310	156	126	329	285	274	304	298	297	274	234*	257	238	210	270	298*
BLUE HILL MASS.	84	479	354	319	423	382	318	322	361	210	330	129	408	336	197	---	---	---	289	318	---	---	180	---	289	155	293	288	337	300	215	293
BOISE IDAHO	416	422	412	325	348	413	363	409	403	369	393	383	380	285	322	357	224	315	291	347	---	319	333	327	326	305	294	290	298	301	292	342
BOSTON MASSACHUSETTS	63	459	351	263	429	350	321	310	334	198	323	141	380	329	196	360	385	350	300	297	285	26	201	253	321	147	273	252	328	285	175	280
BROWNSVILLE TEXAS	104	87	176	188	---	495*	445	525	537	535	---	378	327	516	545	462	461	365	403	381	371	562	546	517	498	524	501	470	375	447	497	422*
BURLINGTON VERMONT	75	374	81	75	116	381	266	125	156	297	96	271	167	327	89	119	364	244	280	286	241	104	144	106	274	86	107	72	272	0	0	180
CAPE HATTERAS N.C.	341	389	484	494	418	462	40	458	466	457	447	414	324	349	41	318	329	237	305	150	187	254	340	306	413	384	389	377	223	393	263	337
CARIBOU MAINE	47	299	183	94	115	172	362	28	153	170	62	38	183	303	69	76	348	109	281	218	133	190	43	100	187	117	80	163	215	84	110	153
CHARLESTON S.C.	252	381	418	515	339	250	301	478	454	469	461	460	233	398	355	417	268	59	73	104	110	151	451	394	465	450	426	416	437	361	370	346
CLEVELAND OHIO	91	458	233	159	495	351	82	162	90	53	50	367	367	379	168	308	355	353	357	229	55	42	140	47	367	284	325	189	349	314	221	240
COLUMBIA MISSOURI	465	448	457	339	437	113	352	430	408	407	261	421	358	85	63	104	297	348	204	138	51	250	346	368	344	355	327	329	318	299	318	304
DAVIS CALIFORNIA	281	280	291	268	248	277	269	254	253	254	250	243	247	124	259	246	245	194	240	224	233	230	232	227	220	220	212	209	202	208	202	237
DODGE CITY KANSAS	434	434	405	391	411	416	411	399	408	342	267	377	369	242	346	275	174	141	295	296	376	321	333	343	337	330	322	292	306	296	312	335
E. LANSING MICHIGAN	93	403	312	343	374	265	184	79	41	181	310	254	305	289	291	254	229	295	320	52	12	23	202	62	298	221	276	223	297	241	192	223
EL PASO TEXAS	593	587	380	548	565	540	550	551	545	451	530	503	451	512	439	350	464	517	502	509	500	496	491	485	479	483	468	465	466	458	459	495
ELY NEVADA	502	497	473	492	434	466	478	470	457	444	444	427	416	436	50	313	429	418	406	402	403	398	403	399	386	387	383	375	368	368	363	409
FAIRBANKS ALASKA	150	219	49	85	73	70	65	68	120	44	---	---	84	133	196	---	92	169	107	169	128	127	87	30	116	132	57	30	75	36	36	98
FORT WORTH TEXAS	504	209	151	129	92	233	535	519	531	498*	414	384	364	273	247	340	275	40	418	484	492	499	470*	492	471	451	---	414*	422	426	415	373*
FRESNO CALIFORNIA	469	467	451	441	341	449	444	432	379	420	417	385	398	401	448	432	401	406	386	342	368	393	386	376	353	374	355	347	346	338	323	396
GAINESVILLE FLORIDA	390	435	420	440	273	115	499	456	443	439	390	408	275	425	273	---	505	129	378	402	364	203	520	515	472	485	410	427	395	---	---	389
GLASGOW MONTANA	339	412	370	368	212	239	386	355	364	289	371	282	257	274	312	312	262	307	209	313	195	277	295	294	283	---	---	197	258	237	240	293
GRAND JUNCTION COLO.	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GREAT FALLS MONTANA	267	354	280	304	295	212	269	178	278	260	320	229	200	147	141	316	186	240	---	---	212	250	264	181	242	237	240	124	175	154	165	232
GREENSBORO N.C.	76	499	504	501	435	424	119	454	443	407	433	401	406	336	402	391	320	335	319	339	239	286	355	260	423	413	391	386	341	390	367	368
INDIANAPOLIS INDIANA	124	507	---	---	488	449	267	317	168	392	---	---	---	226	291	369	377	373	216	95	177	98	221	228	385	366	364	372	---	---	---	299
ITHACA NEW YORK	109	284	127	94	247	109	63	131	100	95	110	256	236	243	80	162	340	307	316	293	174	37	17	32	268	118	150	149	279	148	135	168
LAKE CHARLES LA.	339	331	270	76	76	194	425	474	488	443	396	183	---	307	382	354	467	392	261	332	463	474	469	458	466	460	425	432	426	434	439	371
LAKELAND FLORIDA	---	---	---	---	---	---	---	---	521	509	511	490	144	89	291	493	---	137	350	390*	372	138	435	482	459	392	480	469	460*	171	287	367*
LANDER WYOMING	447	416	459	459	414	390	448	280	448	423	427	403	198	395	411	106	400	279	269	388	363	370	374	377	364	363	270	289	331	308	316	361
LARAMIE WYOMING	445	441	439	425	246	431	419	392	415	361	392	392	304	384	389	279	252	95	233	336	344	347	336	353	285	334	313	328	291	291	324	342
LAS VEGAS NEVADA	523	520	514	503	416	451	482	486	475	460	454	464	393	461	261	133	403	437	428	427	426	426	421	415	406	398	394	395	392	388	382	424
LITTLE ROCK ARKANSAS	397	469	400	195	89	86	476	473	452	474	309	466	---	373	199	311	416	370	215	222	389	210	577	431	407	386	391	---	364	356	355	354
LOS ANGELES CALIF. U	520	517	500	494	429	444	224	145	226	289	444	276	192	124	359	469	443	409	405	428	430	424	439	437	419	392	368	379	353	358	367	377
MADISON WISCONSIN	393	433	459	---	217	200	90	71	112	368	416	305	400	177	372	237	297	333	296	98	22	326	136	357	322	316	331	342	299	243	296	275
MANHATTAN KANSAS	460	440	431	387	423	420	379	418	414	395	302	404	387	122	220	158	262	238	271	358	337	342	246	370	328	356	329	243	321	311	330	336
MATANUSKA ALASKA	234	231	210	176	195	31	70	64	66	52	83	97	62	194	187	193	184	186	166	190	157	117	65	90	52	69	80	57	120	149	92	126
MAUNA LOA OB.HAWAII	707	731	---	---	---	---	---	408	444	612	617	699	636	678	681	682	697	619	---	671	680	679	684	---	---	663	663	533	415	406	568	616
MEDFORD OREGON	390	427	381	285	411	417	404	398	349	384	353	301	377	120	272	252	281	248	321	329	341	333	325	320	303	301	132	140	235	261	268	312
MIAMI FLORIDA	414	387	455	528	343	543	415	483	535	544	557	483	65	58	353	419	477	445	402	355	314	298	200	506	399	394	495	434	500	233	105	392
MIDLAND TEXAS	565	278	543	376	461	---	520	522	514	506	451	498	462	319	456	439	311	491	479	457	483	483	469	463	460	449	440	442	427	429	426	454
NASHVILLE TENNESSEE	151	513	523	458	459	340	446	486	445	456	415	475	436	364	385	422	403	406	202	159	168	163	382	444	417	394	384	385	406	376	350	381
NEW YORK N.Y. U	33	466	386	479	474	210	130	332	329	246	291	251	399	311	184	386	390	327	331	276	166	34	263	272	340	249	331	336	339	314	303	296
NORTH OMAHA NEBRASKA	498	482	485	462	453	452	457	469	454	423	462	420	436	369	281	121	234	296	---	---	---	---	371	403	370	375	355	341	338	288	355	387
OAK RIDGE TENNESSEE	297	321	367	364	254	248	161	295	299	307	312	344	334	279	281	289	291	281	184	76	47	138	172	235	297	291	284	280	294	271	258	263
OKLAHOMA CITY OKLA.	464	347	154	114	260	252	420	405	403	397	249	363	372	245	231	265	246	80	---	---	---	390	---	---	---	369	343	327	340	325	321	307
PHOENIX ARIZONA	476	472	466	453	449	425	440	433	431	---	421	416	386	409	306	279	369	410	397	398	393	397	392	389	378	377	367	363	362	366	361	399

Note. --Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

OCTOBER 1965

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
PORTLAND MAINE	33	447	281	270	433	439	246	120	338	---	---	126	373	298	89	325	368	325	291	286	290	54	92	190	324	295	154	217	316	229	115	254
PROSSER WASHINGTON	391	383	323	176	245	391	344	365	366	363	366	216	328	159	341	330	322	221	297	277	309	307	305	282	272	252	211	212	248	270	226	293
RAPID CITY S.DAK.	360	370	370	361	244	338	354	325	341	251	348	310	217	319	317	165	270	36	288	307	290	270	284	289	262	261	263	259	250	254	256	285
RIVERSIDE CALIFORNIA	59	56	51	55	28*	50	49	37	14	19	48	47	42	36	31	50	48	47	44	46	46	46	47	47	45	43	45	43	42	41	39	43*
SAINT CLOUD MINN.	439	437	428	415	201	262	105	70	225	588	346	377	295*	337	352	288	64	239	129	69	347	253	206	340	321	271	275	244	235	274	296	282*
SALT LAKE CITY UTAH	491	482	471	486	460	474	462	465	447	438	430	423	374	426	73	239	352	423	377	396	396	366	364	358	366	355	357	346	352	352	346	392
SAN ANTONIO TEXAS	210	127	83	150	335	349	536	528	526	474	291	458	360	311	311	411	233	20	266	457	504	517	486	481	476	461	468	442	426	446	440	374
SANTA MARIA CALIF.	476	475	477	376	451	449	391	258	354	398	428	389	299	352	429	423	413	382	390	341	362	383	377	381	356	377	362	358	364	337	347	386
SAULT STE MARIF MICH	113	376	222	442	335	191	45	48	61	105	312	200	157	144	93	353	---	261	244	27	310	264	119	136	270	87	107	315	167	130	189	194
SEATTLE TACOMA WASH.	360	255	302	102	129	281	336	185	321	---	228	83	276	141	227	176	253	56	128	141	272	256	258	219	195	224	108	141	136	164	177	204
SPOKANE WASHINGTON	387	424	378	183	302	275	396	335	370	394	368	226	144	199	286	348	212	183	268	221	287	314	311	274	268	264	224	215	218	267	236	283
STATE COLLEGE PENN.	127	485	288	451	487	356	46	236	166	147	195	411	390	405	188	400	417	304	344	359	128	29	48	159	363	264	217	240	408	348	257	280
STERLING VIRGINA	70	488	455	485	509	440	53	391	251	226	346	377	429	353	351	382	423	389	381	379	179	50	201	272	404	321	349	359	394	390	353	337
STILLWATER OKLAHOMA	493	408	191	192	348	325	451	435	438	408	224	427	403	243	291	225	362	68	354	366	408	404	365	396	378	389	367	329	346	337	334	345
SWAN ISLAND W.I.	475	610	532	615	607	628	658	565	578	447	467	104	412	549	579	586	541	574	561	556	429	440	174	319	328	396	74	299	394	113	368	451
TAMPA FLORIDA	515	418	475	568	418	446	402	552	550	548	539	522	118	107	338	494	482	196	286	457	456	150	451	496	496	388	501	485	454	327	127	412
TUCSON ARIZONA	518	527	519	508	509	495	494	490	465	391	476	461	410	451	302	227	361	456	450	448	435	451	452	436	428	428	422	411	408	411	412	440
WAKE ISLAND.PACIFIC	229	358	265	496	494	468	426	481	446	343	332	128	269	209	---	364	389	271	480	464	468	440	331	436	256	408	426	340	282	68	245	354

Note. --Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (midnight to midnight) at Huntley, Mont.

OCTOBER 1965

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	134	178	188	192	65	56	154	149	175	128	159	131	79	155	160	59	124	136	35	104	50	94	92	66	101	92	67	56	82	55	11	107

The measurement is made with a Beckman and Whitley net exchange radiometer over a plot of sod. **The value represents the total incoming minus the total outgoing radiation of all wave lengths.**

These data are of an experimental nature and are published as received from the Huntley Exp. Station. **The instrument with which they were measured has not been checked by the Weather Bureau.**

TOTAL OZONE DATA

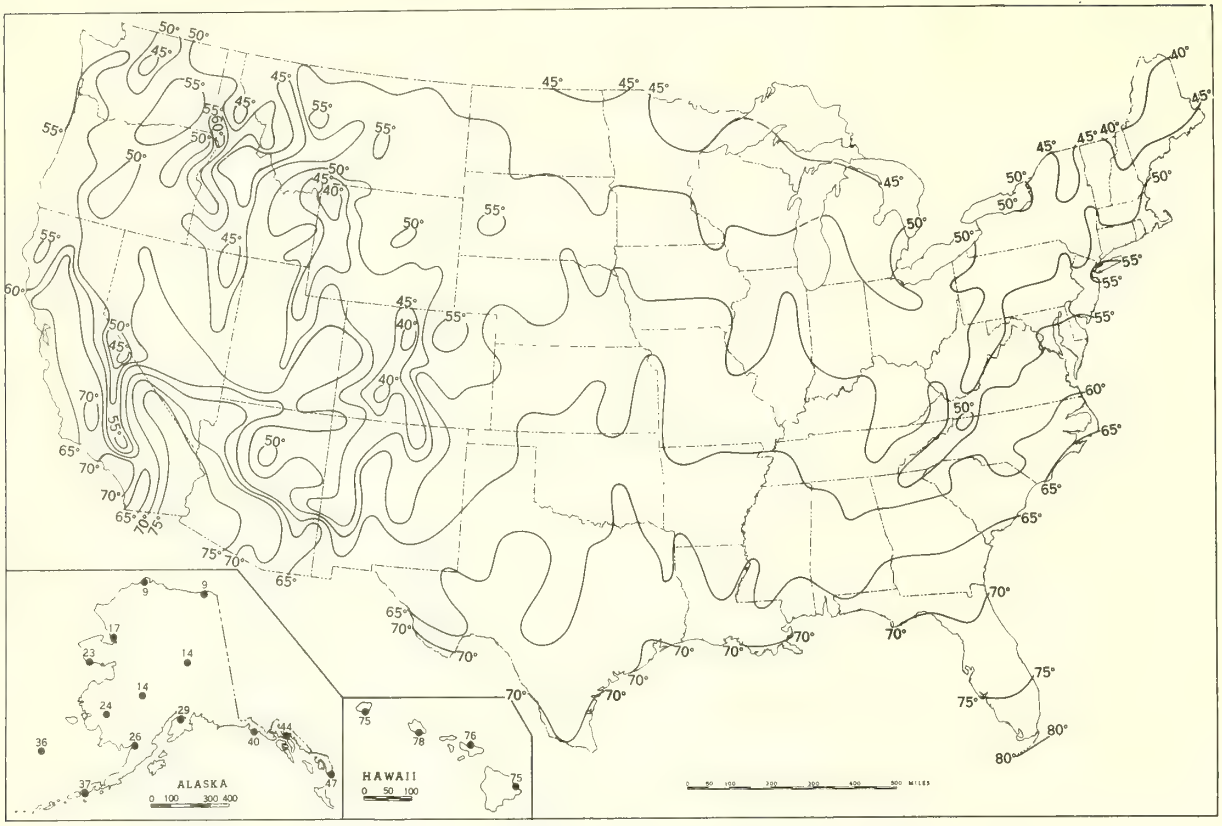
These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λ s Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

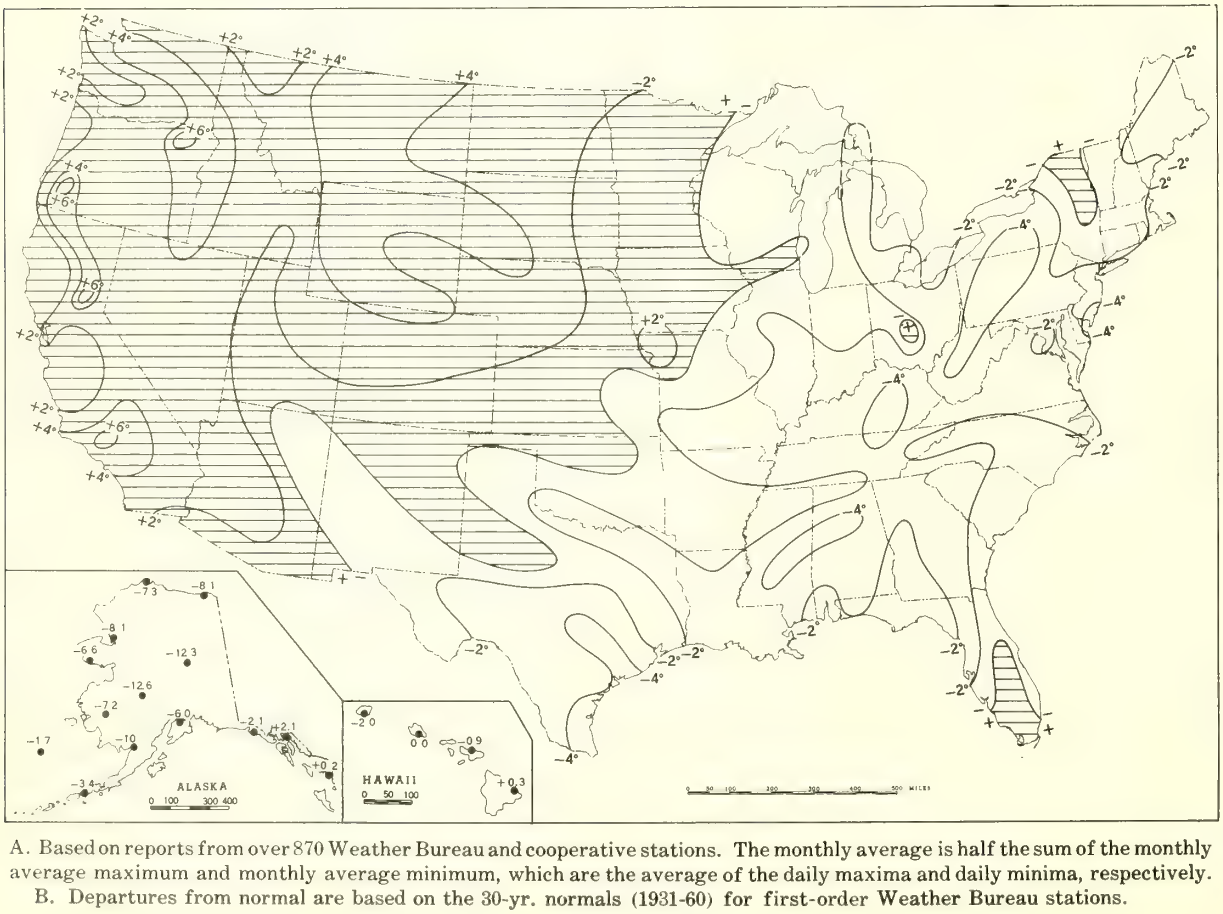
Station	Day of month																														Mean O_3
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
															Data will be delayed																	

The spectrophotometer measures the total amount of ozone in the atmosphere, i e , the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e g . 350 milli-atmo-cm ozone implies an ozone layer 0 350 centimeter thick The code λ s designates the type of measurement made

Chart I. A. Average Temperature (°F.) at Surface, October 1965.



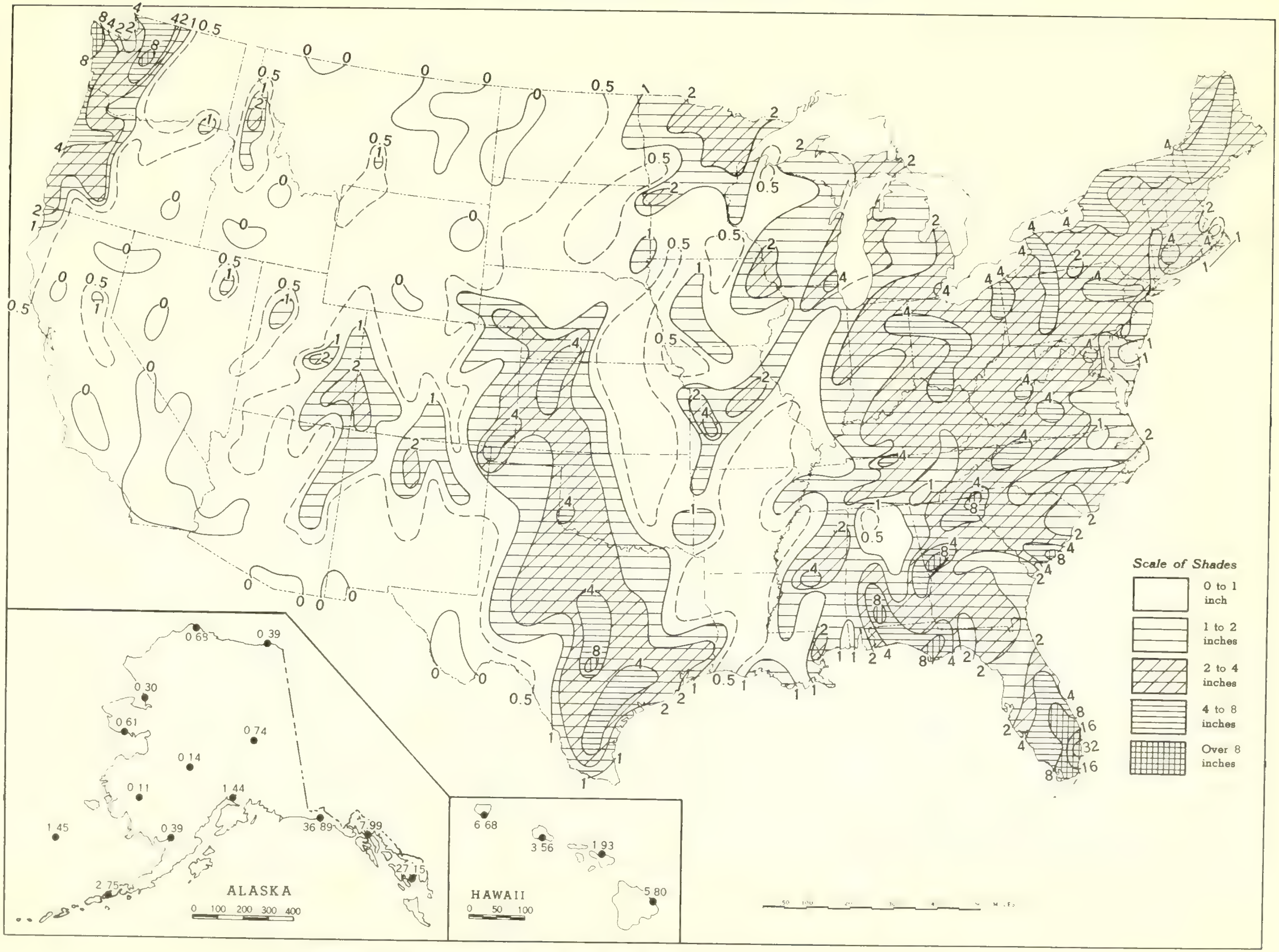
B. Departure of Average Temperature from Normal (°F.), October 1965.



A. Based on reports from over 870 Weather Bureau and cooperative stations. The monthly average is half the sum of the monthly average maximum and monthly average minimum, which are the average of the daily maxima and daily minima, respectively.

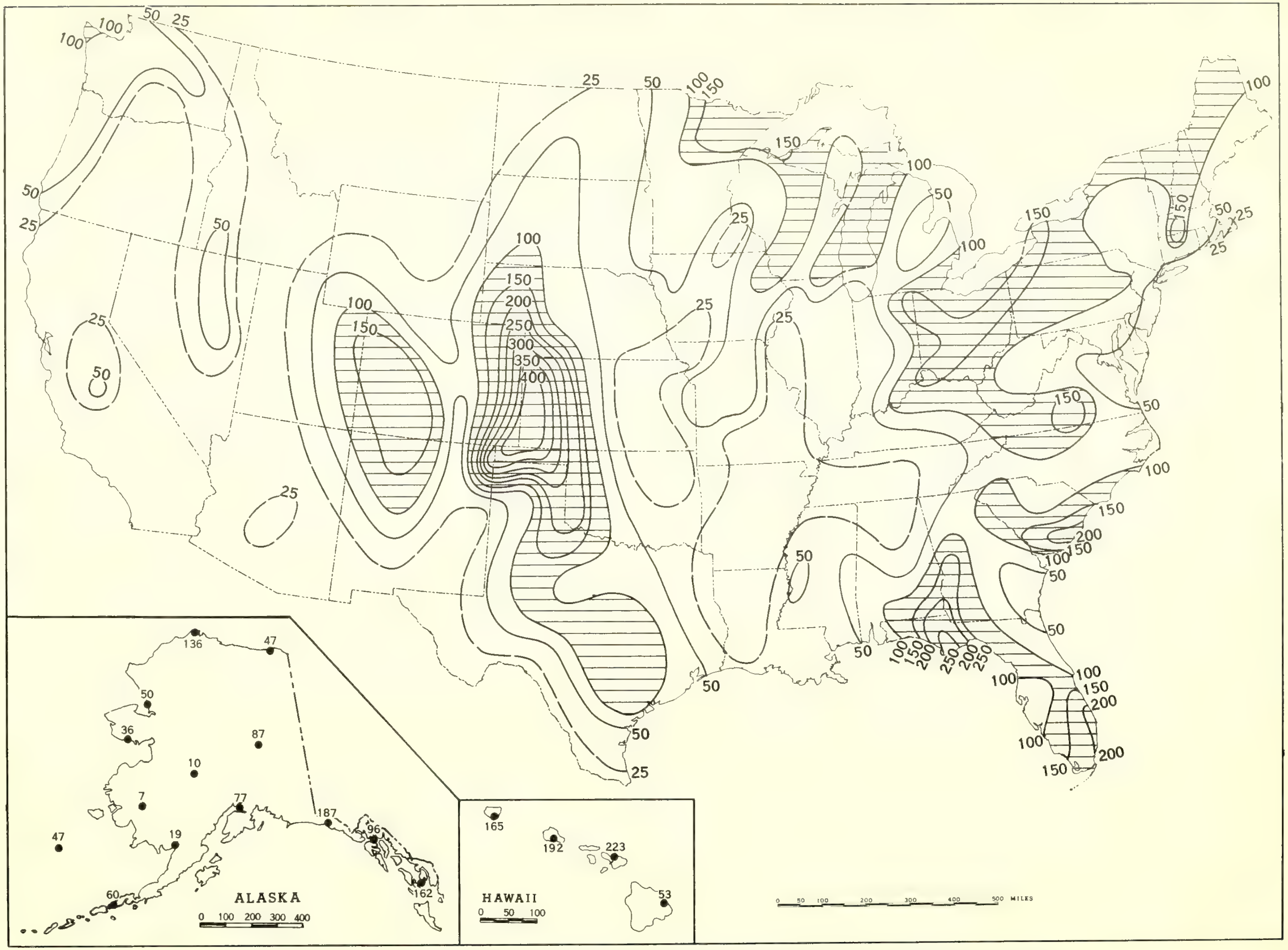
B. Departures from normal are based on the 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart II. Total Precipitation (Inches), October 1965.



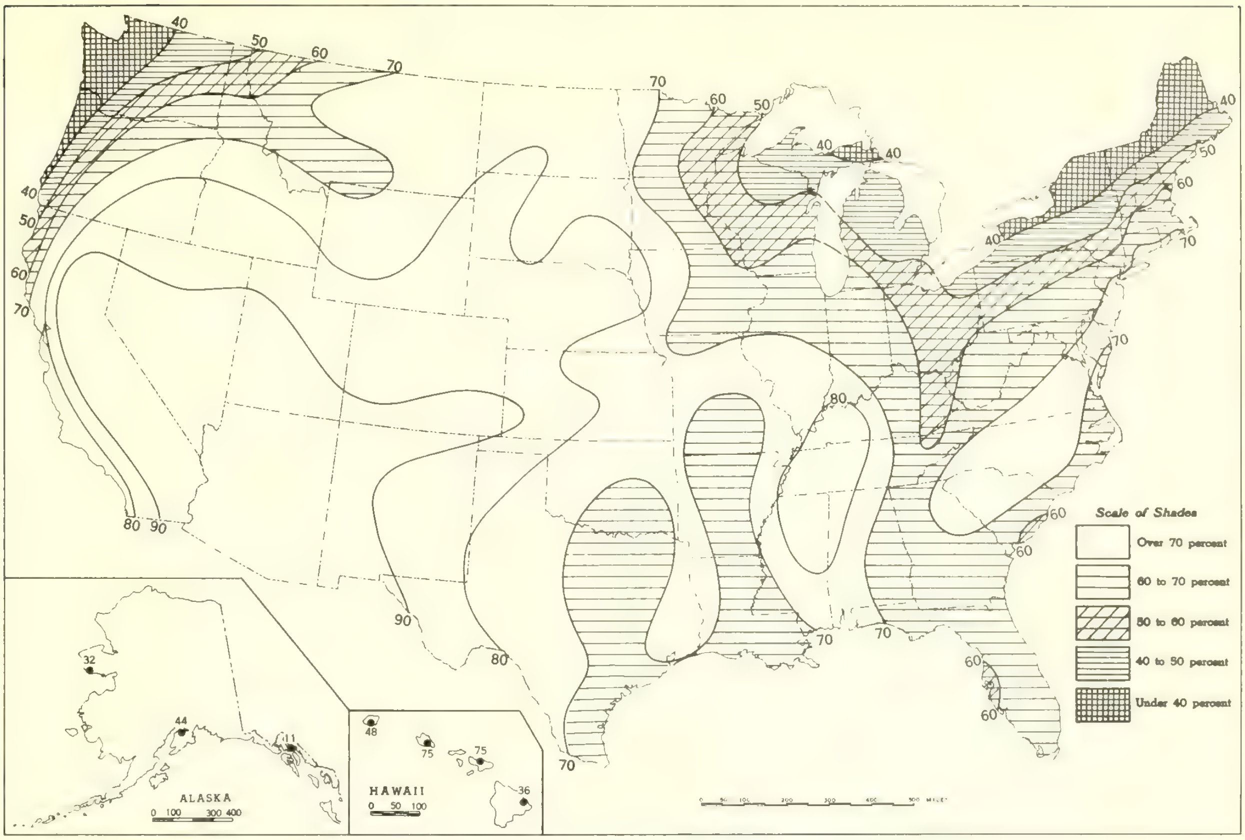
Based on daily precipitation records at about 870 Weather Bureau and cooperative stations.

Chart III. Percentage of Normal Precipitation, October 1965.

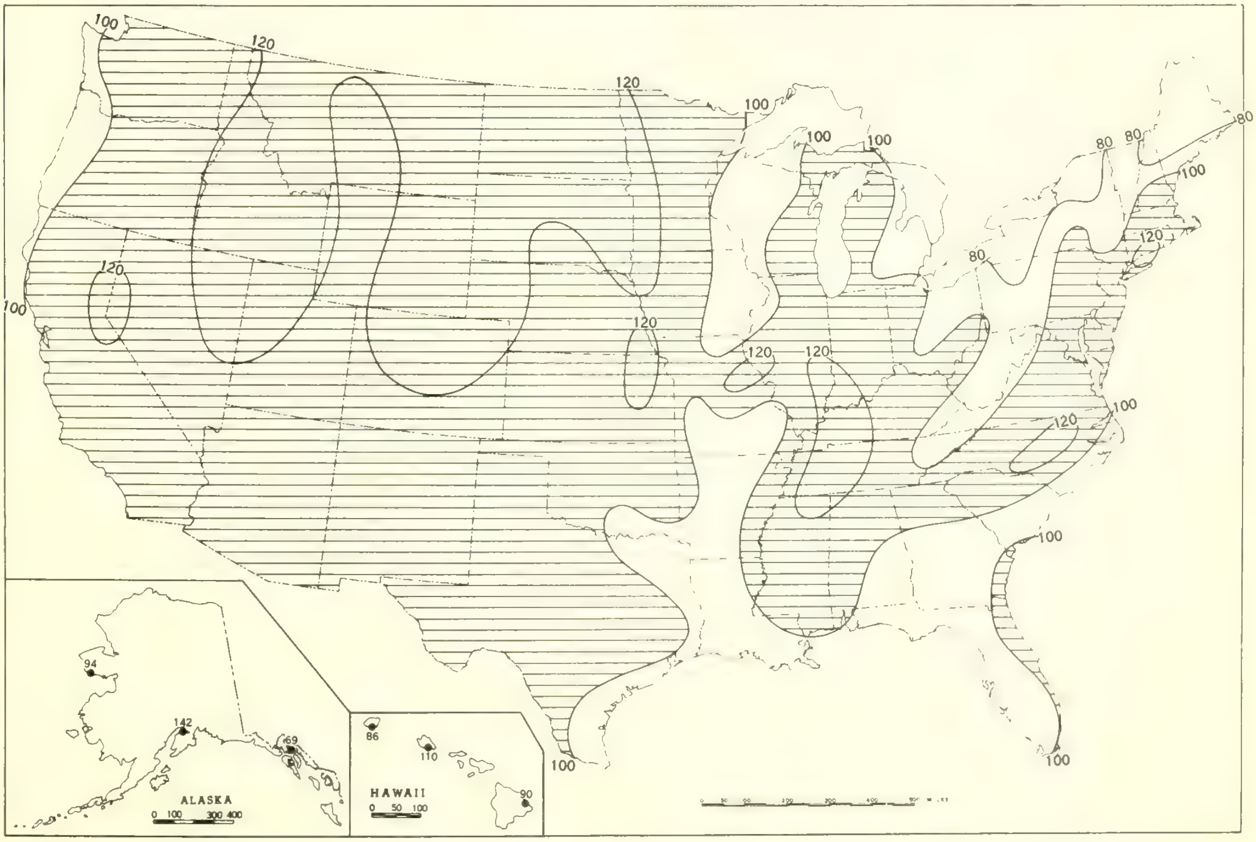


Normal monthly precipitation amounts are computed from 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart VI. A. Percentage of Possible Sunshine, October 1965.

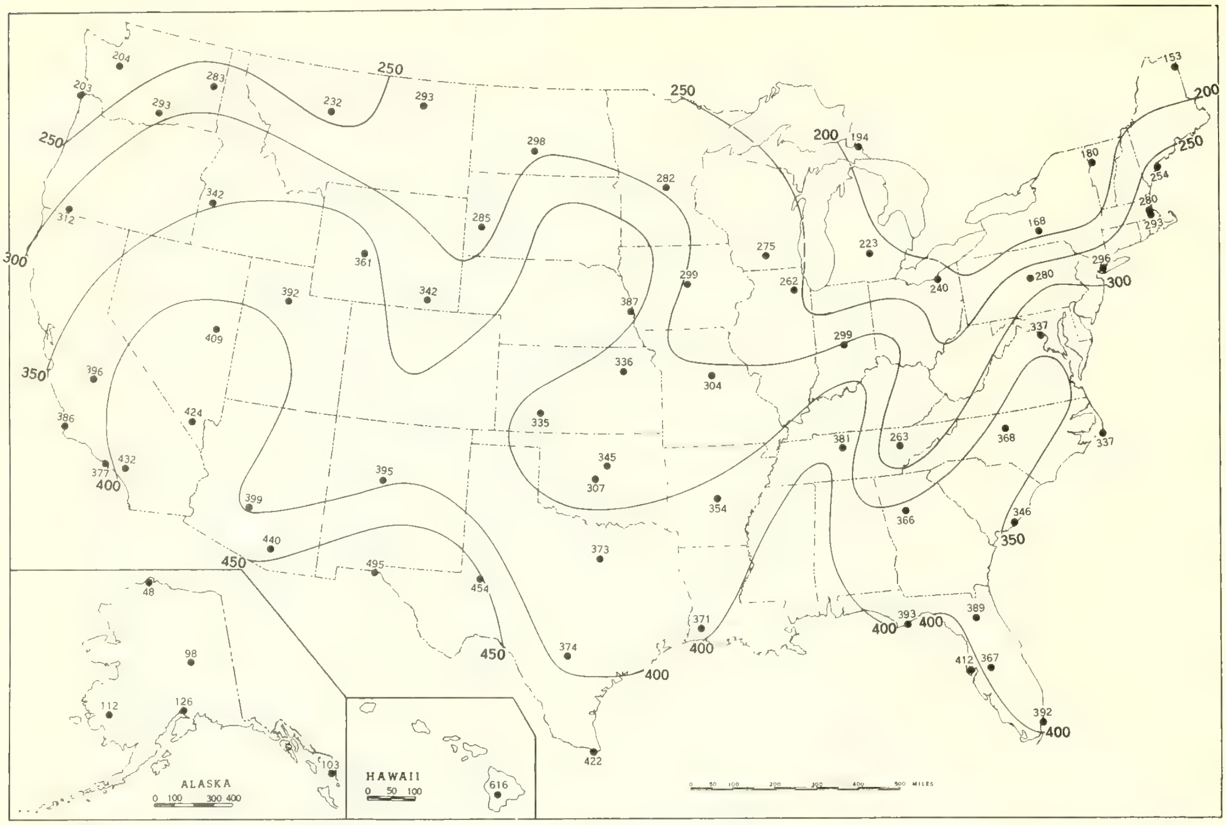


B. Percentage of Mean Monthly Sunshine, October 1965.

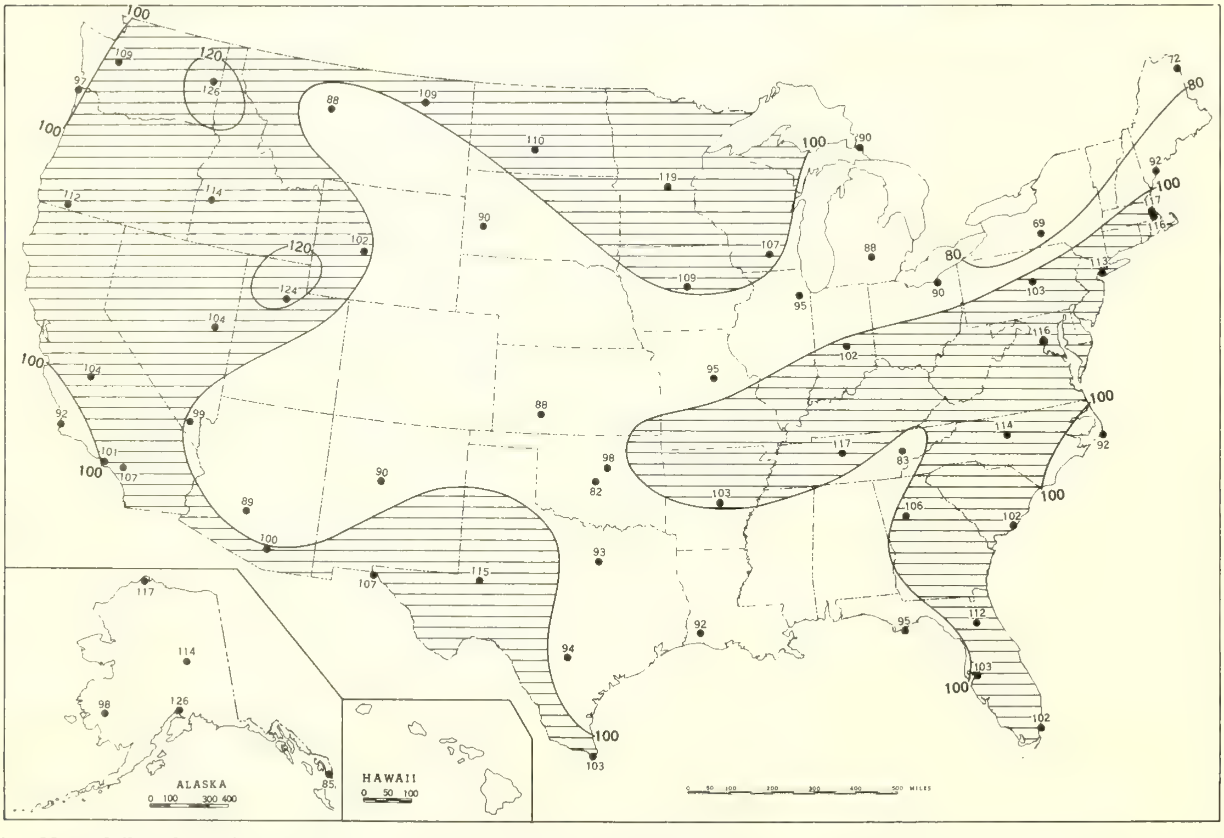


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, October 1965.

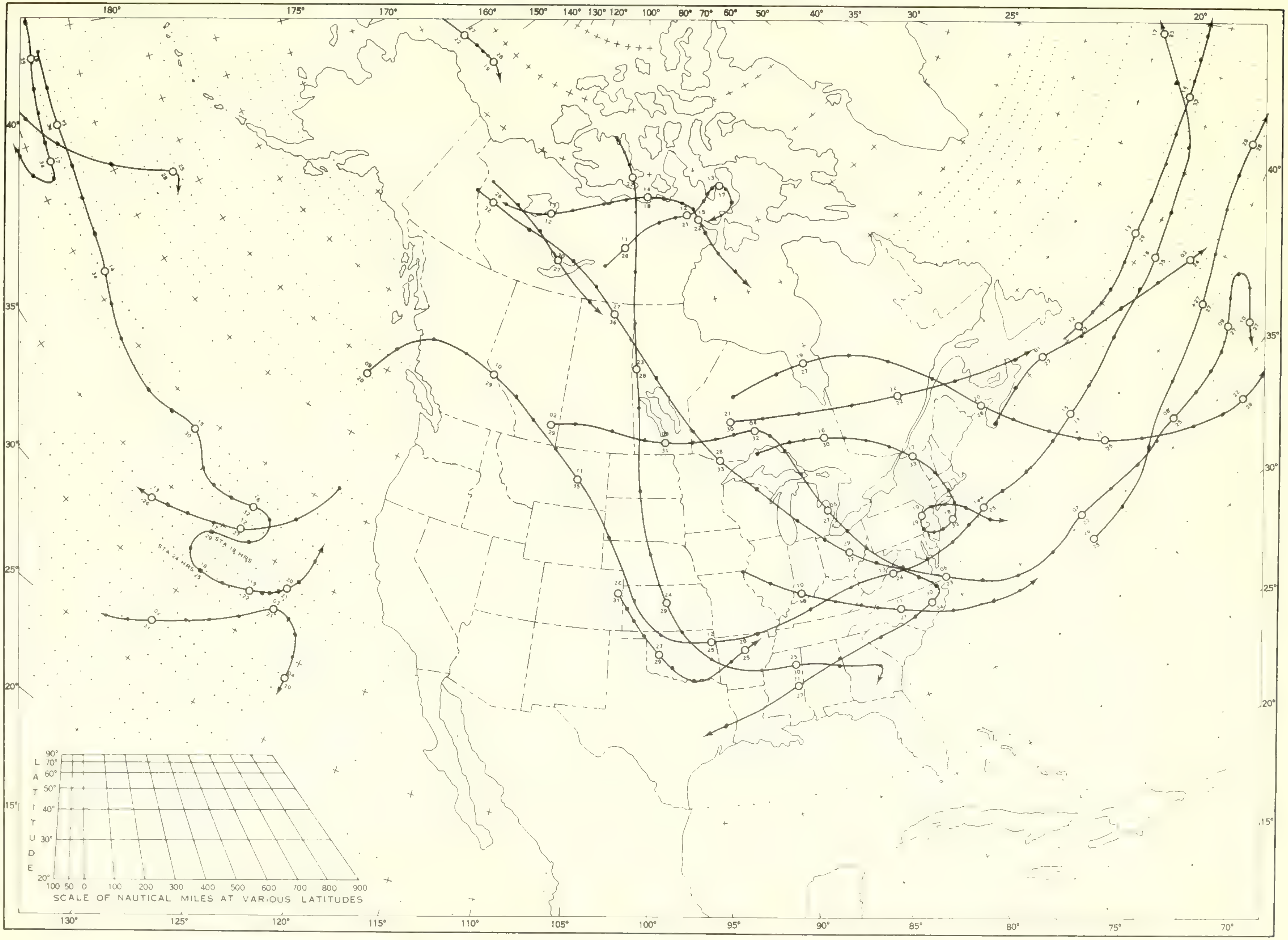


B. Percentage of Mean Daily Solar Radiation, October 1965.



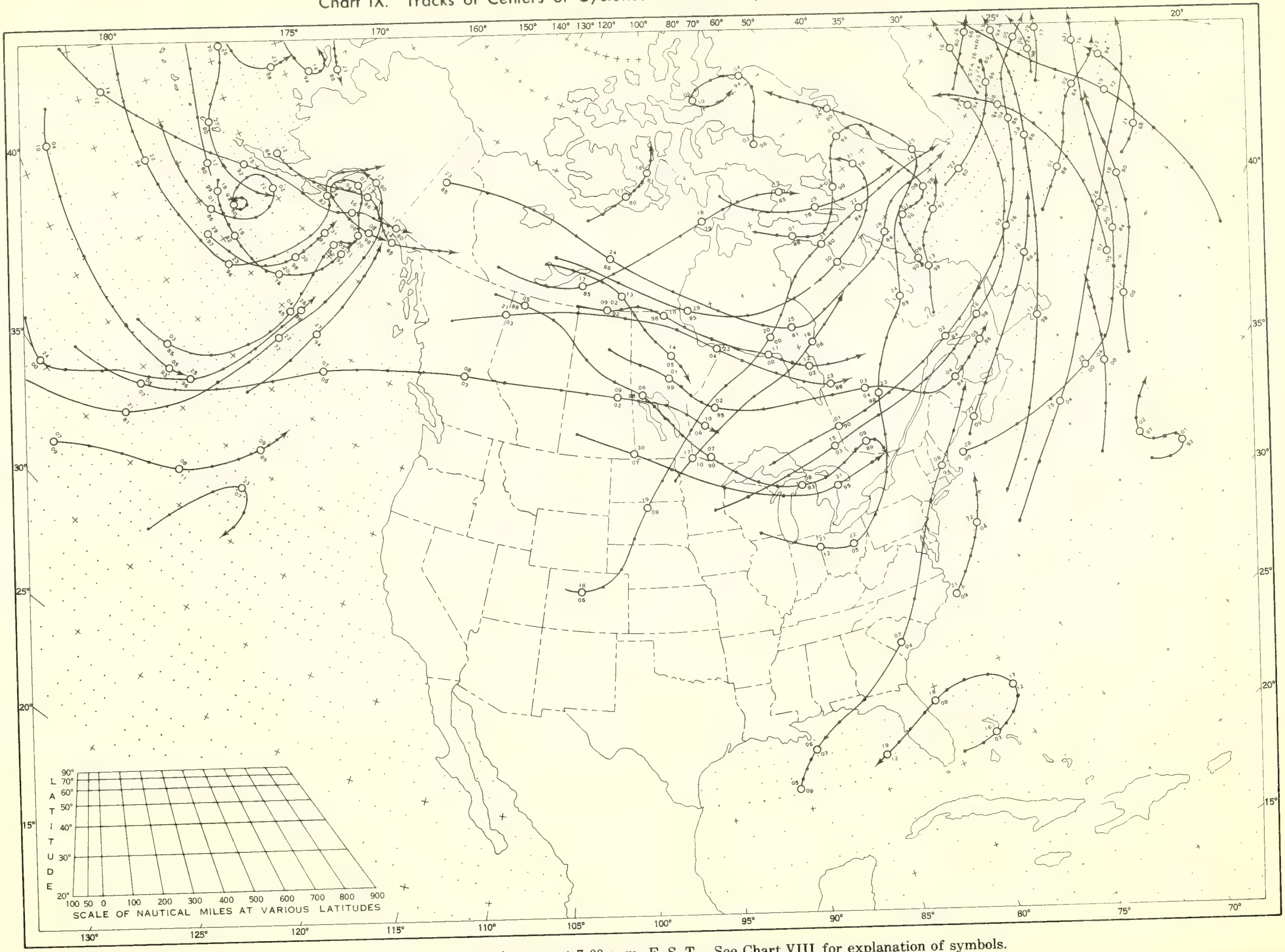
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm. $^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, October 1965.



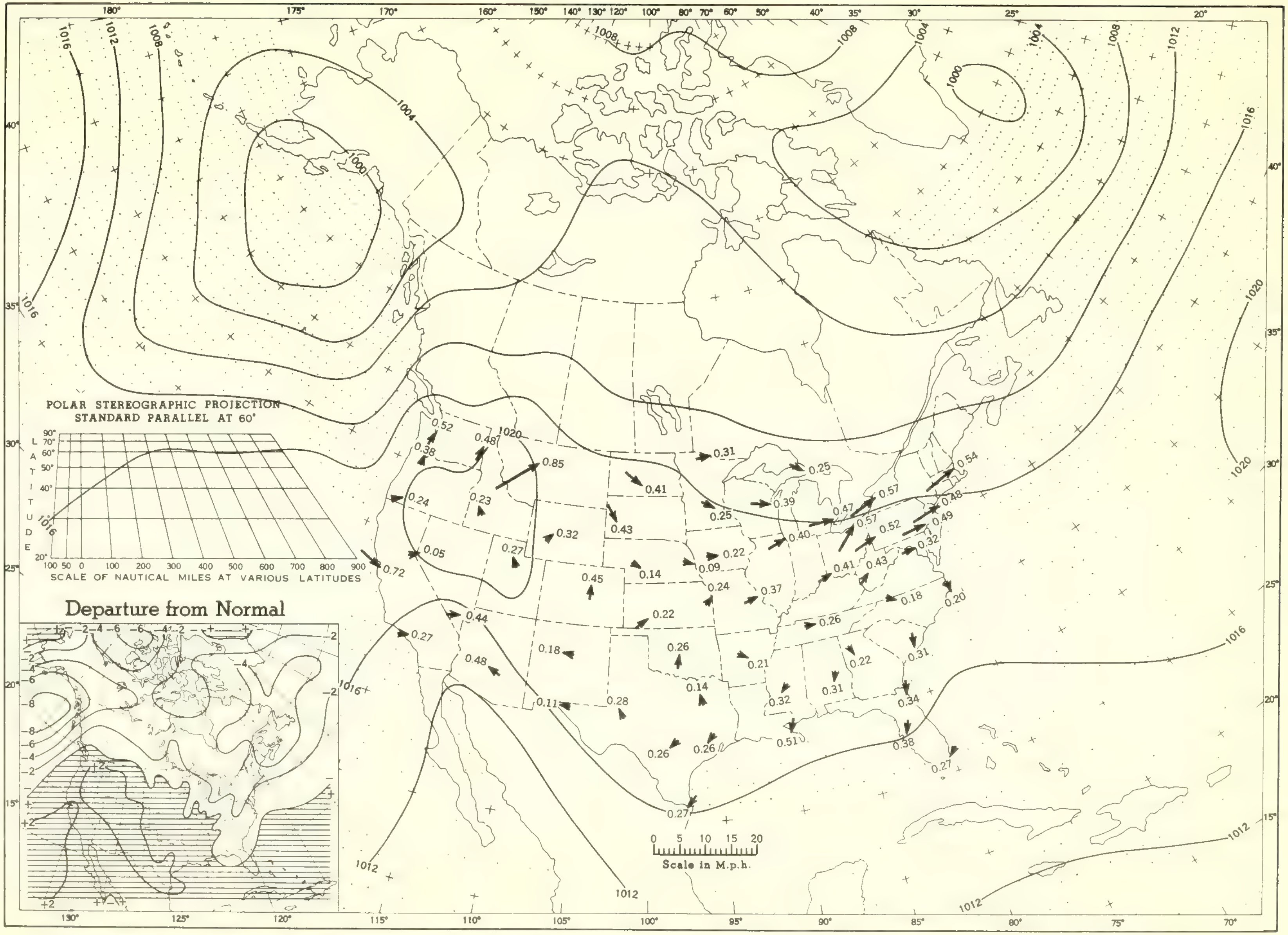
Circle indicates position of center at 7:00 a. m. E. S. T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, October 1965.



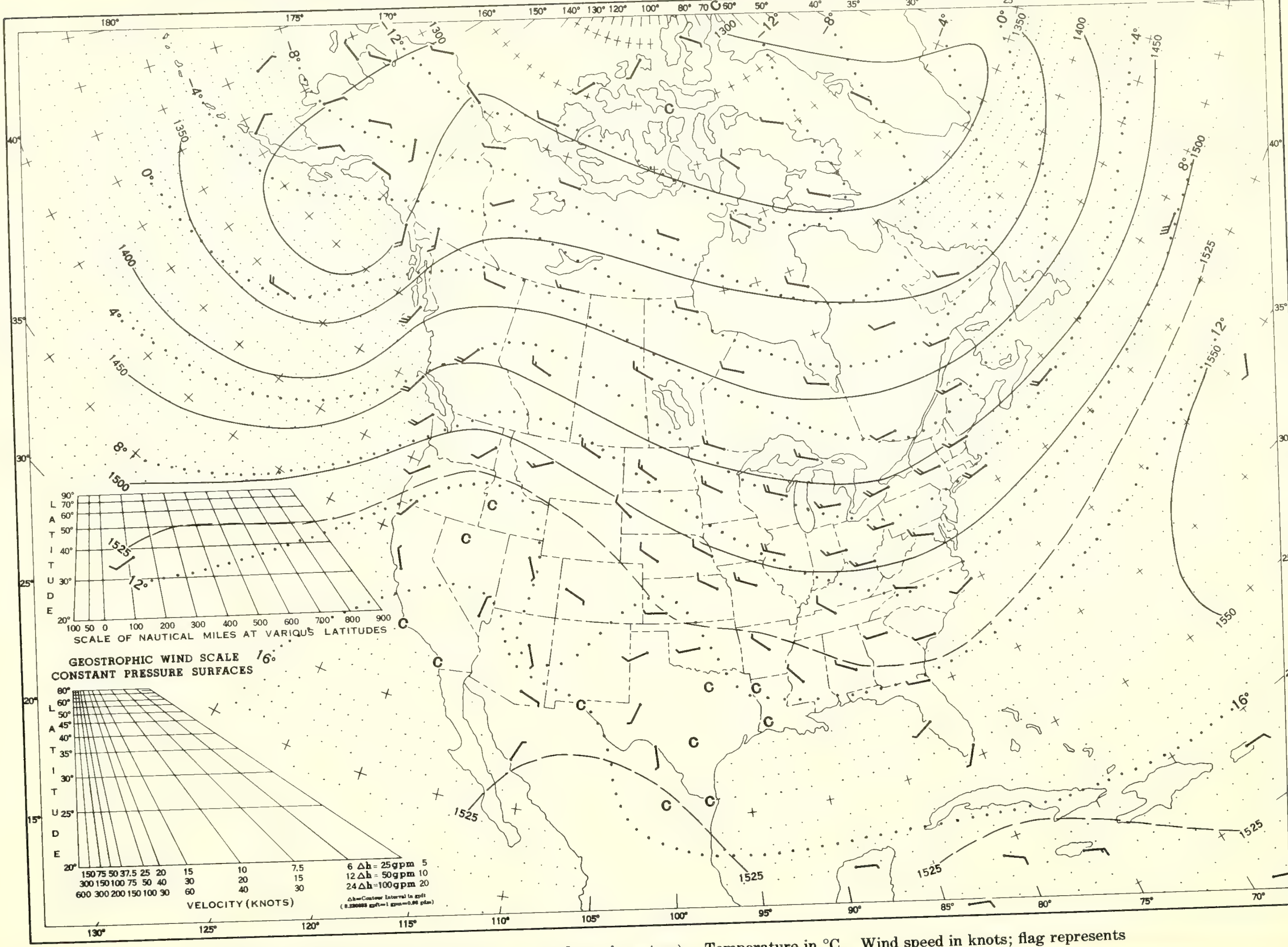
Circle indicates position of center at 7:00 a. m. E. S. T. See Chart VIII for explanation of symbols.

Chart X. Average Sea Level Pressure (mb) and Resultant Surface Wind, October 1965. Inset: Departure of Average Pressure (mb) from Normal, October 1965.



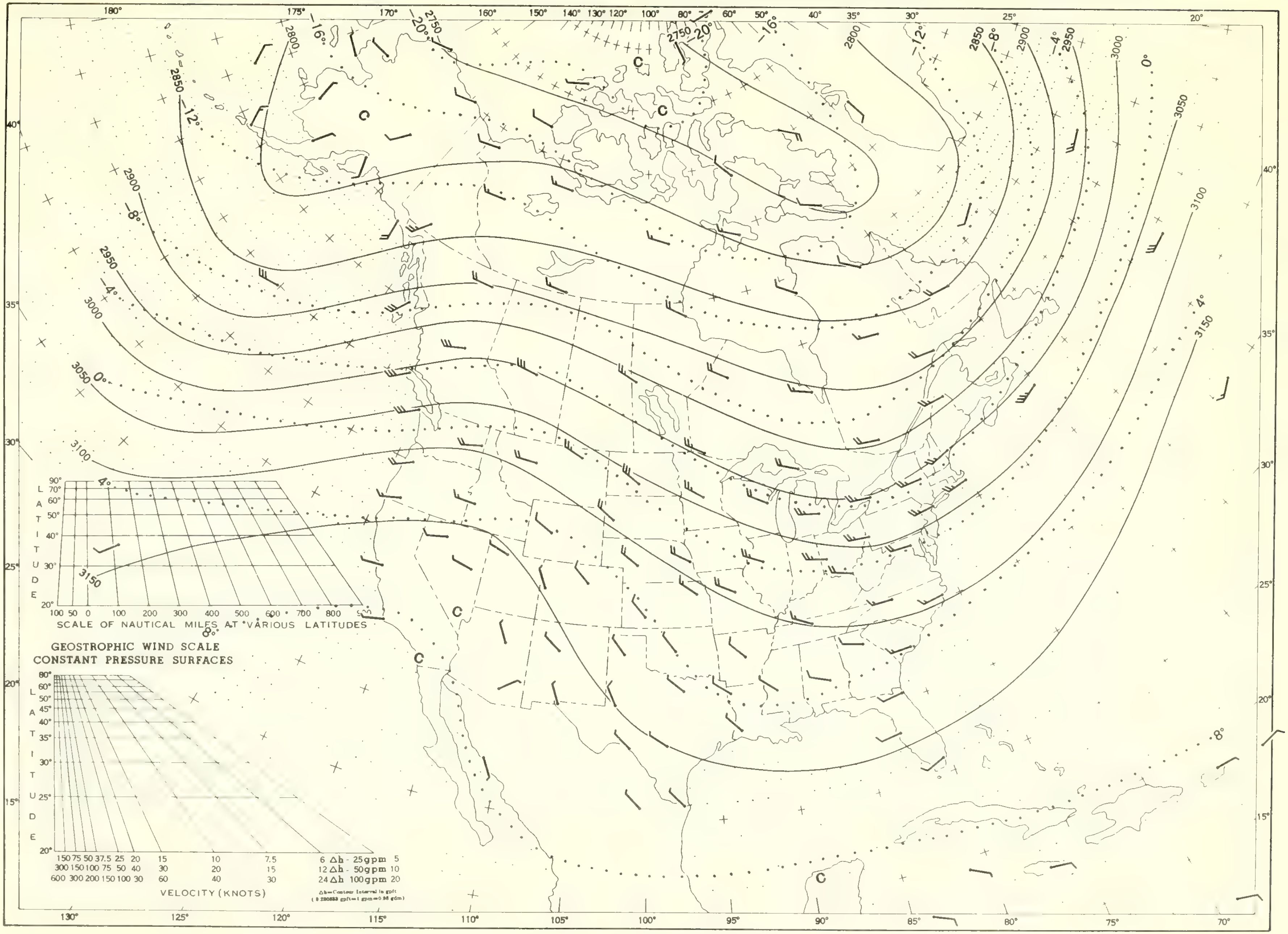
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed ÷ average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb. Surface, 1200 GMT, October 1965. Average Height and Temperature, and Resultant Winds.



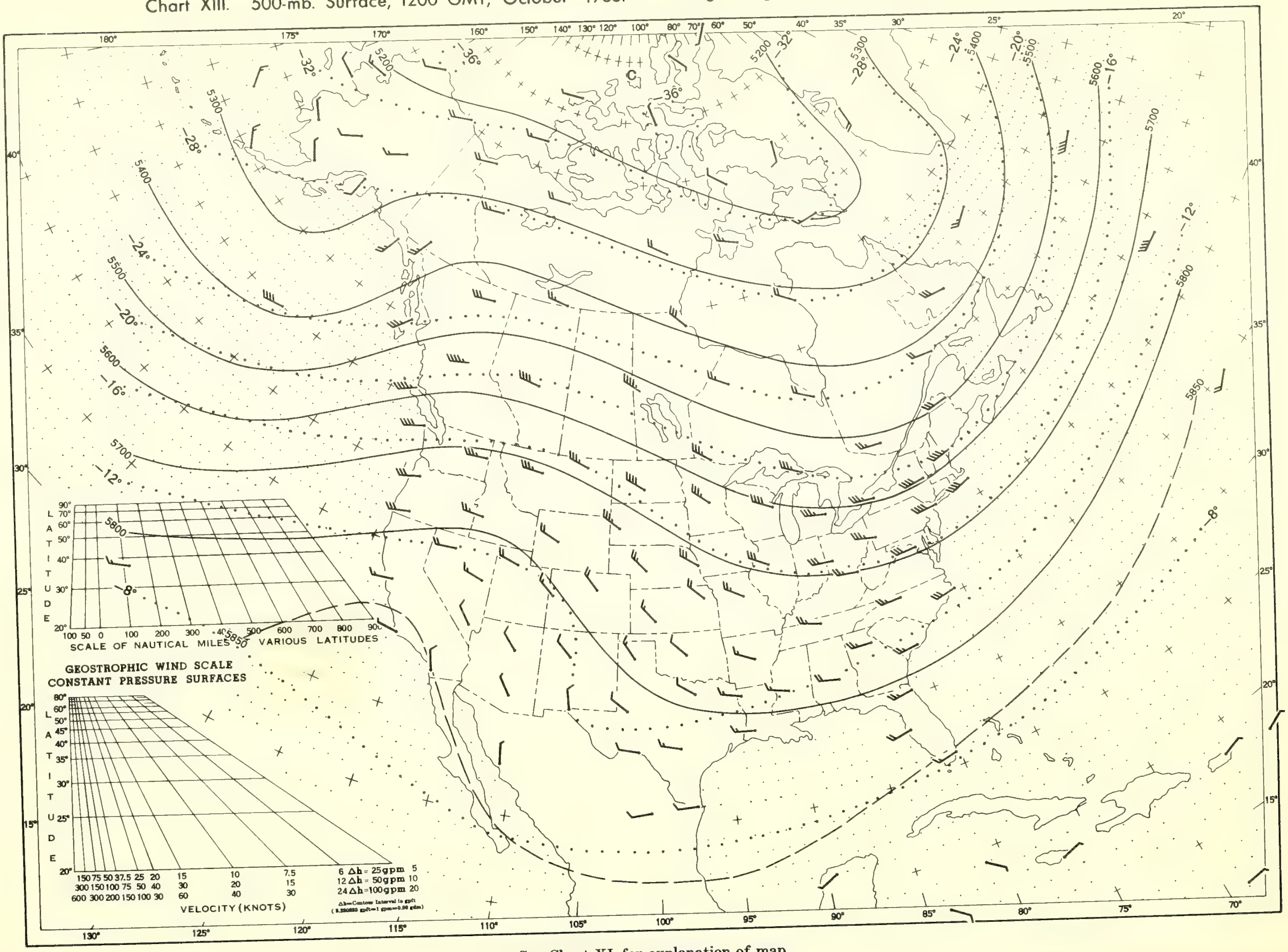
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in knots; flag represents full feather 10 knots, and half feather 5 knots. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, October 1965. Average Height and Temperature, and Resultant Winds.



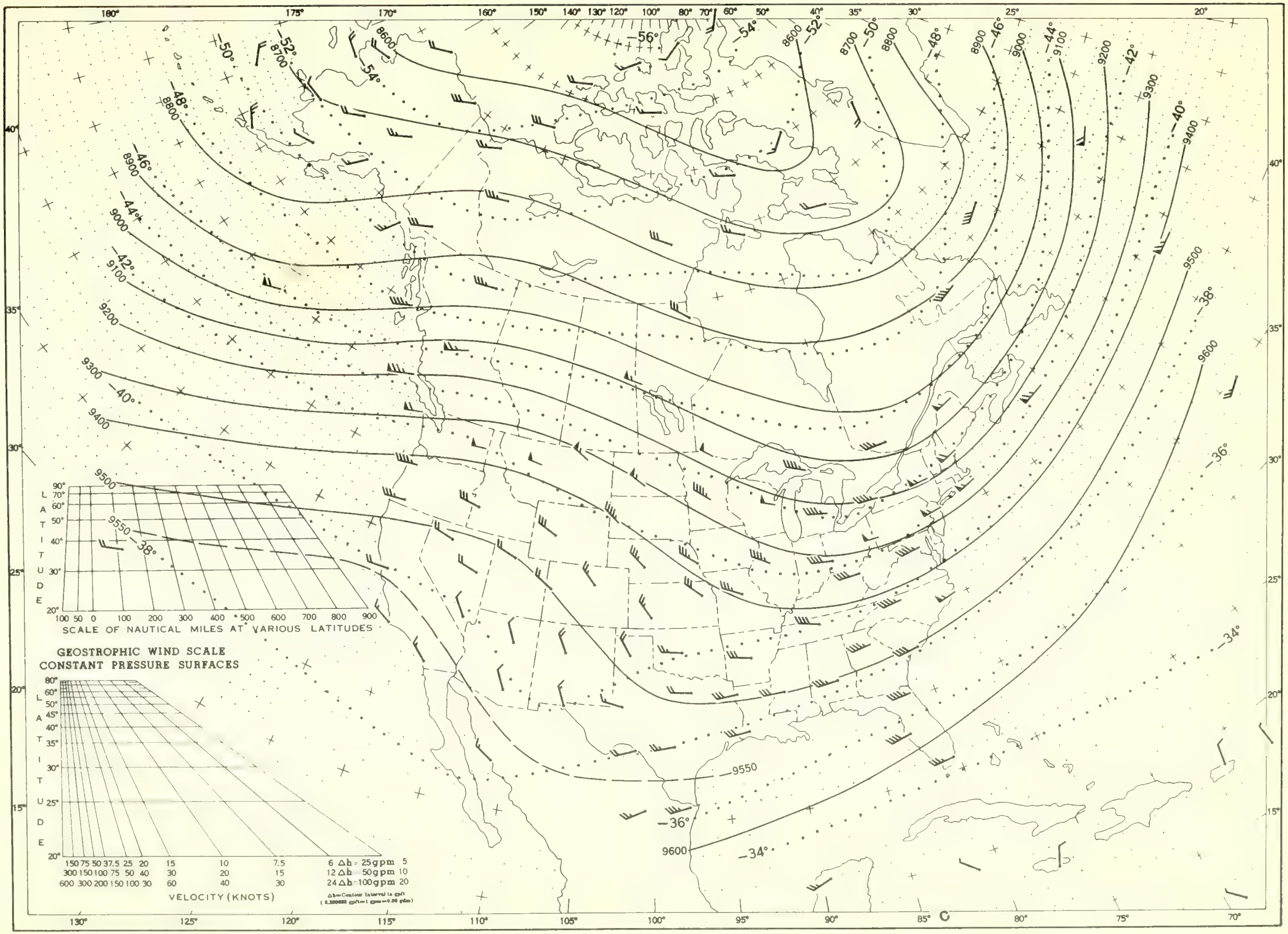
See Chart XI for explanation of map.

Chart XIII. 500-mb. Surface, 1200 GMT, October 1965. Average Height and Temperature, and Resultant Winds.



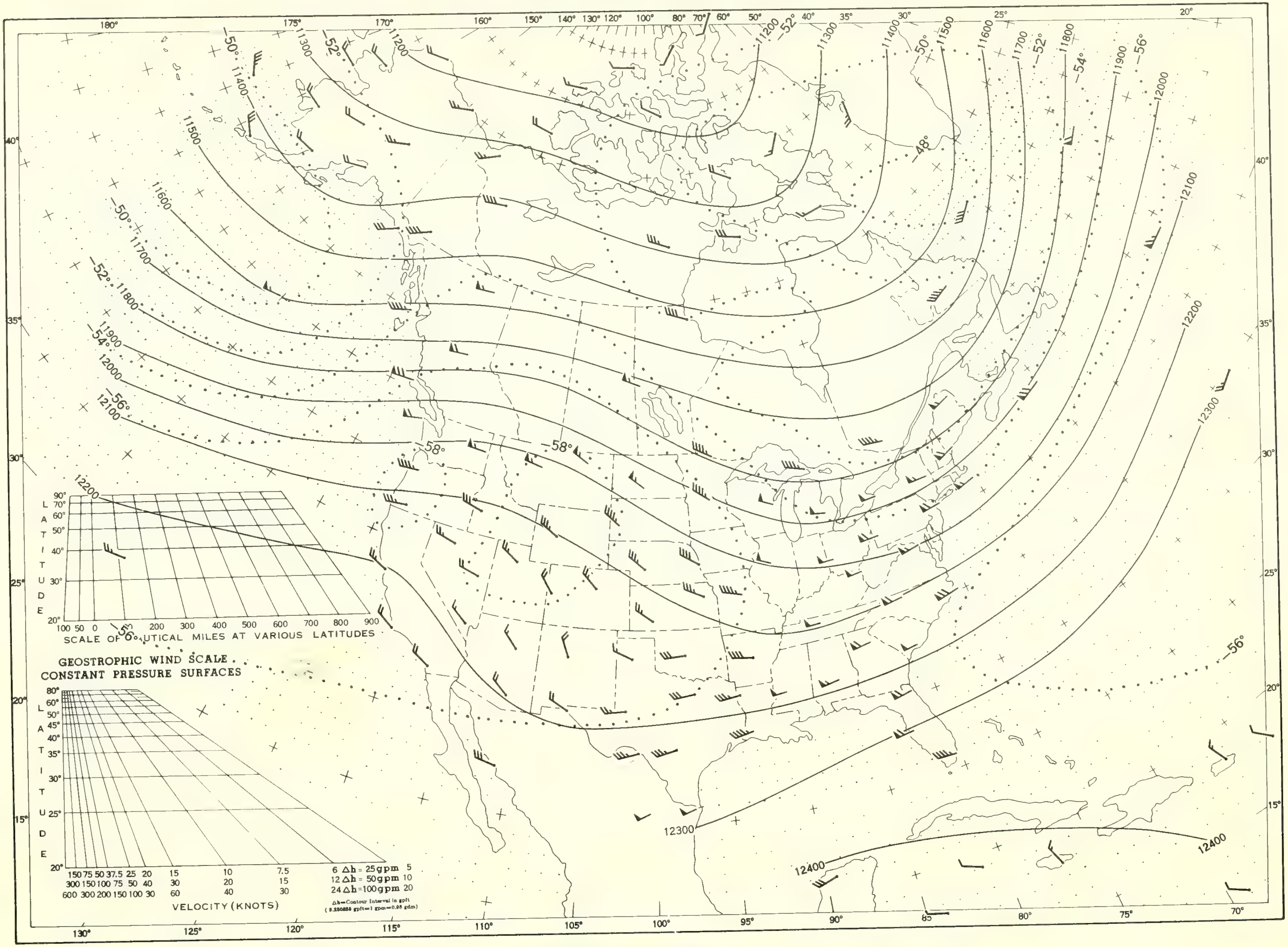
See Chart XI for explanation of map.

Chart XIV. 300-mb. Surface, 1200 GMT, October 1965. Average Height and Temperature, and Resultant Winds.



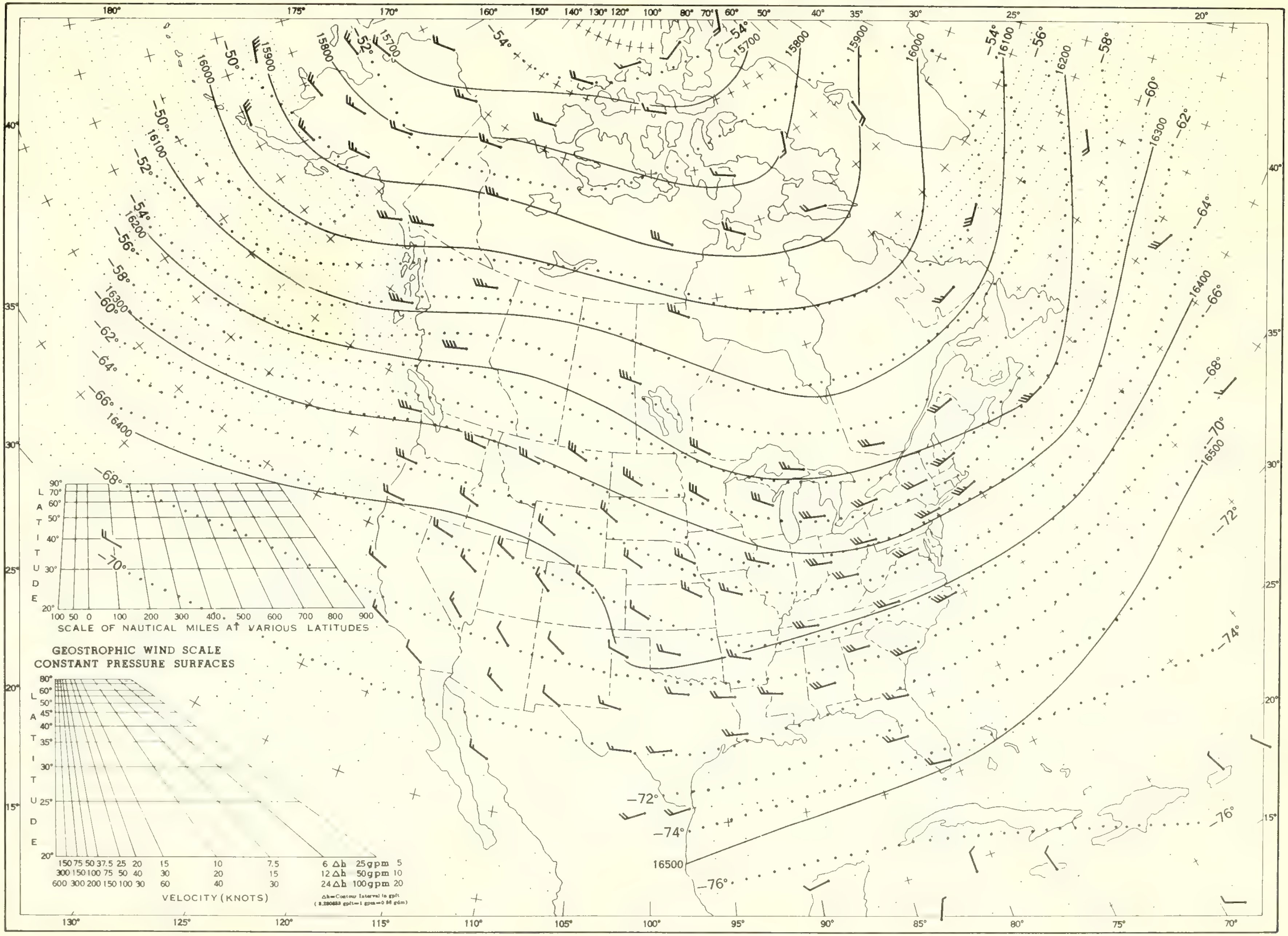
See Chart XI for explanation of map.

Chart XV. 200-mb. Surface, 1200 GMT, October 1965. Average Height and Temperature, and Resultant Winds.



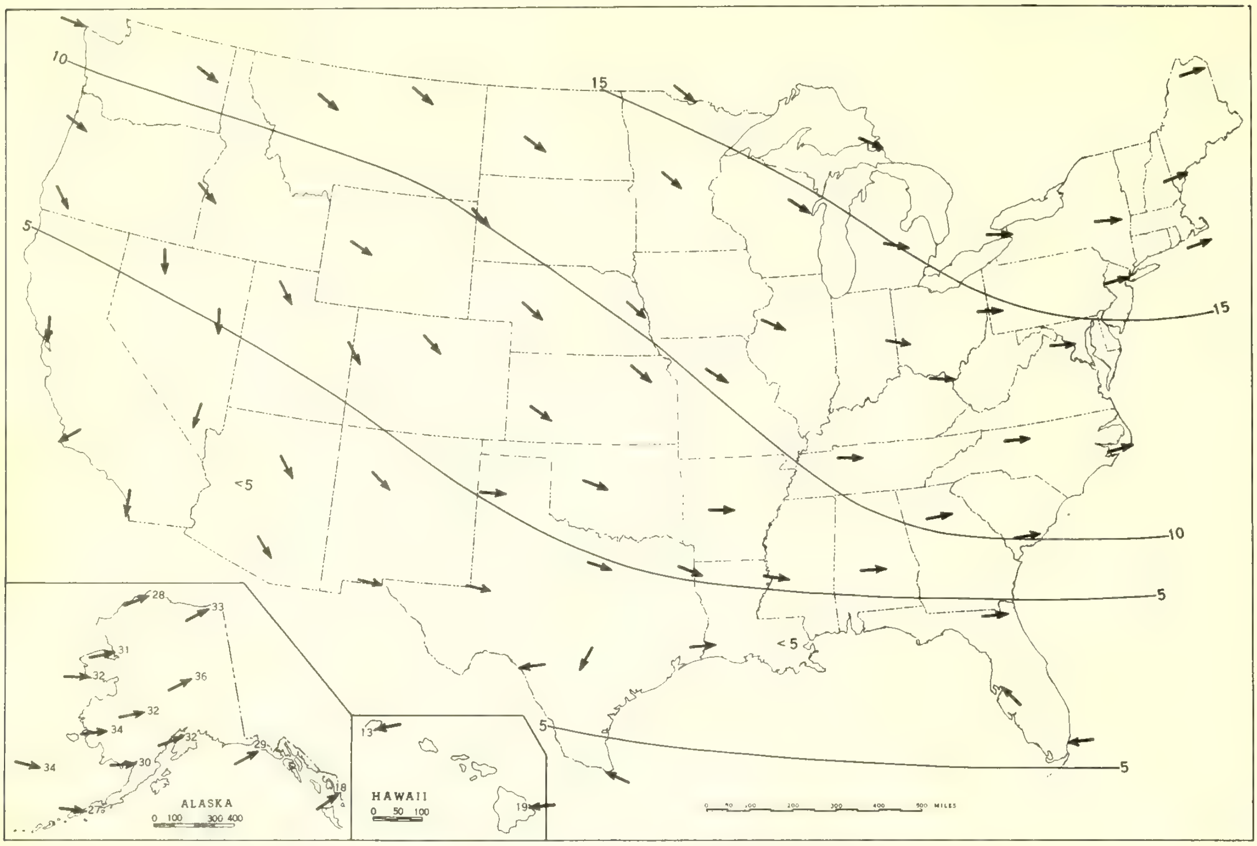
See Chart XI for explanation of map.

Chart XVI. 100-mb. Surface, 1200 GMT, October 1965. Average Height and Temperature, and Resultant Winds.

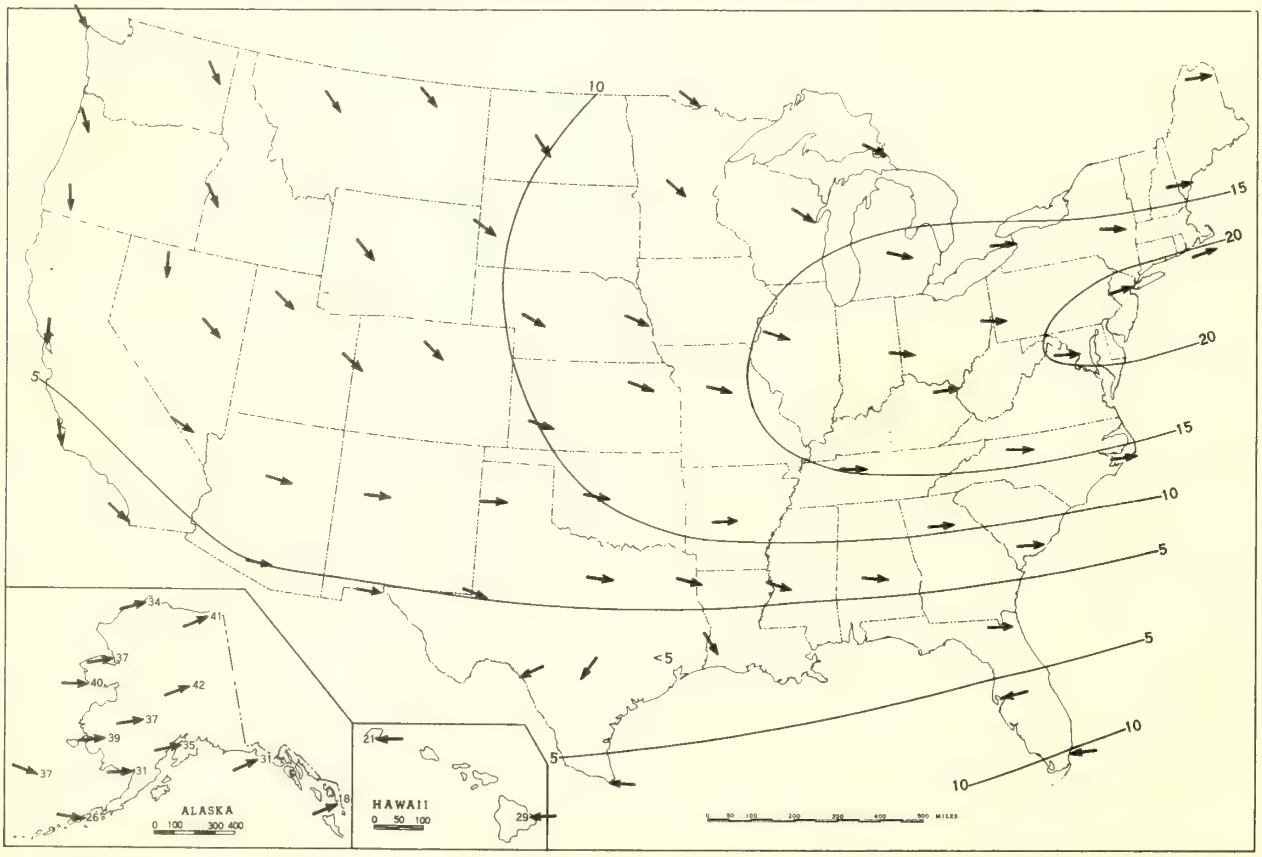


See Chart XI for explanation of map.

Chart XVII. A. 50-mb. Surface, 1200 GMT, October 1965. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, October 1965. Resultant Winds.



Wind speed (isotachs) in knots. Arrows show resultant wind direction. All wind data are based on rawin observations.

U. S. DEPARTMENT OF COMMERCE
JOHN T. CONNOR, Secretary
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
WEATHER BUREAU

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

CLEMSON UNIVERSITY LIBRARY
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NOVEMBER 1965
Volume 16 No. 11

ASHEVILLE: 1966

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NOTE: Delayed data and corrections will be carried in the June and December issues of this publication.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 16 No. 11

NOVEMBER 1965

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. Record Precipitation and Cloudiness in Far Southwest.

2. Continued Drought in Northeast.

3. Unusually Warm Month in Southern Plains and Central Rockies.

TEMPERATURE.--November was unseasonably mild in most areas--for the second consecutive month in north-central and western areas. The month was cooler than normal only in New England and adjacent States, and in some areas along the middle Canadian border. There were no prolonged unusually cold periods. Extreme temperatures during the month ranged from 99° at Dateland, Ariz., on the 3d to -25° at Fraser, Colo., on the 30th.

The month was warmest, relative to normal, in the lower Great Plains and central Rockies where monthly averages ranged up to 8° or more above normal. Grand Junction, Colo., had its warmest November (48.3°) since 1892, and Oklahoma City, Okla., its warmest November (56.3°) in 76 years. A number of stations in the lower Mississippi Valley and southern Texas reported their warmest November in more than 30 years. At Lubbock, Tex., 86° on the 25th was a November high for the station. A number of stations in the south-central portion of the Country observed record high temperatures for so late in the season during the Thanksgiving weekend. Included were Dallas, Tex., 86°, and Evansville, Ind., 78°.

Outbreaks of cold northern air east of the Rockies on the 9th, 14th, and 17th reduced temperatures to below normal levels for short periods and extended the freeze line into the southern States. Subzero temperatures east of the Continental Divide were limited mostly to Canadian border areas west of the Great Lakes. Near the end of the month the first autumn freeze of 1965 in the Texas Panhandle was about 2 to 3 weeks later than usual.

PRECIPITATION.--November precipitation was below normal in most areas east of the Rockies. In much of the Great Plains, lower portions of the Mississippi and Ohio Valleys, and along the Atlantic coast from southern New England through the Carolinas, monthly totals were less than 50 percent of normal. In Delaware, eastern portions of Maryland and Virginia, and a large area in the central Great Plains amounts were less than 25 percent of normal. This was the second consecutive dry month in the lower Mississippi Valley and east-central Great Plains. In contrast record-breaking rains fell in the Far Southwest.

Most of the heavy precipitation in the Far Southwest came during the second half of the month. From the 16th through the 18th, heavy rains in southern California were associated with a storm center off the coast. Los Angeles measured 4.3 inches in a 4-day period and 5.3 inches in 7 days at a time of the year when the normal amount for a 7-day period is less than 1/2 inch. Mt. Wilson received 16 inches during the storm. Flooding and mudslides caused heavy damage. Downtown Los Angeles reported an additional 3.5 inches of rain on the 23d, bringing the total in less than 2 weeks to 9.34 inches. The total of 9.68 inches for the month may be compared to a monthly normal of 1.08 inches and the previous record November total of 6.53 inches. Fourteen cloudy days and 40 percent of possible sunshine were also new November records.

In Hawaii, heavy rainstorms November 10 to 14, totaling about 10 inches in the lowlands to 25 inches in the mountains, caused major landslides and local flooding, except on the Island of Hawaii. Over 200 families on Oahu were evacuated from their homes.

November precipitation brought little change in the Northeast drought. Above normal amounts in northern portions of New York and New England were beneficial but insufficient to offset the accumulated deficiencies of the past 4 years. With below normal amounts in coastal areas, the drought continued and even intensified in Maryland and the Virginias. This was the driest November (0.37 in.) at Washington, D. C., and the driest (0.49 in.) since 1931 at Norfolk, Va. Farther north, Boston, Mass., measured only 21.98 inches for the January-November period, the driest such period there in the last 148 years.

Most of the month's snowfall occurred during the second half. At the end of the month, depths in the Cascade-Sierras ranged up to more than 30 inches. During a storm at midmonth east of the Rockies, 1 to 4 inches fell in Montana and the Dakotas, over a foot in parts of Minnesota, 7 to 10 inches in upper Michigan, and up to 10 inches in northern portions of New York and New England. During another storm the last week, up to 2 feet of snow fell in northern Minnesota and the Lake Superior region and lighter amounts in the northern Great Plains and east of the Great Lakes. At the end of the month an inch or more of snow covered Canadian border areas from eastern North Dakota to Main. At Duluth, Minn., the monthly snowfall of 25.9 inches was the most for November since 1947.

STORMINESS.--November had more than its share of storms. On the 12th tornadoes formed along a squall line in northeastern Illinois and northwestern Indiana, leaving one person dead and considerable damage. On the 15th winds reached 50 m.p.h. over the Lakes and several tornadoes with 2 fatalities occurred in Ohio. During another storm moving eastward in the middle Canadian border region the last week, blizzard conditions developed in Wisconsin and nearby areas and tornadoes were reported in Illinois, Indiana, and Ohio.

CONDENSED CLIMATOLOGICAL SUMMARY

NOVEMBER 1965

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	Whatley	86	7	2 Stations	13	30	Gadsden	3.61	Fort Morgan	0.16
Alaska	Data Delayed									
Arizona	Dateland	99	3	Heber Ranger Station	4	26	Junipine	8.46	2 Stations	.00
Arkansas	Texarkana WBAP	88	26	4 Stations	12	30	Blytheville	4.93	West Memphis	.43
California	Indio US Date Garden	97	1	Bridgeport	-15	28+	Opids Camp FC57 BE	37.92	2 Stations	.24
Colorado	Holyoke	80	2	Fraser	-25	30+	Bonham Reservoir	5.65	24 Stations	.00
Connecticut	Bridgeport WBAP	72	4	Bulls Bridge Dam	11	30	Norfolk 2SW	2.75	Baltic	1.50
Delaware	2 Stations	74	7+	2 Stations	17	30	Wilmington Porter Resvr	1.43	Bridgeville 1NW	.59
Florida	Key West	90	14	Steinhatchee McCain TR	25	30	Perrine	10.45	Indiantown	.11
Georgia	Colquitt 2E	84	4	Blairsville Exp Sta	15	30	Helen 1ESE	4.31	Savannah USAA Pl Grdn	.64
Hawaii	Data Delayed									
Idaho	Caldwell	79	4	Stanley	-15	29	Burke 2ENE	6.15	Leadore No 2	D .35
Illinois	Waterloo 1WSW	80	13	3 Stations	12	30+	Morrison	2.42	DeQuoin 2S	.08
Indiana	Charlestown Ord Plant	82	4	Wabash 2SW	9	30	Auburn 2SSE	2.82	Jeffersonville	.40
Iowa	Albia	79	7	Le Mars 2N	-5	30	Dubuque WBAP	3.18	Logan	.25
Kansas	7 Stations	80	26+	Centralia	5	30	Atlanta	.74	31 Stations	.00
Kentucky	Benton 2	85	7	Benton 2	9	30	Hickman 1E	3.79	Jeremiah	.54
Louisiana	Slidell	90	20	5 Stations	27	30	Grand Chenier	7.12	Old Town Bay	.58
Maine	2 Stations	68	4	Squa Pan Dam	-8	25	Bar Harbor	8.43	Upper Dam	2.31
Maryland	La Plata 1W	77	4	4 Stations	15	30+	Oakland 1SE	2.62	Brookdale	.16
Massachusetts	Framingham	70	1	3 Stations	13	25+	Camp Wellfleet	5.24	West Medway	1.47
Michigan	Bloomingdale	76	3	Kenton US Forest	-2	18	Champion Van Riper Pk	5.61	Higgins Lake	.80
Minnesota	Canby	80	2	Bigfork	-13	30	Tower 3WSW	4.33	Fairmont	.39
Mississippi	Moorhead	88	26	Tupelo 2WSW	16	30	Centreville 4ESE	5.47	Sarah	.37
Missouri	8 Stations	80	27+	Nevada Sewage Plant	5	30	Fisk	4.02	Appleton City	.00
Montana	Crow Agency	80	2+	2 Stations	-24	27	Troy 18N	5.52	3 Stations	.00
Nebraska	Newport	83	3	Wakefield	-3	30	Waterloo	1.78	4 Stations	.00
Nevada	Sunrise Manor Las Vegas	88	1	Ruth	-11	29	Glenbrook	5.33	McGill	.60
New Hampshire	2 Stations	68	1	Grafton	3	20	Fabyan	5.38	Dublin	2.00
New Jersey	Atlantic City WBAP	76	4	2 Stations	14	30	Sussex 1SE	3.38	Millville	.38
New Mexico	Jal	87	7	Augustine	-3	29	Dulce	4.08	40 Stations	.00
New York	NY John F Kennedy INAP	73	4	Elizabethtown	8	10	Highmarket	7.44	Albany	.20
North Carolina	2 Stations	80	16+	Oconalufty	10	30	Hayesville 4NE	4.44	Columbia 2	.35
North Dakota	Marmarth	80	3	Powers Lake 1N	-16	29	Grand Forks FAA AP	1.23	3 Stations	T
Ohio	3 Stations	76	6+	2 Stations	12	30	Dorset	D 5.10	New Carlisle	.58
Oklahoma	Waurika	92	25	Grove 1E	11	30	Cloudy Tower	3.80	31 Stations	.00
Oregon	Pendleton Brch Exp Sta	81	2	Seneca	-13	29	Cape Blanco	19.74	2 Stations	.56
Pennsylvania	Landisville 2NW	79	5	3 Stations	12	30+	Lewis Run 3SE	6.31	do	.93
Puerto Rico	Dos Bocas	94	17	Cayey 1E	53	29	Maricao	15.76	Santa Isabel 3NW	.87
Rhode Island	Providence WBAP	71	4	Kingston	15	30	Greenville	2.61	Block Island WBAP	1.27
South Carolina	Yemassee 1W	81	5	Chester 2WSW	15	30	Paris Mtn Fire Tower	6.10	Andrews	.66
South Dakota	Academy	84	2	3 Stations	-10	30+	Arlington	1.02	2 Stations	T
Tennessee	Boliver 2	83	26	Waverly	11	30	Martin U of T Branch	4.54	Memphis WBAP	.75
Texas	Laredo No 2	97	26	3 Stations	16	30+	Bay City Water Works	11.15	47 Stations	.00
Utah	Antelope Island	84	4	2 Stations	-6	28+	Silver Lake Brighton	D 8.81	Fruita	.16
Vermont	Vernon	65	1	West Burke	4	20	Enosburg Falls	6.12	Burlington WBAP	2.65
Virginia	2 Stations	81	7+	Partlow 3WNW	7	30	Wise 1SE	2.15	2 Stations	.00
Washington	Dayton 1WSW	80	2	Republic	3	26	Spruce	16.95	Oroville 1S	.91
West Virginia	2 Stations	78	26+	Arbovale 2	10	30	Rowlesburg 1	3.29	Harpers Ferry	.53
Wisconsin	16 Stations	70	4+	Foxboro	-1	27	La Vieux Desert	4.87	Janesville	1.35
Wyoming	2 Stations	78	2	2 Stations	-19	30+	Sage 4NNW	3.22	7 Stations	.00

+ And also on an earlier date or dates

NOTE: Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90° F. or above	Min. 32° F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	997.6	1020.2	66	43	54.8	1.5	77	26	19	30	0	5	45	74	2.80	- 0.73	1.92	6	2	0.0	0	0.2	11	33	W	27	7	6	17	6.8	53
HUNTSVILLE	600	997.0	1020.0	68	45	56.1	5.3	80	8	24	30	0	3	43	64	0.64	- 3.01	0.27	6	1	0.0	0	1.2	15	32	22	27	6	8	16	6.9	
MOBILE	211	1011.5	1019.3	74	54	63.9	5.0	81	25+	33	30	0	0	53	71	0.73	- 2.62	0.58	6	1	0.0	0	2.9	9	21	36	27+	6	10	14	6.2	
MONTGOMERY	194	1012.9	1020.0	70	47	58.3	4.1	81	26	27	30	0	1	48	72	1.34	- 1.68	0.68	6	1	0.0	0	1.3	6	28	SW	21	5	8	17	7.1	46
ALASKA												B																				
ANCHORAGE PRK STRIP	85			26	12	19.0	- 3.2	40	29	- 4	23+	0	30			0.94	- 0.09	0.26	8		11.1	11										
ANCHORAGE	141	1004.7	1009.7	28	13	20.5		41	29+	- 3	22	0	30	12	71	1.86		0.68	11	0	17.9	16	1.5	36	29	16	14	10	5	15	5.8	50
ANNETTE	110	1003.4	1007.5	44	34	38.9	- 1.5	57	7	20	24	0	11	31	75	11.47	- 3.18	3.77	19	1	1.7	2	4.0	8	40	14	29	7	3	20	7.3	
BARROW	22	1008.1	1008.8	20	6	12.7	13.4	32	8+	-17	1	0	30	10	86	1.15	0.92	0.32	14	0	12.8	11	5.6	17	32	28	6	V 0	V 2	V16		
BARTER ISLAND	39	1009.5	1011.5	14	1	7.5	7.3	33	7	-19	28	0	30	5	89	0.73	0.33	0.22	13	0	6.5	8	2.3	20	49	26	12	X 4	X 2	X17		
BETHEL	125	1002.7	1008.5	28	17	22.6	5.4	44	14	3	9	0	29	19	87	1.19	0.13	0.40	15	0	8.1	4	1.7	12	55	18	14	4	2	24	8.3	
COLD BAY	94	1007.8	1011.5	40	32	36.0	1.6	50	22	25	30+	0	20	31	83	2.55	- 1.24	0.51	25	1	9.7	4	5.1	24	59	17	11	0	6	24	8.7	
FAIRBANKS	436	995.6	1013.7	13	- 5	3.9	0.0	34	12	-26	23	0	30	1	87	1.21	0.61	0.32	12	0	18.8	16	0.6	34	25	22	12	7	9	14	6.4	
JUNEAU	12	1008.5	1009.2	37	23	29.9	- 4.4	47	1	3	24	0	25	27	90	1.46	- 4.60	0.36	10	0	9.6	6	3.9	11	31	12	15	6	5	19	7.1	47
KING SALMON	43	1007.1	1009.1	30	16	22.6	0.6	46	14	2	1	0	29	21	91	1.60	0.14	0.76	14	0	4.0	2	0.5	8	29	15	14	8	4	18	7.1	
KOTZEBUE	10	1007.1	1007.6	22	11	16.5	9.1	37	14	- 5	25	0	30	12	82	0.37	0.01	0.11	9	0	10.3	12	12.7	12	51	11	23	3	4	23	8.2	
MC GRATH	334	998.6	1012.0	17	1	8.7	3.4	43	14	-17	4	0	30	1	71	1.23	0.15	0.45	9	0	20.1	12	1.3	20	39	19	14	8	5	17	6.7	
NOME	13	1005.1	1005.8	27	17	22.4	5.9	36	14	- 1	29	0	30	20	87	1.46	0.30	0.24	20	0	13.2	11	6.9	11	55	24	11	5	2	23	8.0	17
ST. PAUL ISLAND	22	1006.4	1007.4	39	30	34.3	1.4	45	13	19	30+	0	19	32	88	3.84	1.34	0.61	23	0	8.1	3	10.6	22	69	24	14	0	8	22	8.6	
SHEMYA	122	999.7	1003.4	41	31	35.8	0.0	45	15+	24	26+	0	18	32	83	5.36	2.64	0.88	28	0	8.2	1	20.8	21	63	18	8	0	6	24	8.6	
YAKUTAT	28	1005.8	1006.7	36	18	26.9	- 6.9	43	3+	4	23+	0	28	23	90	6.58	- 9.45	1.97	12	0	12.9	8	3.0	10	23	13	27	12	1	17	5.9	
ARIZONA																																
FLAGSTAFF	6993	788.7	1019.4	53	26	39.7	3.6	65	7+	14	27	0	26	24	62	4.97	3.97	2.26	8	0	2.9	2	2.3	20	23	19	25+	7	5	18	7.1	
PHOENIX	1117	976.0	1015.1	76	48	62.1	4.0	91	1	37	29+	1	0	40	51	0.92	0.43	0.52	4	0	0.0	0	2.0	12	24Y	WNW	23	9	2	19	6.9	62
TUCSON	2584	926.9	1014.7	75	50	62.6	4.5	85	5+	37	29+	0	0	32	39	0.77	0.15	0.44	5	0	0.0	0	3.7	13	31	SW	25	7	5	18	6.7	68
WINSLOW	4895	853.7	1019.3	63	31	47.0	5.7	72	1	15	29	0	15	26	51	0.30	- 0.06	0.14	4	0	0.2	T	2.7	18	29	19	25	7	3	20	6.9	
YUMA	194	1007.8	1015.0	77	53	65.0	1.1	90	4	41	26	1	0	44	53	0.58	0.46	0.30	5	0	0.0	0	2.3	36	28	W	25	8	7	15	6.4	58
ARKANSAS																																
FORT SMITH	449	1001.7	1018.6	68	42	55.2	5.2	82	26	21	30	0	3	44	70	1.16	- 2.02	1.05	3	0	0.0	0	1.7	6	34	W	26	6	2	22	7.6	42
LITTLE ROCK	257	1009.5	1019.2	67	46	56.5	7.0	83	26+	24	30	0	2	47	73	1.54	- 2.58	1.09	5	0	0.0	0	0.8	20	40	NW	26	5	5	20	7.2	39
TEXARKANA	372	1005.4	1018.5	73	50	61.1	7.4	88	26	30	30	0	1	50	71	1.27	- 3.06	0.61	5	0	0.0	0	1.9	14				5	6	19	7.4	
CALIFORNIA																																
BAKERSFIELD	494	999.0	1016.8	66	49	57.3	1.4	85	1	36	28	0	0	45	68	1.05	0.56	0.58	5	0	0.0	0	1.0	8	24	14	17	6	7	17	6.8	
BISHOP	4108			61	32	46.3	0.5	77	1	20	29	0	18			1.90	1.37	0.70	8		T	0						5	12	13	6.5	
BLUE CANYON	5280			48	37	42.4	- 3.3	66	1	23	26	0	5			12.28	5.53	3.92	14		20.5	18			35	14	17	6	6	18	7.0	
BURBANK	724	989.8	1015.7	69	51	59.9	- 0.5	87	4	39	26	0	0	48	71	10.63	9.58	3.49	9	0	0.0	0	2.5	15	25	11	14	10	6	14	6.4	
EUREKA U	43			61	48	54.6	3.4	71	15	36	27	0	0			5.20	0.59	1.46	18		0.0	0			42	SW	17	4	4	22	7.8	45
FRESNO	328	1004.7	1016.7	65	45	54.7	0.9	82	1	33	29+	0	0	45	73	2.69	1.74	0.70	10	0	0.0	0	1.1	10	21	SE	22	7	8	15	6.6	56
LONG BEACH	34	1015.2	1016.6	69	53	60.7	- 0.5	82	4	41	26	0	0	51	76	6.05	5.02	2.03	9	0	0.0	0	1.3	18	23	28	25+	9	6	15	6.6	
LOS ANGELES	97	1012.5	1016.1	67	54	60.5	- 0.6	74	4	42	26	0	0	51	74	6.38	5.29	2.12	9	0	0.0	0	1.5	17	32Y	W	25	9	6	15	6.6	
LOS ANGELES U	270			70	55	62.0	- 0.7	82	4	42	26	0	0			9.68	8.60	3.51	8		0.0	0			16	SW	25	8	8	14	6.3	40
MT SHASTA R	3544			50	34	41.7	- 0.1	71	1	17	28	0	13			12.31	8.34	2.73	18		14.3	10										
OAKLAND	6	1015.6	1015.7	62	52	57.2	2.5	68	7+	42	28	0	0	51	81	4.29	2.56	1.07	13	2	0.0	0	3.0	15	30	14	13	4	5	21	7.3	
RED BLUFF	341	1002.7	1015.5	61	45	52.7	- 1.8	74	5+	31	28	0	1	45	79	5.33	3.04	1.25	14	2	0.0	0	2.9	17	49	S	17	4	9	17	7.6	40
SACRAMENTO	17	1015.2	1016.1	64	46	54.7	1.8	77	4	34	28+	0	0	47	80	2.93	1.48	0.93	11	0	0.0	0	2.5	17	29	SW	24+	5	6	19	7.1	62
SANDBERG R	4517			53	42	47.3	- 1.7	73	4+	28	26	0	4			9.80	8.88	2.97	9		T	T			41	17	17	9	3	18	6.7	
SAN DIEGO	13	1015.2	1016.3	67	54	60.9	- 0.9	75	4	45	27	0	0	54	79	5.82	4.92	1.80	10	0	0.0	0	0.6	26	28	S	22	8	9	13	6.3	55
SAN FRANCISCO	8	1015.9	1016.5	62	49	55.2	0.4	72	7	40	28+	0	0	46	74	5.40	3.83	0.98	12	2	0.0	0	2.2	19	46	SSW	17	4	8	18	7.4	
SAN FRANCISCO U	52			63	53	58.1	0.7	72	3	46	25	0	0			4.79	2.79	1.20	13		0.0	0			26	SW	24+					62
SANTA CATALINA	1568			63	54	58.3	- 2.2	79	4	47	26	0	0			7.49	6.38	2.51	10	0	0.0	0						5	9	16	6.9	
SANTA MARIA	236			67	46	56.3	0.2	76	5+	33	27	0	0			4.74	3.72	1.93	10		0.0	0						9	3	18	6.7	
STOCKTON	22	1015.9	1016.9	63	45	53.8	0.8	75	5	31	28	0	1	46	78	3.52	2.35	1.03	10	0	0.0	0	2.2	17	40	13	13	4	7	19	7.6	
COLORADO																																
ALAMOSA	7536			52	18	34.8	5.3	62	1	3	30+	0	30			0.05	- 0.24	0.05	1		0.3	T						11	10	9	4.9	
COLORADO SPRINGS	6145	810.7	1016.8	57	30	43.8	6.3	70	1	16	28	0	15	20	43	T	- 0.40	T	0	0	T	T	2.6	3	35	31	26	10	6	14	5.6	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station ⌀	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	F.	F.	F.		F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
COLORADO																																
DENVER	5283	835.8	1015.3	59	27	43.3	5.6	73	1	17	26	0	24	23	52	0.36	- 0.33	0.36	1	0	5.5	6	2.1	21	34	SW	23	10	10	10	5.6	80
GRAND JUNCTION	4855	853.7	1017.8	59	38	48.3	9.5	71	1	23	29+	0	5	31	58	0.82	0.24	0.30	5	0	2.8	2	3.4	11	44	W	25	10	5	15	6.3	50
PUEBLO	4684	855.4	1016.0	65	27	46.0	6.0	78	1	9	30	0	23	22	43	0.01	- 0.52	0.01	1	0	0.1	T	2.7	32	38	NW	27	11	10	9	5.3	81
CONNECTICUT																																
BRIDGEPORT	7	1017.3	1017.8	53	38	45.2	0.7	72	4	27	30+	0	5	37	73	1.62	- 2.40	0.69	10	1	T	0	7.5	28	43	32	4	8	9	13	6.1	
HARTFORD	169	1009.8	1016.5	48	31	39.6	- 1.7	69	4	20	25	0	18	28	65	2.21	- 1.63	1.09	13	1	T	T	3.8	29	35	NW	18	6	11	13	6.9	56
NEW HAVEN	6			50	35	42.7	- 0.7	69	4	23	25	0	13			1.96	- 2.09	0.77	12		T	T			35	NW	18	9	9	12	6.0	63
DELAWARE																																
WILMINGTON	78	1015.2	1018.5	54	36	45.0	- 0.4	72	4	22	30	0	11	35	69	0.94	- 2.59	0.27	9	0	0.0	0	3.8	28	33	30	17	9	11	10	5.9	
DIST.OF COLUMBIA																																
WASH NATL AP	14	1016.3	1018.5	59	40	49.5	1.8	75	4	26	30	0	5	35	61	0.37	- 2.47	0.20	7	0	0.0	0	3.1	28	40	W	17	11	11	8	5.6	48
FLORIDA																																
APALACHICOLA U	13			71	57	63.6	2.3	78	27+	40	30	0	0			3.42	0.84	1.50	8	3	0.0	0			24	E	12	10	10	10	5.3	56
DAYTONA BEACH	31	1018.0	1019.3	75	56	65.5	0.2	81	27	42	30	0	0	56	76	0.97	- 1.36	0.51	5	0	0.0	0	3.5	2	21	21	27+	7	15	8	5.6	
FORT MYERS	15	1018.0	1018.3	81	62	71.3	2.1	85	10	50	30	0	0	62	77	0.58	- 0.62	0.57	2	0	0.0	0	4.2	4	23	6	2	12	12	6	4.4	
JACKSONVILLE	24	1018.6	1019.7	73	54	63.5	1.8	81	27	36	30	0	0	54	77	1.92	0.23	0.91	5	1	0.0	0	3.6	1	30	NE	2	6	14	10	5.8	64
KEY WEST	4	1016.3	1016.9	81	72	76.6	2.5	87	13+	66	30	0	0	68	75	0.46	- 2.34	0.21	3	0	0.0	0	8.0	6	26	NE	2	18	6	6	4.0	80
LAKELAND U	214			77	60	68.5	1.6	85	11	45	30	0	0			0.56	- 1.03	0.28	6		0.0	0						13	12	5	4.1	79
MIAMI	7	1016.9	1017.3	81	67	74.2	1.8	85	22	59	30	0	0	64	74	0.96	- 1.87	0.41	5	0	0.0	0	4.3	6	28	6	2	5	18	7	5.6	
ORLANDO	108	1014.6	1018.9	78	61	69.5	3.6	83	11	45	30	0	0	58	71	1.06	- 0.51	0.52	5	1	0.0	0	3.8	2	23	23	22	11	12	7	4.7	
PENSACOLA	112	1015.6	1019.7	73	54	63.1	3.6	81	1	33	30	0	0	54	70	0.55	- 2.69	0.32	5		0.0	0	2.0	7	31	NW	27					54
TALLAHASSEE	55	1017.6	1019.8	75	52	63.3	4.1	83	1	33	30	0	0	51	70	2.54	0.10	1.18	6	2	0.0	0	2.5	3	21	33	27+	3	16	11	6.3	
TAMPA	19	1018.6	1018.8	78	57	67.0	0.2	82	7	37	30	0	0	57	75	0.88	- 0.58	0.42	4	0	0.0	0	3.3	4	22	31	22	11	13	6	4.9	71
WEST PALM BEACH	15	1016.9	1017.5	81	66	73.5	1.0	87	13	55	30	0	0	63	72	2.57	- 0.29	1.21	7	2	0.0	0	4.3	6	32	6	14	9	16	5	4.8	
GEORGIA																																
ATHENS	802	990.9	1020.3	66	43	54.1	2.6	76	9+	23	30	0	2	42	70	1.50	- 1.43	1.05	8	2	0.0	0	1.6	32	23	29	27	8	8	14	5.9	
ATLANTA	1010	983.1	1020.1	64	43	53.8	2.6	75	8	24	30	0	4	42	70	2.32	- 0.64	2.00	7	2	0.0	0	1.2	30	34	W	27	8	6	16	6.3	54
AUGUSTA	143	1014.6	1019.7	70	42	55.6	1.5	79	9+	26	30	0	6	44	73	1.84	- 0.34	1.35	6	1	0.0	0	1.4	29	28	30	22	8	9	13	6.0	
COLUMBUS	385			70	46	57.6	3.5	78	26+	27	30	0	2	47	73	2.13	- 0.46	1.14	9		0.0	0	0.6	2	23	30	27	6	7	17	6.7	
MACON	354	1007.1	1020.3	69	43	55.5	0.1	79	9	25	30	0	4	45	75	1.99	- 0.46	0.96	7	1	0.0	0	1.1	33	22	S	27+	6	9	15	6.7	55
ROME	637			65	39	52.2	3.0	78	8	20	30	0	9			2.13	- 1.29	1.05	8		0.0	0										
SAVANNAH	46	1018.0	1019.9	71	46	58.0	0.7	80	16	27	30	0	2	49	76	2.09	0.04	1.40	6	1	0.0	0	1.3	34	28	N	22	6	11	13	6.3	49
HAWAII																																
HILO	31	1013.9	1015.2	80	67	73.7	0.5	88	8	63	30+	0	0	67	83	19.18	5.81	3.75	27	2	0.0	0	1.6	21	28	14	8	0	7	23	8.5	16
HONOLULU	7	1014.6	1014.9	83	71	77.1	1.2	88	4	67	12	0	0	66	71	14.72	12.56	4.32	15	0	0.0	0	8.6	6	44	SE	13	6	9	15	6.7	57
KAHULUI	48	1012.2	1014.6	81	69	74.9	- 0.1	87	3	64	18+	0	0			9.27	7.75	5.48	15	0	0.0	0	9.9	6	29	NE	25	1	14	15	7.3	50
LIHUE	103	1010.5	1015.7	78	71	74.5	0.0	82	4	66	30+	0	0	68	83	12.10	7.57	3.11	19	2	0.0	0	9.7	7	26	NE	21	0	8	22	8.5	25
IDAHO																																
BOISE	2838	915.7	1016.5	53	36	44.3	5.7	71	4	21	30	0	9	32	68	1.51	0.31	0.58	12	1	0.7	1	5.0	12	31	SW	24	3	6	21	8.0	44
IDAHO FALLS 42NW R	4790			48	21	34.9	6.8	66	2+	1	30	0	28			1.03	0.70	0.25	5				1.7	23	25	SSW	26					
IDAHO FALLS 46W R	4932			48	24	36.4	6.6	67	1	2	30	0	25			1.25	0.84	0.44	8		2.0	1	4.4	23	30	SW	23+					
LEWISTON	1413			52	37	44.3	4.5	64	2	26	30	0	5			1.10	- 0.13	0.29	15		T	0						1	3	26	9.3	
POCATELLO	4454	863.2	1017.5	52	30	40.6	5.6	71	1	9	30	0	18	27	66	1.21	0.22	0.46	11	1	2.0	1	6.6	21	36	SW	24	4	10	16	7.2	43
ILLINOIS																																
CAIRO U	314			62	45	53.3	5.4	77	16	23	30	0	2			1.67	- 2.20	1.10	7		0.0	0			30	SW	15	8	6	16	6.6	48
CHICAGO O HARE	658	992.2	1017.1	50	31	40.3	2.2	73	3	16	30	0	20	32	73	1.47	- 0.70	0.89	10	1	0.2	T	4.4	25	37	27	26	9	5	16	6.6	
CHICAGO MIDWAY	607	994.6		50	34	42.0	2.1	74	3	18	28	0	13	31	67	1.10	- 1.10	0.74	7	2	T	T	5.6	24	37	W	26	8	6	16	6.8	34
MOLINE	582	995.3	1017.4	50	31	40.7	1.5	74	2	15	29	0	19	32	74	1.93	- 0.02	1.02	7	0	0.3	T	4.6	25	49	W	27	9	5	16	6.5	42
PEORIA	652	993.9	1018.3	50	32	41.2	1.5	73	3	13	29	0	16	34	78	1.22	- 0.92	0.67	6	1	0.1	T	3.0	24	45	W	26	9	4	17	6.3	52
ROCKFORD	724	989.2	1016.7	48	31	39.6	2.5	70	3	16	30+	0	18	32	74	1.83	- 0.54	0.92	6	1	0.1	T	4.2	25	31	27	26	8	5	17	6.6	
SPRINGFIELD	588	995.9	1018.3	55	36	45.6	3.8	73	7+	15	30	0	12	36	70	0.89	- 1.47	0.36	7	2	T	T	3.4	23	40	W	26	7	7	16	6.3	52

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90° F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
INDIANA																																
EVANSVILLE	381	1005.1	1019.4	60	36	48.1	3.3	78	26	19	30	0	12	36	65	0.91	-2.25	0.37	5	2	T	T	2.2	25	35	W	26	5	10	15	6.6	51
FORT WAYNE	791	987.1	1017.8	51	34	42.3	3.4	72	3	19	29	0	16	34	75	2.25	-0.30	0.92	7	4	0.2	T	5.8	25	42	W	26+	5	4	21	7.5	44
INDIANAPOLIS	793	989.2	1018.7	54	35	44.7	3.8	74	3	20	30	0	15	34	70	1.41	-1.68	0.71	6	3	T	T	3.5	24	50	SW	26	6	10	14	6.7	45
SOUTH BEND	773	988.8	1017.2	49	33	40.6	1.5	71	3	18	28	0	16	33	76	1.65	-1.00	0.73	9	2	7.3	4	6.3	24	33	26	27	5	3	22	7.6	
IOWA																																
BURLINGTON	694			53	33	43.2	3.8	75	3+	15	29	0	15	34	72	1.24	-0.64		6	1	T		3.1	27	23	30	16	8	8	14	6.1	
DES MOINES	938	982.4	1017.8	51	31	41.0	3.9	76	2	12	29	0	18	32	72	1.79	0.03	1.09	6	3	T	T	2.6	26	38	NW	16	9	7	14	6.0	47
DUBUQUE	1065			46	29	37.4	2.6	67	3+	14	29	0	18			3.18	0.59	1.58	6		0.1	T						8	6	16	6.7	
SIOUX CITY	1095	977.0	1017.6	50	27	38.2	2.1	76	2	3	30	0	20	28	70	0.27	-0.89	0.13	4	1	1.1	1	2.4	28	38	NW	26	10	6	14	5.8	63
WATERLOO	868	984.4	1016.8	49	27	38.3	3.6	72	2	14	29+	0	20	31	75	3.02	1.19	2.16	5	0	T	T	3.3	26	33	30	16	6	9	15	6.6	
KANSAS																																
CONCORDIA	1470	963.8	1017.4	59	32	45.4	3.9	79	2	14	30	0	18	33	67	0.03	-0.95	0.03	2	0	T	T	2.8	20	28	NW	16	8	8	14	5.9	64
DODGE CITY	2582	925.5	1017.2	61	37	49.1	6.3	73	2	25	30+	0	7	35	66	T	-0.64	T	0	0	0.0	0	3.4	20	31	SW	2	10	4	16	6.2	61
GOODLAND	3645	888.6	1017.1	58	29	43.2	5.2	73	15	19	30	0	21	28	62	0.01	-0.48	0.01	1	0	T	T	3.6	22	31	30	26	7	10	13	5.9	
TOPEKA	876	985.8	1018.1	58	33	45.7	3.1	75	2	9	30	0	17	35	69	0.20	-1.30	0.18	4	2	T	T	1.6	24	27	NW	26	11	5	14	5.9	62
WICHITA	1321	969.5	1017.8	62	39	50.5	6.1	75	2	18	30	0	7	39	68	0.11	-1.38	0.11	1	1	0.0	0	1.7	19	30	S	25+	8	3	19	6.8	43
KENTUCKY																																
COVINGTON	869	986.8	1019.0	53	35	44.2	1.5	70	6	20	30+	0	12	32	64	1.26	-1.75	0.74	7	4	T	0	4.1	24	35	27	26	7	5	18	6.9	
LEXINGTON	966	983.7	1019.8	56	36	46.2	1.5	72	7+	16	30	0	12	36	70	1.02	-2.27	0.51	6	2	T	0	4.2	19	28	18	26	5	10	15	6.6	
LOUISVILLE	474	1001.4	1019.3	57	38	47.3	2.6	74	7	20	30	0	9	35	63	1.33	-1.87	0.58	7	3	0.0	0	2.8	23	38	W	26	6	8	16	6.8	43
LOUISIANA																																
ALEXANDRIA	92	1014.9	1019.0	73	52	62.4	5.8	83	21	30	30	0	1	55	81	3.91	-0.87	2.83	7	1	0.0	0	1.0	10	22	24	21	6	12	12	6.5	
BATON ROUGE	64	1016.3	1019.0	75	54	64.3	5.4	81	25+	32	30	0	1	55	75	2.40	-1.69	2.22	5	0	0.0	0	1.1	8	23	23	21	2	16	12	7.0	
LAKE CHARLES	14	1017.3	1018.5	77	57	66.8	7.2	83	25+	36	30	0	0	59	80	1.22	-3.00	0.63	6	0	0.0	0	2.2	11	21	19	26	3	13	14	7.0	
NEW ORLEANS	3	1018.0	1018.7	75	54	64.5	4.5	82	26+	32	30	0	1	57	78	1.49	-1.85	0.95	6	0	0.0	0	2.6	7	22	21	21	2	17	11	6.6	
SHREVEPORT	252	1009.1	1018.2	73	54	63.2	7.5	85	26	33	30	0	0	53	75	1.20	-3.01	1.05	4	0	0.0	0	2.9	16	35	31	26	3	9	18	7.6	46
MAINE																																
CARIBOU	624			33	17	25.1	-5.1	50	4	3	27+	0	30			4.75	1.71	0.97	19		27.0	17						1	4	25	8.4	
PORTLAND	61	1012.9	1015.4	45	28	36.6	-1.5	68	4	15	20+	0	21	28	72	3.96	-0.21	1.29	13	1	0.6	T	3.4	28	42	NW	4	6	10	14	6.7	48
MARYLAND																																
BALTIMORE	148	1012.9	1018.5	56	35	45.6	0.1	74	7	20	30	0	9	32	61	0.68	-2.45	0.26	9	0	0.0	0	3.9	28	41	W	17	10	11	9	5.4	63
MASSACHUSETTS																																
BLUE HILL OBS R	629			47	31	38.9	-3.1	67	4	22	30+	0	18			2.18	-2.35	0.61	12		T	T			59	WNW	4					57
BOSTON	15	1014.9	1016.1	49	35	42.1	-2.8	68	4	26	2	0	10	31	69	2.08	-1.85	0.62	12	1	T	T	6.0	28	43	NW	4	9	11	10	5.6	58
NANTUCKET	43	1015.9	1016.2	49	35	42.0	-3.9	60	4	20	30	0	11	34	75	2.63	-1.42	1.92	11	1	0.2	0	4.6	28	34	SW	17+	5	11	14	6.7	41
PITTSFIELD	1170			43	27	34.9	-2.4	59	6+	16	10	0	23			2.55	-1.36	0.85	16		2.6	1										
WORCESTER	986	978.3	1016.1	45	29	36.7	-2.5	63	4	20	30+	0	24	27	70	2.90	-1.36	1.05	12	1	0.6	T	6.2	28	47	29	4	8	11	11	6.2	
MICHIGAN																																
ALPENA	689			42	26	34.3	-0.3	71	3	16	10	0	25			2.70	0.33	1.01	15		5.2	2			33	SE	26	1	6	23	8.7	24
DETROIT	619	993.2	1016.5	51	35	42.7	2.3	73	3	24	29+	0	11	32	69	1.20	-1.01	0.43	8	1	0.2	T	6.4	26	45	W	16	5	5	20	7.8	35
DETROIT M WAYNE CO	633	992.2	1016.6	50	31	40.5	0.1	71	3	19	29	0	17	31	72	1.49	-0.78	0.68	7	1	0.4	T	6.0	24				5	6	19	7.3	
DETROIT WILLOW RUN	711	988.2	1017.0	49	30	39.7	-0.3	71	3	20	29+	0	19	29	68	1.00	-1.25	0.55	7	2	0.3	T	7.1	24	40	24	27	5	6	19	7.3	
FLINT	770	987.8	1016.1	49	33	40.9	4.0	72	3	22	29	0	17	31	70	2.35	0.17	1.04	14	6	1.9	1	6.3	24	38	25	27	2	5	23	8.3	
GRAND RAPIDS	784	986.5	1016.1	48	32	40.0	2.7	70	3	21	28	0	18	33	78	2.35	-0.14	1.18	11	3	9.1	6	5.9	24	50	SW	26+	4	4	22	8.2	36
HOUGHTON LAKE	1150	972.2	1015.2	43	28	35.4		65	3	18	28	0	23	29	79	2.41		1.16	15	2	6.5	3	4.9	25	37	26	27	3	4	23	8.4	
LANSING	841	984.1	1016.4	48	31	39.4	1.5	72	3	20	18+	0	19	34	84	1.85	-0.36	1.20	9	3	1.5	2	6.3	25	42	SW	27	4	3	23	8.0	27
MARQUETTE U	677			40	28	33.9	0.1	70	3	18	28	0	23			3.51	0.23	0.75	16		12.6	4			34	NW	3	1	4	25	8.9	29
MUSKEGON	627	992.6	1016.1	46	33	39.8	0.2	62	3	23	28+	0	18	34	79	1.78	-1.16	1.08	13	1	3.2	1	4.9	26	39	32	16	4	2	24	8.2	
SAULT STE MARIE	721	986.5	1013.8	38	26	32.3	-1.0	61	3	15	17	0	25	28	84	5.08	1.75	1.14	19	1	27.7	8	1.4	27	45	31	3	0	5	25	9.2	30

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MINNESOTA																																
DULUTH	1428	962.4	1015.4	35	20	27.8	0.5	63	2	8	30+	0	27	22	78	3.33	1.55	1.47	14	0	25.9	23	4.0	28	45	W	12	2	7	21	8.2	38
INTERNATIONAL FALLS	1179	971.2	1015.7	34	16	24.9	1.1	63	2	- 1	29	0	28	18	76	2.63	1.17	1.03	13	0	29.7	26	2.1	28	32	30	3	2	3	25	8.7	
MINNEAPOLIS	834	985.1	1016.5	42	24	33.1	1.9	68	2	8	30	0	24	27	79	1.98	0.58	0.90	7	0	1.6	1	2.5	30	38	NW	16	4	7	19	7.3	43
ROCHESTER	1297	967.8	1016.7	42	25	33.7	2.2	68	2	10	30+	0	23	26	77	1.31	- 0.26	0.77	6	1	1.1	T	4.9	26	41	31	16	5	8	17	7.0	
ST CLOUD	1034	977.3	1016.3	39	20	29.6	0.1	70	2	1	30	0	27		74	1.55	0.22	0.73	7		4.5	4						5	6	19	7.4	
MISSISSIPPI																																
JACKSON	310	1007.5	1019.5	73	48	60.1	4.6	84	26	25	30	0	3	51	78	1.79	- 2.11	0.91	8	2	0.0	0	2.2	14	37	NW	27	5	10	15	6.6	54
MERIDIAN	290	1009.1	1020.2	72	45	58.4	4.3	84	26	22	30	0	4	49	78	1.14	- 1.96	0.36	7	2	0.0	0	0.6	16	23	32	27	5	9	16	7.0	
VICKSBURG U	234			71	55	62.9	6.7	81	26	32	30	0	1			1.94	- 2.49	1.40	8		0.0	0			34	SE	7	6	11	13	6.4	42
MISSOURI																																
COLUMBIA	778	989.2	1017.8	59	38	48.3	5.0	77	26	15	30	0	9	37	66	0.59	- 1.68	0.36	6	1	0.0	0	2.3	21	34	W	26	10	5	15	5.9	66
KANSAS CITY	742	990.5	1017.7	59	37	48.2	3.6	77	2	17	30	0	9	36	65	0.24	- 1.56	0.21	4	2	T	0	1.4	22	26	W	26	10	5	15	5.8	65
SAINT JOSEPH	811			60	34	46.9	5.5	78	3+	10	30	0	15	33	65	0.65	- 1.03	0.41	4	2	T	0	1.4	25	26	32	16	12	6	12	5.1	
ST LOUIS	535	998.0	1018.8	59	38	48.5	4.4	76	26+	19	29	0	10	37	65	0.78	- 1.79	0.43	4	2	T	0	2.7	23	35	NW	26	9	5	16	6.2	51
SPRINGFIELD	1268	972.6	1018.5	62	37	49.5	4.5	76	26	10	30	0	8	39	71	0.43	- 2.33	0.25	8	2	0.0	0	3.6	19	34	W	26	8	7	15	6.3	41
MONTANA																																
BILLINGS	3567	889.3	1015.4	48	28	38.0	2.9	72	1	12	26	0	23	25	66	0.66	0.03	0.35	6	0	6.3	4	4.6	26	37	W	15	2	9	19	7.7	51
GLASGOW	2284			37	16	26.8	- 1.4	75	2	-18	27	0	27			0.12	- 0.35	0.06	5		1.0	1						6	3	21	7.5	
GREAT FALLS	3662	886.2	1016.6	45	25	34.9	0.6	70	2+	- 7	26	0	19	22	64	1.13	0.38	0.49	6	1	9.7	5	6.0	23	34	W	4+	2	5	23	8.1	45
HAVRE	2582			36	14	24.8	- 4.7	68	2	-17	26	0	28			0.64	0.14	0.21	6		9.5	5			41	NW	2	4	7	19	7.6	48
HELENA	3828	879.4	1017.4	46	23	34.7	3.1	67	2	3	25	0	30	24	70	0.62	0.05	0.21	10	1	2.1	2	3.5	26	28	W	21+	1	13	16	7.7	38
KALISPELL	2965	909.6	1016.3	42	27	34.3	3.3	56	1	12	29	0	23	29	84	0.72	- 0.71	0.28	14	0	3.9	2	0.7	18	29	1	23	0	0	30	9.7	
MILES CITY	2629	921.4	1016.7	44	22	32.7	0.1	75	1	- 5	27	0	26	21	67	0.39	- 0.04		5	0	3.0		1.2	30								
MISSOULA	3190	903.5	1017.4	44	29	36.4	5.9	65	2	13	30	0	22	30	80	1.05	0.15	0.34	12	0	3.2	1	0.3	31	23	E	24+	0	3	27	9.4	27
NEBRASKA																																
GRAND ISLAND	1841	950.2	1017.8	55	28	41.3	4.1	75	15	12	30	0	21	29	68	0.50	- 0.26	0.45	2	1	0.4	T	2.9	25	30	32	16	10	6	14	5.9	
LINCOLN U	1150			54	32	42.9	2.1	78	2	11	30	0	17			0.84	- 0.42	0.66	4		T	T			29	NW	12	8	10	12	5.8	59
NORFOLK	1544			50	25	37.4	1.5	74	2	2	30	0	23			0.13	- 0.78	0.07	4		0.3	T						9	7	14	6.0	
NORTH PLATTE	2775	917.4	1016.8	56	26	40.9	5.4	77	2	15	30+	0	27	28	70	0.05	- 0.45	0.03	2	0	0.5	1	1.0	29	33	N	3	10	5	15	6.1	58
OMAHA	978	981.7	1017.8	55	30	42.4	3.5	78	2	9	30	0	20	33	72	1.24	- 0.02	1.10	5	2	0.1	T	1.5	28	34	NW	12	8	10	12	6.0	59
SCOTTSBLUFF	3957	878.8	1016.6	56	27	41.5	5.7	75	2	17	30	0	26	26	61	0.09	- 0.37	0.08	2	0	1.0	1	2.5	32	39	31	15	5	10	15	6.5	
VALENTINE	2587			50	22	36.1	2.5	82	2	4	29	0	26			0.32	- 0.17	0.22	4		2.2	2			42	SW	14	10	7	13	5.8	68
NEVADA																																
ELKO	5050	845.2	1018.3	52	24	38.3	4.1	74	1	0	29+	0	21	25	66	1.96	1.08	1.13	11	0	9.4	6	1.4	19	23	26	24+	7	5	18	6.9	
ELY	6253	808.7	1017.5	52	24	37.6	3.9	68	1	- 1	28	0	22	19	54	0.93	0.34	0.53	9	0	5.5	6	8.4	20	36	SW	24+	5	5	20	7.3	62
LAS VEGAS	2162	939.4	1016.4	66	45	55.9	3.4	81	1	32	29	0	1	32	48	2.22	1.91	1.09	6	0	0.0	0	2.9	23	31	SW	25	7	10	13	6.3	60
RENO	4404	865.2	1016.2	56	27	41.6	3.3	76	1	15	26	0	21	28	63	1.62	1.05	0.50	8	0	2.2	2	1.4	19	30	SE	18+	5	9	16	7.0	84
WINNEMUCCA	4299	867.3	1017.0	55	27	40.9	5.1	75	1	13	30	0	20	25	61	1.20	0.40	0.43	10	0	0.5	T	2.3	17	37	W	24	6	7	17	7.0	43
NEW HAMPSHIRE																																
CONCORD	342	1003.1	1016.1	44	25	34.8	- 2.8	65	4	12	20	0	27	26	72	2.45	- 1.27	1.17	7	1	1.0	1	3.1	29	38	W	4	7	12	11	6.5	51
MT WASHINGTON OBS	6262			23	8	15.1	- 5.2	36	4	- 6	2	0	30			6.90	0.29	1.31	20	1	37.8	12			115Y	W	1	0	5	25	8.8	20
NEW JERSEY																																
ATLANTIC CITY	64	1016.3	1018.6	55	35	44.9	- 1.8	76	4	19	30	0	16	36	72	0.79	- 2.87	0.32	9	0	0.0	0	5.5	29	35	31	17	11	9	10	5.6	55
ATLANTIC CITY U	11			54	40	47.2	- 1.1	73	4	25	30	0	4			0.82	- 2.97	0.41	8						47	WNW	17					
NEWARK	11	1016.6	1017.7	52	37	44.4	- 1.5	70	4	26	30	0	8	31	62	1.48	- 1.89	0.45	11	0	0.0	0	5.9	27	37	28	18	10	7	13	6.0	
TRENTON U	56			52	38	45.3	- 0.5	70	4	27	30	0	5			1.28	- 1.88	0.43	11		0.0	0			38	NW	17	9	9	12	5.8	55
NEW MEXICO																																
ALBUQUERQUE	5310	840.2	1018.2	61	36	48.4	4.8	72	15	24	29+	0	8	26	45	0.33	- 0.05	0.29	3	0	T	0	0.3	31	35	NW	23	12	4	14	5.5	69
CLAYTON	4969			62	34	48.0	6.3	79	15	16	29	0	12			T	- 0.33	T	0		0.0	0						9	6	15	6.1	
RATON	6379			61	26	43.6	6.1	70	5	9	29	0	27			T	- 0.39	T	0		0.0	0						11	11	8	4.9	
ROSWELL	3617			70	35	52.5	6.6	85	25	16	30	0	9			0.08	- 0.26	0.06	4	3	0.0	0			33	NW	26	7	9	14	6.1	60
SILVER CITY	5373			65	39	52.0	4.5	73	7	23	29	0	5			0.21	- 0.22	0.21	1		0.0	0						10	11	9	5.2	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days		Average dew point		Total	Departure from normal	Greatest in 24 hours	No. of days		Snow, Sleet		Resultant speed	Resultant direction	Fastest mile			Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
												Max. 90° F. or above	Min. 32° F. or below						01 inch or more	With thunderstorms	Total	Maximum depth on ground			Speed	Direction	Date					
	Ft.	Mb.	Mb.	F.	F.	°F.	F.	F.		F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW YORK																																
ALBANY	275	1005.8	1016.7	46	29	37.6	- 1.5	62	4	16	10	0	19	28	69	1.89	- 0.81	0.57	12	1	0.5	1	4.1	26	40	NW	18	0	11	19	8.2	32
BINGHAMTON	1590	956.3	1016.4	43	31	36.9	- 1.1	61	6	19	2	0	18	30	76	2.30	- 0.21	0.55	17	3	4.5	3	5.3	25	37	NW	18	0	7	23	8.7	34
BUFFALO	705	989.8	1015.8	47	33	40.0	0.9	64	3	21	29	0	14	33	79	4.69	1.09	1.60	17	5	12.2	8	5.9	24	38	W	27+	1	4	25	8.9	23
NEW YORK U	132	1014.9	1018.0	53	40	46.8	- 0.2	71	4	31	30+	0	3	34	65	1.46	- 1.93	0.56	12	0	0.0	0	4.4	26	33	NW	18	12	9	9	5.4	51
J.F. KENNEDY	15	1016.9	1017.6	53	38	45.4	- 0.8	73	4	29	30	0	8	34	68	1.36	- 2.15	0.65	11	1	T	0	5.1	29	40	32	18	11	8	11	5.9	
NEW YORK LA GUARDIA	11	1015.9	1017.7	51	41	45.9	- 1.5	67	7	29	2	0	1	31	59	1.29	- 2.30	0.46	13	0	T	0	5.3	29	34	NW	18+	9	7	14	6.2	
ROCHESTER	547	995.9	1016.7	48	32	39.8	- 0.3	68	3	18	29	0	18	31	72	3.40	0.89	0.98	15	2	8.0	5	5.7	24	42	SW	17	2	4	24	8.7	21
SYRACUSE	410	1000.7	1015.8	47	31	38.7	- 1.5	65	3	17	2	0	17	31	77	2.97	0.07	1.01	20	2	2.7	2	4.8	26	37	W	17	1	6	23	8.6	28
NORTH CAROLINA																																
ASHEVILLE	2140	943.1	1020.2	60	33	46.4	1.8	70	8+	21	30	0	13	36	74	1.30	- 1.47	0.54	8	1	T	0	2.6	34	33	35	18+	10	8	12	5.4	62
CAPE HATTERAS R	7	1018.6	1019.1	64	48	56.0	- 0.2	75	8	34	21+	0	0	47	72	1.46	- 2.63	0.65	5	1	0.0	0	3.6	34	31	SW	27+	7	10	13	6.1	55
CHARLOTTE	735	991.9	1019.6	62	40	51.4	1.0	74	8	27	30	0	4	39	67	3.19	0.66	1.49	8	2	0.0	0	1.5	33	22	SW	16	9	11	10	5.7	64
GREENSBORO	897	987.8	1020.0	62	38	50.1	2.2	75	8+	23	30	0	6	37	66	1.29	- 1.39	0.43	7	0	0.0	0	1.9	28	29	NW	17	9	11	10	5.8	58
RALEIGH	434	1003.7	1019.6	63	39	50.9	0.9	76	8+	22	30	0	6	38	64	1.23	- 1.54	0.74	5	1	0.0	0	1.6	28	26	31	17	10	10	10	5.3	63
WILMINGTON	28	1018.3	1019.7	69	46	57.5	2.1	77	16+	32	30	0	1	46	69	1.12	- 1.97	0.57	5	0	0.0	0	1.9	35	26	NW	17	10	12	8	5.5	56
NORTH DAKOTA																																
BISMARCK	1647	955.6	1017.1	42	18	30.1	1.2	74	2	0	29	0	30	18	65	0.18	- 0.41	0.09	4	0	0.4	T	2.8	31	43	NW	15	5	12	13	6.6	49
FARGO	896	983.4	1017.5	37	16	26.0	- 2.1	70	2	- 1	29	0	29	19	75	0.79	- 0.05	0.52	7	0	6.1	6	2.3	31	39	N	16	3	6	21	7.7	42
WILLISTON	1899			37	16	26.7	- 0.9	69	2	- 5	27	0	29			0.21	- 0.37	0.09	4		2.2	1			32	NW	15	6	9	15	7.0	43
OHIO																																
AKRON	1208	972.9	1018.1	51	34	42.3	1.5	70	3	19	29	0	16	33	73	2.41	0.16	1.17	13	3	0.9	1	6.0	24	29	25	27	4	5	21	7.8	
CINCINNATI OBS	761			55	38	46.5	1.9	74	6	22	30+	0	9			1.85	- 1.10	0.66	7		T	0			33	SW	26					53
CLEVELAND	777	987.8	1017.3	51	34	42.5	2.1	73	3	22	30+	0	15	34	74	1.89	- 0.72	0.84	12	2	1.2	1	7.2	23	38	SW	27	4	6	20	7.8	30
COLUMBUS	812	988.2	1018.8	53	34	43.3	2.1	72	3	19	29	0	13	34	71	1.19	- 1.31	0.51	10	4	0.2	T	4.0	24	56	W	27	5	7	18	7.2	48
DAYTON	1002	982.1	1018.9	51	33	42.3	0.5	71	6+	18	29	0	15	34	74	1.20	- 1.47	0.39	8	4	T	T	4.9	22	37	SW	27	6	6	18	7.2	47
MANSFIELD	1295			49	32	40.6	1.2	68	3	17	30	0	17			2.47	- 0.22	0.74	9	6	T	T						4	5	21	7.5	
TOLEDO	676	991.9	1017.7	49	30	39.5	0.9	72	3	18	29	0	19	30	71	1.75	- 0.29	0.75	10	3	0.1	T	6.4	24	38	SW	12	4	8	18	7.2	45
YOUNGSTOWN	1178	974.3	1017.8	50	33	41.7	2.4	71	3	21	29	0	17	34	75	2.65	- 0.16	0.93	12	2	3.1	2	6.0	24	30	35	8	4	3	23	8.2	
OKLAHOMA																																
OKLAHOMA CITY	1280	971.2	1017.8	67	45	56.3	7.9	84	25	27	30	0	3	44	67	0.06	- 1.50	0.04	2	0	0.0	0	1.5	17	40	W	26	7	5	18	7.0	54
TULSA	650	993.6	1018.1	69	43	55.7	8.1	84	25	18	30	0	4	42	65	0.03	- 2.25	0.02	2	0	0.0	0	2.7	18	36	NW	26	6	8	16	6.5	62
OREGON																																
ASTORIA	8	1010.5	1011.4	55	43	48.8	2.5	62	17	28	25	0	3	46	89	11.82	0.62	2.06	27	0	0.0	0	4.3	13	35	18	18	1	2	27	9.2	
BURNS U	4151	871.3	1016.1	49	26	37.6	1.5	69	1	5	29	0	26	29	74	1.75	0.59	0.60	13		4.2	2	0.5	26				2	10	18	7.8	
EUGENE	359	999.7	1013.1	55	44	49.4	3.9	63	18+	31	29+	0	2	45	90	7.43	1.81	1.84	21	0	0.0	0	4.2	17	25	18	18	1	3	26	8.9	
MEACHAM	4050			44	34	38.8	4.4	64	1	24	28+	0	11			2.42	- 1.73	0.55	16		7.2	6						1	3	26	9.0	
MEDFORD	1298	966.5	1014.6	56	38	46.6	4.2	70	3	25	29+	0	5	40	81	2.56	- 0.04	0.65	15	0	T	T	0.7	16	31	14	13	1	4	25	8.6	
PENDLETON	1482	960.7	1015.0	51	38	44.7	3.4	74	1	26	29	0	4	36	77	1.95	0.55	0.38	15	0	T	0	1.6	23	26	26	20	1	4	25	9.0	
PORTLAND	21	1011.5	1012.8	56	44	49.7	4.6	63	6+	32	29+	0	3	44	81	5.64	0.31	1.20	18	0	0.0	0	6.1	14	38	S	18	2	0	28	9.1	25
SALEM	196	1005.4	1012.9	55	41	47.9	2.7	62	5+	26	29	0	3	44	88	7.00	1.29	1.59	21	1	0.0	0	4.8	17	35	18	18	1	3	26	8.8	
SEXTON SUMMIT P	3836	880.8	1014.0	46	36	41.2	- 1.6	63	1	27	27+	0	6			4.70	0.32	1.23	18		7.5	4			39	17	18+	4	2	24	8.4	
PACIFIC AREA																																
CANTON ISLAND	8			89	76	82.5	- 1.1	92	23	72	15+	13	0			16.85	15.24	4.93	22		0.0	0						0	3	27	9.3	
ENIWETOK	13	1009.1	1009.9	87	77	82.3	- 0.3	89	30+	74	22+	0	0	74	75	3.85	- 2.45	1.40	18		0.0	0	14.7	5								
TAGUAC GUAM R	361			85	73	78.7	- 0.6	87	4+	68	15	0	0			6.97	- 3.32	1.96	24		0.0	0			25	E	20+					
JOHNSTON	7	1011.2	1011.8	83	76	79.8	0.2	85	21+	70	27	0	0	71	75	1.65	- 0.41	0.44	11	0	0.0	0	10.9	9	33	E	30	3	14	13	6.9	41
KOROR R	94	1006.4	1017.0	88	76	82.3	1.1	89	28+	74	30+	0	0	76	84	6.16	- 6.77	1.55	21	3	0.0	0	2.4	6	23	NE	29	1	4	25	8.9	51
KWAJALEIN	8	1008.1	1008.9	85	76	80.9	- 0.4	88	7	71	9	0	0	75	83	9.17	- 2.96	1.83	23	0	0.0	0	9.7	6	44	3	9	0	2	28	9.3	
MAJURO	10	1008.8	1009.2	86	76	81.0	0.5	88	8	73	10+	0	0	76	84	12.12	- 3.80	3.37	28	5	0.0	0	4.6	8	27	NE	9	2	7	21	8.4	51
MARCUS ISLAND	20			83	74	78.6	- 0.8	86	11	71	20+	0	0			1.61	- 1.64	0.44	15		0.0	0			34	E	20	8	19	3	5.0	82
PONAPE R	123	1004.1	1009.4	86	74	80.0	0.1	88	11+	71	28	0	0	75	86	15.50	- 1.35	5.00	25	2	0.0	0	3.3	6	21	SE	24	0	2	28	9.3	30
TRUK MOEN ISLAND	5	1009.1	1009.5	86	76	80.9	0.1	88	15+	73	21	0	0	75	82	5.54	- 6.82	0.93	22	4	0.0	0	5.6	6	30	NE	10	0	6	24	8.8	54
WAKE	11	1014.2	1014.4	82	74	78.3	- 2.1	86	5+	67	27	0	0	67	68	1.92	- 1.16	1.49	5	0	0.0	0	15.8	4	37	4	30+	11	10	9	5.6	
YAP R	55			86	76	81.0	- 0.5	89	1	74	30+	0	0			12.02	0.87	2.55	24	2	0.0	0	6.3	6	24	NE	1	0	7	23	9.0	48

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 °F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	F.	°F.	F.	°F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PENNSYLVANIA																																
ALLENTOWN	376	1003.7	1018.0	50	32	41.3	- 0.6	67	4	21	30	0	18	32	71	1.66	- 1.67	0.50	9	1	T	0	4.7	28	36	30	18+	7	8	15	6.3	
ERIE	732	989.8	1017.0	50	35	42.4	1.2	72	3	22	29+	0	9	34	74	4.27	0.91	1.30	15	5	18.4	14	7.1	24	38	27	27	2	2	26	8.7	
HARRISBURG	338	1005.4	1018.3	51	34	42.2	- 1.2	68	4	22	15	0	15	30	65	1.63	- 1.32	0.53	10	1	T	0	3.8	28	37	NW	18	4	13	13	6.7	43
PHILADELPHIA	5	1017.3	1018.4	53	36	44.2	- 0.1	71	4	21	25	0	11	32	65	1.05	- 2.35	0.36	9	1	0.0	0	3.8	28	35	W	17	8	9	13	6.1	48
PITTSBURGH	1137	973.2	1018.2	50	33	41.3	0.5	68	3	21	29	0	14	32	70	2.35	0.11	0.71	10	3	0.2	T	6.2	25	38	25	27	3	7	20	8.0	37
READING U	266			52	38	44.9	- 0.2	70	4	28	30+	0	5			1.89	- 1.51	0.59	12		T	T			51	W	18	5	10	15	6.3	47
SCRANTON	930	982.7	1017.8	48	33	40.4	0.8	63	7	22	10	0	14	31	71	1.43	- 1.51	0.39	13	1	0.5	T	4.5	25	33	SW	27	3	7	20	7.8	35
WILLIAMSPORT	527	998.3	1017.9	50	33	41.4	0.3	63	4+	21	2	0	14	31	69	1.69	- 1.76	0.50	12	4	T	T	2.7	27	29	28	17	2	10	18	7.7	
RHODE ISLAND																																
BLOCK ISLAND	110			49	37	42.9	- 2.3	63	4	27	25	0	7			1.27	- 2.44	0.50	11		T	0						7	9	14	6.2	
PROVIDENCE	51	1014.2	1016.6	50	32	41.1	- 1.9	71	4	22	20	0	17	30	65	2.08	- 2.03	0.84	12	1	T	0	4.9	28	30	29	4	10	9	11	5.7	56
SOUTH CAROLINA																																
CHARLESTON	41	1018.0	1019.6	69	46	57.6	1.7	79	16	29	30+	0	2	48	74	0.87	- 1.22	0.46	5	0	0.0	0	2.0	36	36Y	SW	27+	6	9	15	6.5	46
CHARLESTON U	9			68	53	60.4	1.8	76	17+	36	30	0	0			0.82	- 1.10	0.34	5		0.0	0			29	W	17					
COLUMBIA	217	1011.5	1019.7	68	41	54.7	1.0	79	9	28	30	0	5	43	71	1.77	- 0.59	1.16	7	2	0.0	0	1.6	29	22	29	17	10	8	12	5.7	56
GNVLE-SPARTANBURG	957	985.1	1020.1	63	41	52.3	0.6	75	9+	24	30	0	2	38	63	2.82	- 0.02	1.71	7	2	0.0	0	1.2	1	28	SW	27	9	11	10	5.7	53
SOUTH DAKOTA																																
ABERDEEN	1296	968.8	1017.2	43	15	29.2	- 1.1	72	2	- 9	30	0	30	18	65	0.65	- 0.09	0.57	5	0	5.8	6	1.9	31	30	17	4	11	9	10	5.5	
HURON	1282	969.2	1017.1	45	20	32.4	1.2	74	2	1	29	0	28	23	72	0.45	- 0.23	0.24	3	0	2.3	2	1.5	27	34	NW	16+	9	9	12	5.7	71
RAPID CITY	3165	903.2	1015.9	51	26	38.2	3.1	77	1	13	29+	0	24	25	65	0.15	- 0.26	0.08	3	0	0.8	1	2.9	34	45	NW	15	6	9	15	6.5	54
SIOUX FALLS	1418	964.4	1017.3	45	21	32.8	0.2	72	2	- 2	30	0	24	24	74	0.26	- 0.74	0.15	5	1	1.6	2	2.4	27	36	32	16	10	7	13	5.9	
TENNESSEE																																
BRISTOL	1507	965.5	1020.5	59	36	47.6	1.7	72	5	18	30	0	10	35	67	1.85	- 0.66	0.74	9	0	T	T	1.3	29	35	29	27	6	7	17	6.6	
CHATTANOOGA	670	995.3	1020.1	63	40	51.4	2.0	74	8+	22	30	0	6	42	76	4.48	0.83	3.14	7	2	0.0	0	0.7	31	32	NW	27	8	9	13	6.4	46
KNOXVILLE	980	984.8	1020.5	62	41	51.7	3.0	73	26+	23	30	0	5	40	69	2.50	- 0.74	1.39	7	0	T	0	1.6	30	37	W	17	9	5	16	6.3	52
MEMPHIS	255	1009.1	1019.6	66	46	55.8	5.7	82	26	24	30+	0	2	42	62	0.75	- 3.63	0.38	7	2	0.0	0	1.2	18	32	SW	26	7	7	16	6.6	53
NASHVILLE	590	997.6	1019.7	62	41	51.9	3.4	76	7+	18	30	0	5	39	63	1.82	- 1.46	1.06	8	3	T	T	1.8	20	34	S	26	6	6	18	6.9	47
OAK RIDGE	905			61	38	49.5	2.2	73	7+	20	30	0	5			2.92	- 0.85	1.79	8		0.0	0			32Y		27	10	5	15	6.0	
TEXAS																																
ABILENE	1762	955.6	1017.1	74	51	62.3	9.3	90	25	30	29	1	1	44	57	1.85	0.74	1.70	2	1	0.0	0	3.5	19	32	W	26	6	6	18	7.3	66
AMARILLO	3604	892.3	1015.9	66	39	52.5	6.5	81	25	23	27	0	6	31	50	0.07	- 0.59	0.07	1	1	0.0	0	5.4	22	45	W	26	7	13	10	5.7	69
AUSTIN	597	995.9	1018.0	73	55	64.1	5.3	87	24	36	30	0	0	55	78	2.65	0.53	1.62	6	1	0.0	0	0.4	29	24	NW	26	3	12	15	7.2	39
BROWNSVILLE	16	1015.9	1016.5	81	64	72.1	4.5	88	25	50	30	0	0	66	85	2.60	1.28	1.13	9	3	0.0	0	2.6	13	29	S	26	8	13	9	5.7	57
CORPUS CHRISTI	41	1015.6	1017.0	81	62	71.2	7.1	92	26	44	30	1	0	64	82	1.96	0.24	0.98	5	2	0.0	0	3.2	10	33	S	26	3	13	14	6.7	51
DALLAS	481	1000.3	1017.7	71	53	61.9	7.0	86	26	35	29	0	0	52	74	1.99	- 0.71	1.60	3	0	0.0	0	2.7	16	32	NW	26	2	9	19	7.7	38
DEL RIO	1026	981.4	1017.3	76	55	65.4	6.6	90	26	37	30	1	0	53	71	1.26	0.64	1.08	4	2	0.0	0	3.3	11	16	33	28	4	7	19	7.4	
EL PASO	3918	884.2	1016.3	71	42	56.8	5.6	79	25	30	29	0	2	29	37	0.12	- 0.21	0.12	1	1	0.0	0	1.1	30	54	SW	25	11	7	12	5.5	72
FORT WORTH	537	997.6	1018.1	73	53	62.9	8.1	88	26+	34	30	0	0	52	73	2.43	- 0.03	2.11	4	0	0.0	0	1.5	17	25	36	28+	3	7	20	7.5	
GALVESTON U	7			74	67	70.3	7.3	78	26+	51	29	0	0			4.26	0.70	1.50	9		0.0	0			26	NE	29+					53
HOUSTON U	41			77	62	69.4	7.8	84	26+	48	30	0	0			3.80	- 0.24	1.41	8		0.0	0										
HOUSTON	50	1015.9	1018.0	78	60	69.1	8.3	86	26	39	30	0	0	60	76	4.82	0.96	1.91	8	1	0.0	0	2.4	12	28	23	21	1	11	18	7.7	57
LUBBOCK	3243	904.8	1016.3	72	43	57.3	9.4	86	25	26	30+	0	4	34	47	0.02	- 0.52	0.02	1	1	0.0	0	3.3	24	37	26	26	5	14	11	6.2	
MIDLAND	2851	917.7	1016.2	72	43	57.4	4.9	85	25	27	30+	0	3	40	60	0.29	- 0.18	0.29	1	1	0.0	0	2.7	20	32	29	26	9	7	14	6.1	
PORT ARTHUR	16	1017.6	1018.3	78	59	68.1	8.4	84	25+	37	30	0	0	60	79	2.29	- 1.17	0.94	7	1	0.0	0	3.0	12	34	SW	26	1	14	15	7.3	72
SAN ANGELO	1903	950.2	1017.0	75	48	61.2	6.4	90	25	28	30+	1	2	46	64	0.39	- 0.39	0.35	3	0	0.0	0	2.9	22	43	28	26	7	5	18	6.8	
SAN ANTONIO	788	989.8	1018.0	75	54	64.5	5.0	82	24+	30	30	0	1	56	79	0.89	- 0.48	0.44	6	1	0.0	0	1.5	3	23	NE	29+	6	8	16	6.9	49
VICTORIA	104	1013.2	1017.5	78	60	68.7	6.3	88	26	37	30	0	0	61	81	2.07	- 0.29	1.09	7	1	0.0	0	1.5	8	32Y	SSW	26	3	12	15	7.5	
WACO	500	999.7	1017.7	73	53	63.2	6.4	87	26+	35	30	0	0	52	71	4.64	2.45	3.31	4	2	0.0	0	2.3	20	25	32	26	5	8	17	7.2	
WICHITA FALLS	994	980.4	1017.2	70	44	57.0	4.5	89	25	26	30	0	3	46	73	0.01	- 1.41	0.01	1	0	0.0	0	1.7	21	43	26	26	4	7	19	7.6	
UTAH																																
MILFORD	5028			56	28	42.3	6.2	76	1	11	29+	0	20			1.23	0.71	0.44	8		2.4	2						8	4	18	6.6	
SALT LAKE CITY	4220	872.3	1017.3	57	35	46.1	9.4	73	2	16	30	0	10	31	62	1.13	- 0.17	0.40	11	0	2.6	1	4.0	17	35	S	14	6	5	19	7.1	52
WENDOVER	4237			51	35	42.7	5.1	60	23	18	29	0	8			0.41	0.12	0.15	9		0.5	1						7	9	14	6.3	

See footnotes at end of table

CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station		Pressure		Temperature								No. of days				Precipitation			No. of days		Snow, Sleet		Wind		Fastest mile			No. of days (sunrise to sunset)				
	Elevation (ground)	Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	°F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
VERMONT																																
BURLINGTON	332	1002.7	1015.5	40	26	32.9	- 2.4	58	4	15	19	0	26	26	76	2.65	0.03	0.93	14	1	12.4	7	3.2	24	37	W	4	0	6	24	8.9	25
VIRGINIA																																
LYNCHBURG	916			57	37	47.3	0.3	77	7	22	30	0	8			1.00	- 1.58	0.40	7	0	0.0	0			32	NW	17	11	8	11	5.6	56
NORFOLK	26	1018.3	1019.2	61	42	51.6	0.2	77	8	32	30	0	1	39	65	0.49	- 2.56	0.26	3	0	0.0	0	1.4	27	34	SW	27	14	7	9	4.7	64
RICHMOND	162	1013.5	1019.6	60	36	48.2	- 0.3	76	8+	17	30	0	8	33	61	0.36	- 2.68	0.25	5	0	0.0	0	1.9	26	29	W	27+	9	12	9	5.3	67
ROANOKE	1149	977.0	1019.4	58	37	47.5	0.8	75	7	20	30	0	6	33	61	0.95	- 1.75	0.37	7	0	T	0	3.2	28	32	30	17	12	8	10	5.4	
WASHINGTON																																
OLYMPIA	195	1004.7	1012.1	53	41	46.6	2.8	62	1	28	29+	0	4	44	90	5.84	- 1.83	0.98	26	1	0.0	0	3.7	20	31	17	18	0	3	27	9.4	
SEATTLE TACOMA	400	995.9	1012.4	55	44	49.4	5.5	68	16	32	23	0	1	43	79	4.98	- 0.37	1.16	21	1	0.0	0	3.2	17	33	20	19	0	4	26	9.2	18
SPOKANE	2356	929.9	1014.8	44	32	38.0	2.3	65	1	21	30	0	14	33	84	1.71	- 0.53	0.60	13	0	6.3	4	1.8	17	32	SW	19	0	3	27	9.5	11
STAMPEDE PASS R	3958			37	31	34.3	2.9	52	1	22	23	0	16			8.23	- 4.35	1.11	23		24.8	19						0	0	30	9.8	
TATOOSH ISLAND R	101	1006.4	1009.6	53	46	49.5	2.3	57	18+	40	25+	0	0	44	82	10.35	- 0.16	1.29	27	4	0.0	0	12.3	10	66	SW	19	0	4	26	9.2	15
WALLA WALLA U	949			51	40	45.5	3.2	68	1	29	30+	0	3			1.94	0.22	0.48	15		2.2	T			26	W	20	0	0	30	9.8	14
YAKIMA	1052	975.6	1014.6	50	35	42.4	5.0	65	1	24	27	0	8	35	78	1.43	0.47	0.49	10	0	1.4	T	2.6	26	24	19	21	1	4	25	8.9	
WEST INDIES																																
SAN JUAN P.R.	15	1011.5	1013.8	86	73	79.8	1.6	89	1	68	30+	0	0	71	77	3.93	- 2.56	1.37	14	3	0.0	0	5.2	8	33	E	4	2	19	9	6.3	60
SWAN ISLAND	28			84	77	80.4	0.3	86	13+	74	24+	0	0			3.89	- 3.50	1.57	10		0.0	0						8		13	6.4	
WEST VIRGINIA																																
BECKLEY	2504	929.9	1020.0	53	35	44.0		67	3	17	30	0	11	32	66	0.96		0.49	8	0	0.6	1	3.9	24	40	29	27	7	6	17	6.8	
CHARLESTON	939	984.4	1019.2	57	35	46.1	0.8	73	3	13	30	0	13	35	67	0.64	- 2.15	0.48	5	0	T	0	3.7	23	31	25	28	5	9	16	6.7	
ELKINS	1970	947.2	1019.4	54	30	41.9	1.2	70	3	16	30	0	17	32	74	1.43	- 1.32	0.43	13	1	1.6	1	4.8	27	33	30	17	4	9	17	7.6	
HUNTINGTON	827	988.8	1019.3	59	37	47.8	2.3	74	8	21	30	0	10	36	68	0.96	- 1.50	0.70	4	2	T	0	2.9	23	32	25	28	7	7	16	6.6	
PARKERSBURG U	615			56	37	46.6	1.8	73	3	25	30+	0	8			1.85	- 0.51	0.65	7		T	T			38	W	27					38
WISCONSIN																																
GREEN BAY	682	989.5	1015.7	43	28	35.3	1.1	68	3	15	14	0	21	29	78	2.19	0.28	0.94	8	1	0.3	T	5.1	27	34	SW	27	5	6	19	7.6	30
LA CROSSE	651	991.9	1017.2	43	27	35.3	1.1	68	3	14	28	0	22	29	80	2.98	1.04	0.96	8	2	0.2	T	3.0	26	32	28	27	8	4	18	6.9	
MADISON	858	984.1	1016.3	45	27	35.6	1.6	66	3	14	30	0	23	30	80	1.96	- 0.18	0.92	8	2	T	0	4.7	26	35	W	27	8	4	18	6.8	40
MILWAUKEE	672	990.9	1016.7	46	31	38.5	2.7	69	3	18	28	0	18	31	76	2.02	- 0.16	0.99	7	0	T	T	6.5	26	40	W	27	8	5	17	6.8	46
WYOMING																																
CASPER	5338	836.1	1015.4	53	27	39.8	6.2	71	1	16	26	0	22	20	49	0.07	- 0.64	0.07	2	0	0.5	T	9.6	25	35	35	11	7	9	14	6.4	
CHEYENNE	6126	811.4	1016.1	53	30	41.4	7.2	70	1	17	29	0	23	19	45	T	- 0.62	T	0	0	T	0	10.1	28	52	W	15	8	8	14	6.3	62
LANDER	5563	827.6	1015.8	51	26	38.6	7.6	67	4	12	26	0	24	21	53	0.44	- 0.48	0.44	1	0	5.2	5	2.6	26	34	W	15	7	13	10	5.5	76
SHERIDAN	3964	877.4	1016.6	52	24	38.1	4.7	77	2	16	26+	0	30	22	58	0.22	- 0.58	0.18	4	0	4.5	4	2.2	29	36	NW	15	3	10	17	7.1	65

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.
A Maximum hourly average.
B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

V Sun below horizon November 19 - 30, inclusive.
X Sun below horizon November 24 - 30, inclusive.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm			Mm	Mm	M.p.s.		M.p.s.							%
ALABAMA																																
BIRMINGHAM	189	997.6	1020.2	19.9	6.1	12.7	0.8	25.0	26	- 7.2	30	0	5	7.2	74	71	- 19	49	6	2	0	0	0.1	11	14.8	W	27	7	6	17	6.8	53
HUNTSVILLE	183	997.0	1020.0	20.0	7.2	13.4	2.9	26.7	8	- 4.4	30	0	3	6.1	64	16	- 76	7	6	1	0	0	0.5	15	14.3	22	27	6	8	16	6.9	
MOBILE	64	1011.5	1019.3	23.3	12.2	17.7	2.8	27.2	25+	0.6	30	0	0	11.7	71	19	- 67	15	6	1	0	0	1.3	9	9.4	36	27+	6	10	14	6.2	
MONTGOMERY	59	1012.9	1020.0	21.1	8.3	14.6	2.3	27.2	26	- 2.8	30	0	1	8.9	72	34	- 43	17	6	1	0	0	0.6	6	12.5	SW	21	5	8	17	7.1	46
ALASKA												B																				
ANCHORAGE PRK STRIP	26			- 3.3	-11.1	- 7.2	-1.8	4.4	29	-20.0	23+	0	30			24	- 2	7	8		282	279										
ANCHORAGE	43	1004.7	1009.7	- 2.2	-10.6	- 6.4		5.0	29+	-19.4	22	0	30	-11.1	71	47		17	11	0	455	406	0.7	36	13.0	16	14	10	5	15	5.8	50
ANNETTE	34	1003.4	1007.5	6.7	1.1	3.8	-0.8	13.9	7	- 6.7	24	0	11	- 0.6	75	291	- 81	96	19	1	43	51	1.8	8	17.9	14	29	7	3	20	7.3	
BARROW	7	1008.1	1008.8	- 6.7	-14.4	-10.7	7.4	0.0	8+	-27.2	1	0	30	-12.2	86	29	23	8	14	0	325	279	2.5	17	14.3	28	6	V 0	V 2	V16		
BARTER ISLAND	12	1009.5	1011.5	-10.0	-17.2	-13.6	4.1	0.6	7	-28.3	28	0	30	-15.0	89	19	8	6	13	0	165	203	1.0	20	21.9	26	12	X 4	X 2	X17		
BETHEL	38	1002.7	1008.5	- 2.2	- 8.3	- 5.2	3.0	6.7	14	-16.1	9	0	29	- 7.2	87	30	3	10	15	0	206	102	0.8	12	24.6	18	14	4	2	24	8.3	
COLD BAY	29	1007.8	1011.5	4.4	0.0	2.2	0.9	10.0	22	- 3.9	30+	0	20	- 0.6	83	65	- 31	13	25	1	246	102	2.3	24	26.4	17	11	0	6	24	8.7	
FAIRBANKS	133	995.6	1013.7	-10.6	-20.6	-15.6	0.0	1.1	12	-32.2	23	0	30	-17.2	87	31	15	8	12	0	478	406	0.3	34	11.2	22	12	7	9	14	6.4	
JUNEAU	4	1008.5	1009.2	2.8	- 5.0	- 1.2	-2.4	8.3	1	-16.1	24	0	25	- 2.8	90	37	-117	9	16	0	244	152	1.7	11	13.9	12	15	6	5	19	7.1	47
KING SALMON	13	1007.1	1009.1	- 1.1	- 8.9	- 5.2	0.3	7.8	14	-16.7	1	0	29	- 6.1	91	41	4	19	14	0	102	51	0.2	8	13.0	15	14	8	4	18	7.1	
KOTZEBUE	3	1007.1	1007.6	- 5.6	-11.7	- 8.6	5.1	2.8	14	-20.6	25	0	30	-11.1	82	9	0	3	9	0	262	305	5.7	12	22.8	11	23	3	4	23	8.2	
MC GRATH	102	998.6	1012.0	- 8.3	-17.2	-12.9	1.9	6.1	14	-27.2	4	0	30	-17.2	71	31	4	11	9	0	511	305	0.6	20	17.4	19	14	8	5	17	6.7	
NOME	4	1005.1	1005.8	- 2.8	- 8.3	- 5.3	3.3	2.2	14	-18.3	29	0	30	- 6.7	87	37	8	6	20	0	335	279	3.1	11	24.6	24	11	5	2	23	8.0	17
ST. PAUL ISLAND	7	1006.4	1007.4	3.9	- 1.1	1.3	0.8	7.2	13	- 7.2	30+	0	19	0.0	88	98	34	15	23	0	206	76	4.7	22	30.8	24	14	0	8	22	9.6	
SHEMYA	37	999.7	1003.4	5.0	- 0.6	2.1	0.0	7.2	15+	- 4.4	26+	0	18	0.0	83	136	67	22	28	0	208	T	9.3	21	28.2	18	8	0	6	24	8.6	
YAKUTAT	9	1005.8	1006.7	2.2	- 7.8	- 2.8	-3.8	6.1	3+	-15.6	23+	0	28	- 5.0	90	167	-240	50	12	0	328	203	1.3	10	10.3	13	27	12	1	17	5.9	
ARIZONA																																
FLAGSTAFF	2131	788.7	1019.4	11.7	- 3.3	4.3	2.0	18.3	7+	-10.0	27	0	26	- 4.4	62	126	101	57	8	0	74	51	1.0	20	10.3	19	25+	7	5	18	7.1	
PHOENIX	340	976.0	1015.1	24.4	8.9	16.7	2.2	32.8	1	2.8	29+	1	0	4.4	51	23	11	13	4	0	0	0	0.9	12	10.7Y	WNW	23	9	2	19	6.9	62
TUCSON	788	926.9	1014.7	23.9	10.0	17.0	2.5	29.4	5+	2.8	29+	0	0	0.0	39	20	4	11	5	0	0	0	1.7	13	13.9	SW	25	7	5	18	6.7	68
WINSLOW	1492	853.7	1019.3	17.2	- 0.6	8.3	3.2	22.2	1	- 9.4	29	0	15	- 3.3	51	8	- 2	4	4	0	5	T	1.2	18	13.0	19	25	7	3	20	6.9	
YUMA	59	1007.8	1015.0	25.0	11.7	18.3	0.6	32.2	4	5.0	26	1	0	6.7	53	15	12	8	5	0	0	0	1.0	36	12.5	W	25	8	7	15	6.4	58
ARKANSAS																																
FORT SMITH	137	1001.7	1018.6	20.0	5.6	12.9	2.9	27.8	26	- 6.1	30	0	3	6.7	70	29	- 51	27	3	0	0	0	0.8	6	15.2	W	26	6	2	22	7.6	42
LITTLE ROCK	78	1009.5	1019.2	19.4	7.8	13.6	3.9	28.3	26+	- 4.4	30	0	2	8.3	73	39	- 66	28	5	0	0	0	0.4	20	17.9	NW	26	5	5	20	7.2	39
TEXARKANA	113	1005.4	1018.5	22.8	10.0	16.2	4.1	31.1	26	- 1.1	30	0	1	10.0	71	32	- 78	15	5	0	0	0	0.8	14				5	6	19	7.4	
CALIFORNIA																																
BAKERSFIELD	151	999.0	1016.8	18.9	9.4	14.1	0.8	29.4	1	2.2	28	0	0	7.2	68	27	14	15	5	0	0	0	0.4	8	10.7	14	17	6	7	17	6.8	
BISHOP	1252			16.1	0.0	7.9	0.3	25.0	1	- 6.7	29	0	18			48	35	18	8		T	0						5	12	13	6.5	
BLUE CANYON	1609			8.9	2.8	5.8	-1.8	18.9	1	- 5.0	26	0	5			312	140	100	14		521	457			15.6	14	17	6	6	18	7.0	
BURBANK	221	989.8	1015.7	20.6	10.6	15.5	-0.3	30.6	4	3.9	26	0	0	8.9	71	270	243	89	9	0	0	0	1.1	15	11.2	11	14	10	6	14	6.4	
EUREKA U	13			16.1	8.9	12.6	1.9	21.7	15	2.2	27	0	0			132	15	37	18		0	0			18.8	SW	17	4	4	22	7.8	45
FRESNO	100	1004.7	1016.7	18.3	7.2	12.6	0.5	27.8	1	0.6	29+	0	0	7.2	73	68	44	18	10	0	0	0	0.5	10	9.4	SE	22	7	8	15	6.6	56
LONG BEACH	10	1015.2	1016.6	20.6	11.7	15.9	-0.3	27.8	4	5.0	26	0	0	10.6	76	154	128	52	9	0	0	0	0.6	18	10.3	28	25+	9	6	15	6.6	
LOS ANGELES	30	1012.5	1016.1	19.4	12.2	15.8	-0.3	23.3	4	5.6	26	0	0	10.6	74	162	134	54	9	0	0	0	0.7	17	14.3Y	W	25	9	6	15	6.6	
LOS ANGELES U	82			21.1	12.8	16.7	-0.4	27.8	4	5.6	26	0	0			246	218	89	8		0	0			7.2	SW	25	8	8	14	6.3	40
MT SHASTA R	1080			10.0	1.1	5.4	-0.1	21.7	1	- 8.3	28	0	13			313	212	69	18		363	254										
OAKLAND	2	1015.6	1015.7	16.7	11.1	14.0	1.4	20.0	7+	5.6	28	0	0	10.6	81	109	65	27	13	2	0	0	1.3	15	13.4	14	13	4	5	21	7.3	
RED BLUFF	104	1002.7	1015.5	16.1	7.2	11.5	-1.0	23.3	5+	- 0.6	28	0	1	7.2	79	135	77	32	14	2	0	0	1.3	17	21.9	S	17	4	9	17	7.6	40
SACRAMENTO	5	1015.2	1016.1	17.8	7.8	12.6	1.0	25.0	4	1.1	28+	0	0	8.3	80	74	38	24	11	0	0	0	1.1	17	13.0	SW	24+	5	6	19	7.1	62
SANDBERG R	1377			11.7	5.6	8.5	-0.9	22.8	4+	- 2.2	26	0	4			249	226	75	9		T	T			18.3	17	17	9	3	18	6.7	
SAN DIEGO	4	1015.2	1016.3	19.4	12.2	16.1	-0.5	23.9	4	7.2	27	0	0	12.2	79	148	125	46	10	0	0	0	0.3	26	12.5	S	22	8	9	13	6.3	55
SAN FRANCISCO	2	1015.9	1016.5	16.7	9.4	12.9	0.2	22.2	7	4.4	28+	0	0	7.8	74	137	97	25	12	2	0	0	1.0	19	20.6	SSW	17	4	8	18	7.4	
SAN FRANCISCO U	16			17.2	11.7	14.5	0.4	22.2	3	7.8	25	0	0			122	71	30	13		0	0			11.6	SW	24+					62
SANTA CATALINA	478			17.2	12.2	14.6	-1.2	26.1	4	8.3	26	0	0			190	162	64	10	0	0	0						5	9	16	6.9	
SANTA MARIA	72			19.4	7.8	13.5	0.1	24.4	5+	0.6	27	0	0			120	94	49	10		0	0						9	3	18	6.7	
STOCKTON	7	1015.9	1016.9	17.2	7.2	12.1	0.4	23.9	5	- 0.6	28	0	1	7.8	78	89	60	26	10	0	0	0	1.0	17	17.9	13	13	4	7	19	7.6	
COLORADO																																
ALAMOSA	2297			11.1	- 7.8	1.6	2.9	16.7	1	-16.1	30+	0	30			1	- 6	1	1		8	T						11	10	9	4.9	
COLORADO SPRINGS	1873	810.7	1016.8	13.9	- 1.1	6.6	3.5	21.1	1	- 8.9	28	0	15	- 6.7	43	T	- 10	T	0	0	T	T	1.2	3	15.6	31	26	10	6	14	5.6	
DENVER	1610	835.8	1015.3	15.0	- 2.8	6.3	3.1	22.8	1	- 8.3	26	0	24	- 5.0	52	9	- 8	9	1	0	140	152	0.9	21	15.2	SW	23	10	10	10	5.6	80
GRAND JUNCTION	1480	853.7	1017.8	15.0	3.3	9.1	5.3	21.7	1	- 5.0	29+	0	5	- 0.6	58	21	6	8	5	0	71	51	1.5	11	19.7	W	25	10	5	15	6.3	50
PUEBLO	1428	855.4	1016.0	18.3	- 2.8	7.8	3.3	25.6	1	-12.8	30	0	23	- 5.6	43	T	- 13	T	1	0	T	T	1.2	32	17.0	NW	27	11	10	9	5.3	81

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)				
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Resultant speed	Resultant direction	Fastest mile (1 6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm			Mm	Mm	M.p s		M p.s							%
CONNECTICUT																																
BRIDGEPORT	2	1017.3	1017.8	11.7	3.3	7.3	0.4	22.2	4	- 2.8	30+	0	5	2.8	73	41	- 61	18	10	1	T	0	3.4	28	19.2	32	4	8	9	13	6.1	
HARTFORD	52	1009.8	1016.5	8.9	- 0.6	4.2	-0.9	20.6	4	- 6.7	25	0	18	- 2.2	65	56	- 41	28	13	1	T	T	1.7	29	15.6	NW	18	6	11	13	6.9	56
NEW HAVEN	2			10.0	1.7	5.9	-0.4	20.6	4	- 5.0	25	0	13			50	- 53	20	12		T	T			15.6	NW	18	9	9	12	6.0	63
DELAWARE																																
WILMINGTON	24	1015.2	1018.5	12.2	2.2	7.2	-0.2	22.2	4	- 5.6	30	0	11	1.7	69	24	- 66	7	9	0	0	0	1.7	28	14.8	30	17	9	11	10	5.9	
DIST.OF COLUMBIA																																
WASH NATL AP	4	1016.3	1018.5	15.0	4.4	9.7	1.0	23.9	4	- 3.3	30	0	5	1.7	61	9	- 63	5	7	0	0	0	1.4	28	17.9	W	17	11	11	8	5.6	48
FLORIDA																																
APALACHICOLA U	4			21.7	13.9	17.6	1.3	25.6	27+	4.4	30	0	0			87	21	38	8	3	0	0			10.7	E	12	10	10	10	5.3	56
DAYTONA BEACH	9	1018.0	1019.3	23.9	13.3	18.6	0.1	27.2	27	5.6	30	0	0	13.3	76	25	- 35	13	5	0	0	0	1.6	2	9.4	21	27+	7	15	8	5.6	
FORT MYERS	5	1018.0	1018.3	27.2	16.7	21.8	1.2	29.4	10	10.0	30	0	0	16.7	77	15	- 16	14	2	0	0	0	1.9	4	10.3	6	2	12	12	6	4.4	
JACKSONVILLE	7	1018.6	1019.7	22.8	12.2	17.5	1.0	27.2	27	2.2	30	0	0	12.2	77	49	6	23	5	1	0	0	1.6	1	13.4	NE	2	6	14	10	5.8	64
KEY WEST	1	1016.3	1016.9	27.2	22.2	24.8	1.4	30.6	13+	18.9	30	0	0	20.0	75	12	- 59	5	3	0	0	0	3.6	6	11.6	NE	2	18	6	6	4.0	80
LAKELAND U	65			25.0	15.6	20.3	0.9	29.4	11	7.2	30	0	0			14	- 26	7	6		0	0						13	12	5	4.1	79
MIAMI	2	1016.9	1017.3	27.2	19.4	23.4	1.0	29.4	22	15.0	30	0	0	17.8	74	24	- 47	10	5	0	0	0	1.9	6	12.5	6	2	5	18	7	5.6	
ORLANDO	33	1014.6	1018.9	25.6	16.1	20.8	2.0	28.3	11	7.2	30	0	0	14.4	71	27	- 13	13	5	1	0	0	1.7	2	12.3	23	22	11	12	7	4.7	
PENSACOLA	34	1015.6	1019.7	22.8	12.2	17.3	2.0	27.2	1	0.6	30	0	0	12.2	70	14	- 68	8	5		0	0	0.9	7	13.9	NW	27					54
TALLAHASSEE	17	1017.6	1019.8	23.9	11.1	17.4	2.3	28.3	1	0.6	30	0	0	10.6	70	65	3	30	6	2	0	0	1.1	3	9.4	33	27+	3	16	11	6.3	
TAMPA	6	1018.6	1018.8	25.6	13.9	19.4	0.1	27.8	7	2.8	30	0	0	13.9	75	22	- 15	11	4	0	0	0	1.5	4	9.8	31	22	11	13	6	4.9	71
WEST PALM BEACH	5	1016.9	1017.5	27.2	18.9	23.1	0.6	30.6	13	12.8	30	0	0	17.2	72	65	- 7	31	7	2	0	0	1.9	6	14.3	6	14	9	16	5	4.8	
GEORGIA																																
ATHENS	244	990.9	1020.3	18.9	6.1	12.3	1.4	24.4	9+	- 5.0	30	0	2	5.6	70	38	- 36	27	8	2	0	0	1.7	32	10.3	29	27	8	8	14	5.9	
ATLANTA	309	983.1	1020.1	17.8	6.1	12.1	1.4	23.9	8	- 4.4	30	0	4	5.6	70	59	- 16	51	7	2	0	0	0.5	30	15.2	W	27	8	6	16	6.3	54
AUGUSTA	44	1014.6	1019.7	21.1	5.6	13.1	0.8	26.1	9+	- 3.3	30	0	6	6.7	73	47	- 9	34	6	1	0	0	0.6	29	12.5	30	22	8	9	13	6.0	
COLUMBUS	117			21.1	7.8	14.2	1.9	25.6	26+	- 2.8	30	0	2	8.3	73	54	- 12	29	9		0	0	0.3	2	10.3	30	27	6	7	17	6.7	
MACON	108	1007.1	1020.3	20.6	6.1	13.1	0.1	26.1	9	- 3.9	30	0	4	7.2	75	51	- 12	24	7	1	0	0	0.5	33	9.8	[illegible]	27+	6	9	15	6.7	55
ROME	194			18.3	3.9	11.2	1.7	25.6	8	- 6.7	30	0	9			54	- 33	27	8		0	0										
SAVANNAH	14	1018.0	1019.9	21.7	7.8	14.4	0.4	26.7	16	- 2.8	30	0	2	9.4	76	53	1	36	6	1	0	0	0.6	34	12.5	N	22	6	11	13	6.3	49
HAWAII																																
HILO	9	1013.9	1015.2	26.7	19.4	23.2	0.3	31.1	8	17.2	30+	0	0	19.4	83	487	148	95	27	2	0	0	0.7	21	12.5	14	8	0	7	23	8.5	16
HONOLULU	2	1014.6	1014.9	28.3	21.7	25.1	0.7	31.1	4	19.4	12	0	0	18.9	71	374	319	110	15	0	0	0	3.8	6	19.7	[illegible]	13	6	9	15	6.7	57
KAHULUI	15	1012.2	1014.6	27.2	20.6	23.8	-0.1	30.6	3	17.8	18+	0	0			235	197	139	15	0	0	0	4.4	6	13.0	NE	25	1	14	15	7.3	50
LIHUE	31	1011.5	1015.7	25.6	21.7	23.6	0.0	27.8	4	18.9	30+	0	0	20.0	83	317	192	79	19	2	0	0	4.3	7	11.6	NE	21	0	8	22	9.5	25
IDAHO																																
BOISE	865	915.7	1016.5	11.7	2.0	6.8	3.2	21.7	4	- 6.1	30	0	9	0.0	68	38	8	15	12	1	18	T	2.2	12	13.9	SW	24	3	6	21	8.0	44
IDAHO FALLS 4.NW R	1460			9.3	- 6.1	1.6	3.8	18.9	2+	-17.2	30	0	28			26	18	6	5				0.8	23	11.2	SW	26					
IDAHO FALLS 46W R	1503			9.2	- 4.4	2.4	3.7	19.4	1	-16.7	30	0	25			32	21	11	8		51	T	2.0	23	13.4	SW	23+					
LEWISTON	431			11.1	2.9	6.8	2.5	17.8	2	- 3.3	30	0	5			28	- 3	7	15		T	0						1	3	26	9.3	
POCATELLO	1358	863.3	1017.5	11.1	- 1.1	4.8	3.1	21.7	1	-12.8	30	0	18	- 2.8	66	31	6	12	11	1	51	T	3.0	21	16.1	SW	24	4	10	16	7.2	43
ILLINOIS																																
CAIRO U	96			16.7	7.2	11.8	3.0	25.0	16	- 5.0	30	0	2			42	- 56	28	7		0	0			13.4	SW	15	8	6	16	6.6	48
CHICAGO O HARE	201	992.2	1017.1	10.0	- 0.6	4.6	1.2	22.8	3	- 8.9	30	0	20	0.0	73	37	- 18	23	10	1	5	T	2.0	26	16.5	27	26	9	5	16	6.6	
CHICAGO MIDWAY	185	994.6		10.0	1.1	5.6	1.1	23.3	3	- 7.8	28	0	13	- 0.6	67	28	- 28	19	7	2	T	T	2.5	24	16.5	W	26	8	6	16	6.8	34
MOLINE	177	995.2	1017.4	10.2	- 0.6	4.8	0.8	23.3	2	- 9.4	29	0	19	0.0	74	49	- 1	26	7	2	8	T	2.1	25	21.9	W	27	9	5	16	6.5	42
PEORIA	199	993.9	1018.3	10.2	0.0	5.1	0.8	22.8	3	-10.6	29	0	16	1.1	78	31	- 23	17	6	1	T	T	1.3	24	20.1	W	26	9	4	17	6.7	52
ROCKFORD	221	989.2	1016.7	8.9	- 0.6	4.2	1.4	21.1	3	- 8.9	30+	0	18	0.0	74	46	- 14	23	6	1	T	T	1.9	25	13.9	27	26	8	5	17	6.6	
SPRINGFIELD	179	995.9	1018.4	12.8	2.2	7.6	2.1	22.8	7+	- 9.4	30	0	12	2.2	70	23	- 37	9	7	2	T	T	1.5	24	17.9	W	26	7	7	16	6.7	[illegible]
INDIANA																																
EVANSVILLE	116	1005.1	1019.4	15.6	2.2	8.9	1.8	25.6	26	- 7.2	30	0	12	2.2	65	23	- 57	9	5	2	T	T	1.0	25	15.6	W	26	5	10	15	6.6	51
FORT WAYNE	241	987.1	1017.8	10.6	1.1	5.7	1.9	22.2	3	- 7.2	29	0	16	1.1	75	57	- 8	23	7	4	5	T	2.6	25	18.8	W	26+	5	4	21	7.5	44
INDIANAPOLIS	246	987.2	1018.7	12.5	1.7	7.1	2.1	23.3	3	- 6.7	30	0	15	1.1	70	36	- 43	18	6	3	T	T	1.6	24	22.4	W	26	6	10	14	6.7	45
SOUTH BEND	236	988.8	1017.2	9.4	0.6	4.8	0.8	21.7	3	- 7.8	28	0	16	0.6	76	42	- 25	19	9	2	185	102	2.8	24	14.8	24	27	5	3	22	7.6	
IOWA																																
BURLINGTON	213			11.7	0.6	6.2	2.1	23.9	3+	- 9.4	29	0	15	1.1	72	31	- 16		6	1	T		1.4	27	14.3	30	16	9	8	14	6.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow Sleet				Fastest mile (1.6 kilometers)							
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb	Mb.	C.	C	C	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm.	M.p.s.		M.p.s							%
IOWA																																
DES MOINES	286	982.4	1017.8	10.6	- 0.6	5.0	2.2	24.4	2	-11.1	29	0	18	0.0	72	45	1	28	6	3	T	T	1.2	26	17.0	NW	16	9	7	14	6.0	47
DUBUQUE	325			7.8	- 1.7	3.0	1.4	19.4	3+	-10.0	29	0	18			81	15	40	6		T	T						8	6	16	6.7	
SIOUX CITY	334	977.0	1017.6	10.0	- 2.8	3.4	1.2	24.4	2	-16.1	30	0	20	- 2.2	70	7	- 23	3	4	1	28	T	1.1	28	17.0	NW	26	10	6	14	5.8	63
WATERLOO	265	984.4	1016.8	9.4	- 2.8	3.5	2.0	22.2	2	-10.0	29+	0	20	- 0.6	75	77	30	55	5	0	T	T	1.5	26	14.8	30	16	6	9	15	6.6	
KANSAS																																
CONCORDIA	448	963.8	1017.4	15.0	0.0	7.4	2.2	26.1	2	-10.0	30	0	18	0.6	67	1	- 24	1	2	0	T	T	1.3	20	12.5	NW	16	8	8	14	5.9	64
DODGE CITY	787	925.5	1017.2	16.1	2.8	9.5	3.5	22.8	2	- 3.9	30+	0	7	1.7	66	T	- 16	T	0	0	0	0	1.5	20	13.9	SW	2	10	4	16	6.2	61
GOODLAND	1111	888.6	1017.1	14.4	- 1.7	6.2	2.9	22.8	15	- 7.2	30	0	21	- 2.2	62	T	- 12	T	1	0	T	T	1.6	22	13.9	30	26	7	10	13	5.9	
TOPEKA	267	985.8	1018.1	14.4	0.6	7.6	1.7	23.9	2	-12.8	30	0	17	1.7	69	5	- 33	5	4	2	T	T	0.7	24	12.1	NW	26	11	5	14	5.9	62
WICHITA	403	969.5	1017.8	16.7	3.9	10.3	3.4	23.9	2	- 7.8	30	0	7	3.9	68	3	- 35	3	1	1	0	0	0.8	19	13.4	5	25+	8	3	19	6.8	43
KENTUCKY																																
COVINGTON	265	986.8	1019.0	11.7	1.7	6.8	0.8	21.1	6	- 6.7	30+	0	12	0.0	64	32	- 44	19	7	4	T	0	1.8	24	15.6	27	26	7	5	18	6.9	
LEXINGTON	294	983.7	1019.8	13.3	2.2	7.9	0.8	22.2	7+	- 8.9	30	0	12	2.2	70	26	- 58	13	6	2	T	0	1.9	19	12.5	18	26	5	10	15	6.6	
LOUISVILLE	144	1001.4	1019.3	13.9	3.3	8.5	1.4	23.3	7	- 6.7	30	0	9	1.7	63	34	- 47	15	7	3	0	0	1.3	23	17.0	W	26	6	8	16	6.8	43
LOUISIANA																																
ALEXANDRIA	28	1014.9	1019.0	22.8	11.1	16.9	3.2	28.3	21	- 1.1	30	0	1	12.8	81	99	- 22	72	7	1	0	0	0.4	10	9.8	24	21	6	12	12	6.5	
BATON ROUGE	20	1016.3	1019.0	23.9	12.2	17.9	3.0	27.2	25+	0.0	30	0	1	12.8	75	61	- 43	56	5	0	0	0	0.5	8	10.3	23	21	2	16	12	7.0	
LAKE CHARLES	4	1017.3	1018.5	25.0	13.9	19.3	4.0	28.3	25+	2.2	30	0	0	15.0	80	31	- 76	16	6	0	0	0	1.0	11	9.4	19	26	3	13	14	7.0	
NEW ORLEANS	1	1018.0	1018.7	23.9	12.2	18.1	2.5	27.8	26+	0.0	30	0	1	13.9	78	38	- 47	24	6	0	0	0	1.2	7	9.8	21	21	2	17	11	6.6	
SHREVEPORT	77	1009.1	1018.2	22.8	12.2	17.3	4.2	29.4	26	0.6	30	0	0	11.7	75	30	- 76	27	4	0	0	0	1.3	16	15.6	31	26	3	9	18	7.6	46
MAINE																																
CARIBOU	190			0.6	- 8.3	- 3.8	-2.8	10.0	4	-16.1	27+	0	30			121	43	25	19		686	432						1	4	25	8.4	
PORTLAND	19	1012.9	1015.4	7.2	- 2.2	2.6	-0.8	20.0	4	- 9.4	20+	0	21	- 2.2	72	101	- 5	33	13	1	15	T	1.5	28	18.8	NW	4	6	10	14	6.7	48
MARYLAND																																
BALTIMORE	45	1012.9	1018.5	13.3	1.7	7.6	0.1	23.3	7	- 6.7	30	0	9	0.0	61	17	- 62	7	9	0	0	0	1.7	28	18.3	W	17	10	11	9	5.4	63
MASSACHUSETTS																																
BLUE HILL OBS R	192			8.3	- 0.6	3.8	-1.7	19.4	4	- 5.6	30+	0	18			55	- 60	15	12		T	T			26.4	WNW	4					57
BOSTON	5	1014.9	1016.1	9.4	1.7	5.6	-1.6	20.0	4	- 3.3	2	0	10	- 0.6	69	53	- 47	16	12	1	T	T	2.7	28	19.2	NW	4	9	11	10	5.6	58
NANTUCKET	13	1015.9	1016.2	9.4	1.7	5.6	-2.2	15.6	4	- 6.7	30	0	11	1.1	75	67	- 36	49	11	1	5	0	2.1	28	15.2	SW	17+	5	11	14	6.7	41
PITTSFIELD	357			6.1	- 2.8	1.6	-1.3	15.0	6+	- 8.9	10	0	23			65	- 35	22	16		66	T										
WORCESTER	301	978.3	1016.1	7.2	- 1.7	2.6	-1.4	17.2	4	- 6.7	30+	0	24	- 2.8	70	74	- 35	27	12	1	15	T	2.8	28	21.0	29	4	8	11	11	6.2	
MICHIGAN																																
ALPENA	210			5.6	- 3.3	1.3	-0.2	21.7	3	- 8.9	10	0	25			69	8	26	15		132	51			14.8	SE	26	1	6	23	8.7	24
DETROIT	189	993.2	1016.5	10.6	1.7	5.9	1.3	22.8	3	- 4.4	29+	0	11	0.0	69	30	- 26	11	8	1	5	T	2.9	26	20.1	W	16	5	5	20	7.8	35
DETROIT M WAYNE CO	193	992.2	1016.6	10.0	- 0.6	4.7	0.1	21.7	3	- 7.2	29	0	17	- 0.6	72	38	- 20	17	7	1	10	T	2.7	24				5	6	19	7.3	
DETROIT WILLOW RUN	217	988.2	1017.0	9.4	- 1.1	4.3	-0.2	21.7	3	- 6.7	29+	0	19	- 1.7	68	25	- 32	14	7	2	8	T	3.2	24	17.9	24	27	5	6	19	7.3	
FLINT	235	987.8	1016.1	9.4	0.6	4.9	2.2	22.2	3	- 5.6	29	0	17	- 0.6	70	60	4	26	14	6	48	T	2.8	24	17.0	25	27	2	5	23	8.3	
GRAND RAPIDS	239	986.5	1016.1	8.9	0.0	4.4	1.5	21.1	3	- 6.1	28	0	18	0.6	78	60	- 4	30	11	3	231	152	2.6	24	22.4	SW	26+	4	4	22	8.2	36
HOUGHTON LAKE	351	972.2	1015.2	6.1	- 2.2	1.9		18.3	3	- 7.8	28	0	23	- 1.7	79	61		29	15	2	165	76	2.2	25	16.5	26	27	3	4	23	8.4	
LANSING	256	984.1	1016.4	8.9	- 0.6	4.1	0.8	22.2	3	- 6.7	18+	0	19	1.1	84	47	- 9	30	9	3	38	51	2.8	25	18.8	SW	27	4	3	23	8.0	27
MARQUETTE U	206			4.4	- 2.2	1.1	0.1	21.1	3	- 7.8	28	0	23			89	6	19	16		320	102			15.2	NW	3	1	4	25	8.9	29
MUSKEGON	191	992.6	1016.1	7.8	0.6	4.3	0.1	16.7	3	- 5.0	28+	0	18	1.1	79	45	- 29	27	13	1	81	T	2.2	26	17.4	32	16	4	2	24	8.2	
SAULT STE MARIE	220	986.5	1013.8	3.3	- 3.3	0.2	-0.6	16.1	3	- 9.4	17	0	25	- 2.2	84	129	44	29	19	1	704	203	0.6	27	20.1	31	3	0	5	25	9.2	30
MINNESOTA																																
DULUTH	435	962.4	1015.4	1.7	- 6.7	- 2.3	0.3	17.2	2	-13.3	30+	0	27	- 5.6	78	85	39	37	14	0	658	584	1.8	28	20.1	W	12	2	7	21	8.2	38
INTERNATIONAL FALLS	359	971.2	1015.7	1.1	- 8.9	- 3.9	0.6	17.2	2	-18.3	29	0	28	- 7.8	76	67	30	26	13	0	754	660	0.9	28	14.3	30	3	2	3	25	8.7	
MINNEAPOLIS	254	985.1	1016.5	5.6	- 4.4	0.6	1.1	20.0	2	-13.3	30	0	24	- 2.8	79	50	15	23	7	0	41	T	1.1	30	17.0	NW	16	4	7	19	7.3	43
ROCHESTER	395	967.8	1016.7	5.6	- 3.9	0.9	1.2	20.0	2	-12.2	30+	0	23	- 3.3	77	33	- 7	20	6	1	28	T	2.2	26	18.3	31	16	5	8	17	7.0	
ST CLOUD	315	977.3	1016.3	3.9	- 6.7	- 1.3	0.1	21.1	2	-17.2	30	0	27		74	39	6	19	7		114	102						5	6	19	7.4	
MISSISSIPPI																																
JACKSON	94	1007.5	1019.5	22.8	8.9	15.6	2.6	28.9	26	- 3.9	30	0	3	10.6	78	45	- 54	23	8	2	0	0	1.0	14	16.5	NW	27	5	10	15	6.6	54
MERIDIAN	88	1009.1	1020.2	22.2	7.2	14.7	2.4	28.9	26	- 5.6	30	0	4	9.4	78	29	- 50	9	7	2	0	0	0.3	16	10.3	32	27	5	9	16	7.0	
VICKSBURG U	71			21.7	12.8	17.2	3.7	27.2	26	0.0	30	0	1			49	- 63	36	8		0	0			15.2	SE	7	6	11	13	6.4	42

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days				Precipitation							Wind					No. of days (sunrise to sunset)				
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb	C.	C.	C.	C.	C.		C.				C	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s							%
MISSOURI																																
COLUMBIA	237	989.2	1017.8	15.0	3.3	9.1	2.8	25.0	26	- 9.4	30	0	9	2.8	66	15	- 43	9	6	1	0	0	1.0	21	15.2	W	26	10	5	15	5.9	66
KANSAS CITY	226	990.5	1017.7	15.0	2.8	9.0	2.0	25.0	2	- 8.3	30	0	9	2.2	65	6	- 40	5	4	2	T	0	0.6	22	11.6	W	26	10	5	15	5.8	65
SAINT JOSEPH	247			15.6	1.1	8.3	3.1	25.6	3+	-12.2	30	0	15	0.6	65	17	- 26	10	4	2	T	0	0.6	25	11.6	32	16	12	6	12	5.1	
ST LOUIS	163	998.0	1018.8	15.0	3.3	9.2	2.4	24.4	26+	- 7.2	29	0	10	2.8	65	20	- 45	11	4	2	T	0	1.2	23	15.6	NW	26	9	5	16	6.2	51
SPRINGFIELD	386	972.6	1018.5	16.7	2.8	9.7	2.5	24.4	26	-12.2	30	0	8	3.9	71	11	- 59	6	8	2	0	0	1.6	19	15.2	W	26	8	7	15	6.3	41
MONTANA																																
BILLINGS	1087	889.3	1015.4	8.9	- 2.2	3.3	1.6	22.2	1	-11.1	26	0	23	- 3.9	66	17	1	9	6	0	160	102	2.1	26	16.5	W	15	2	9	19	7.7	51
GLASGOW	696			2.8	- 8.9	- 2.9	-0.8	23.9	2	-27.8	27	0	27			3	- 9	2	5		25	T						6	3	21	7.5	
GREAT FALLS	1116	886.2	1016.6	7.2	- 3.9	1.6	0.3	21.1	2+	-21.7	26	0	19	- 5.6	64	29	10	12	6	1	246	127	2.7	23	15.2	W	4+	2	5	23	8.1	45
HAVRE	787			2.2	-10.0	- 4.0	-2.6	20.0	2	-27.2	26	0	28			16	4	5	6		241	127			18.3	NW	2	4	7	19	7.6	48
HELENA	1167	879.4	1017.4	7.8	- 5.0	1.5	1.7	19.4	2	-16.1	25	0	30	- 4.4	70	16	1	5	10	1	53	51	1.6	26	12.5	W	21+	1	13	16	7.7	38
KALISPELL	904	909.6	1016.3	5.6	- 2.8	1.3	1.8	13.3	1	-11.1	29	0	23	- 1.7	84	18	- 18	7	14	0	99	51	0.3	18	13.0	1	23	0	0	30	9.7	
MILES CITY	801	921.4	1016.7	6.7	- 5.6	0.4	0.1	23.9	1	-20.6	27	0	26	- 6.1	67	10	- 1		5	0	76		0.5	30								
MISSOULA	972	903.5	1017.4	6.7	- 1.7	2.4	3.3	18.3	2	-10.6	30	0	22	- 1.1	80	27	4	9	12	0	81	T	0.1	31	10.3	E	24+	0	3	27	9.4	27
NEBRASKA																																
GRAND ISLAND	561	950.2	1017.8	12.8	- 2.2	5.2	2.3	23.9	15	-11.1	30	0	21	- 1.7	68	13	- 7	11	2	1	10	T	1.3	25	13.4	32	16	10	6	14	5.9	
LINCOLN U	351			12.2	0.0	6.1	1.2	25.6	2	-11.7	30	0	17			21	- 11	17	4		T	T			13.0	NW	12	8	10	12	5.8	59
NORFOLK	471			10.[illegible]	- 3.9	3.0	0.8	23.3	2	-16.7	30	0	23			3	- 20	2	4		8	T						9	7	14	6.0	
NORTH PLATTE	846	917.4	1016.8	13.3	- 3.3	4.9	3.0	25.0	2	- 9.4	30+	0	27	- 2.2	70	1	- 11	1	2	0	13	T	0.4	29	14.8	N	3	10	5	15	6.1	58
OMAHA	298	981.7	1017.8	12.8	- 1.1	5.8	1.9	25.6	2	-12.8	30	0	20	0.6	72	31	- 1	28	5	2	T	T	0.7	28	15.2	NW	12	8	10	12	6.0	59
SCOTTSBLUFF	1206	878.8	1016.6	13.3	- 2.8	5.3	3.2	23.9	2	- 8.3	30	0	26	- 3.3	61	2	- 9	2	2	0	25	T	1.1	32	17.4	31	15	5	10	15	6.5	
VALENTINE	789			[illegible]	- 5.6	2.3	1.4	27.8	2	-15.6	29	0	26			8	- 4	6	4		56	51			18.8	SW	14	10	7	13	5.8	68
NEVADA																																
ELKO	1539	845.2	1018.3	11.1	- 4.4	3.5	2.3	23.3	1	-17.8	29+	0	21	- 3.9	66	50	27	29	11	0	239	152	0.6	19	10.3	26	24+	7	5	18	6.9	
ELY	1906	808.7	1017.5	11.1	- 4.4	3.1	2.2	20.0	1	-18.3	28	0	22	- 7.2	54	24	9	13	9	0	140	152	3.8	20	16.1	SW	24+	5	5	20	7.3	62
LAS VEGAS	659	939.4	1016.4	18.9	7.2	13.3	1.9	27.2	1	0.0	29	0	1	0.0	48	56	49	28	6	0	0	0	1.3	23	13.9	SW	25	7	10	13	6.3	60
RENO	1342	865.2	1016.2	13.3	- 2.8	5.3	1.8	24.4	1	- 9.4	26	0	21	- 2.2	63	41	27	13	8	0	56	51	0.6	19	13.4	SE	18+	5	9	16	7.0	84
WINNEMUCCA	1310	867.3	1017.0	12.8	- 2.8	4.9	2.8	23.9	1	-10.6	30	0	20	- 3.9	61	30	10	11	10	[illegible]	13	T	1.0	17	16.5	W	24	6	7	17	7.0	43
NEW HAMPSHIRE																																
CONCORD	104	1003.1	1016.1	6.7	- 3.9	1.6	-1.6	18.3	4	-11.1	20	0	27	- 3.3	72	62	- 32	30	7	1	25	T	1.4	29	17.0	W	4	7	12	11	6.5	51
MT WASHINGTON OBS	1909			- 5.[illegible]	-13.3	- 9.4	-2.9	2.2	4	-21.1	2	0	30			175	7	33	[illegible]	1	960	305			51.4Y	W	1	0	5	25	8.8	20
NEW JERSEY																																
ATLANTIC CITY	2	1016.3	1018.6	12.8	1.7	7.2	-1.0	24.4	4	- 7.2	30	0	16	2.2	72	20	- 73	8	9	[illegible]	0	0	2.5	29	15.6	31	17	11	9	10	5.6	[illegible]
ATLANTIC CITY	3			12.2	4.4	8.4	-0.6	22.8	4	- 3.9	30	0	4			21	- 75	10	8						21.0	WNW	17					
NEWARK	3	1016.6	1017.7	11.1	2.8	6.9	-0.9	21.1	4	- 3.3	30	0	8	- 0.6	62	38	- 48	11	11	0	0	0	2.6	27	16.5	28	18	10	7	13	6.0	
TRENTON U	17			11.1	3.3	7.4	-1.3	21.1	4	- 2.8	30	0	5			33	- 48	11	11		0	0			17.0	NW	17	9	9	12	5.8	55
NEW MEXICO																																
ALBUQUERQUE	1618	840.2	1018.2	16.1	2.2	9.1	2.7	22.2	15	- 4.4	29+	0	8	- 3.3	45	8	- 1	7	3	0	T	0	0.1	31	15.6	NW	23	12	4	14	5.5	69
CLAYTON	1515			16.7	1.1	8.9	3.5	26.1	15	- 8.9	29	0	12			T	- 8	T	0		0	0						9	6	15	6.1	
RATON	1944			16.1	- 3.[illegible]	6.4	3.4	21.1	5	-12.8	29	0	27			T	- 10	T	0		0	0						11	11	8	4.9	
ROSWELL	1102			21.1	1.7	11.4	3.7	29.4	25	- 8.9	30	0	9			2	- 7	2	4	3	0	0			14.8	NW	26	7	9	14	6.1	60
SILVER CITY	1638			18.3	3.9	11.1	2.5	22.8	7	- 5.0	29	0	5			5	- 6	5	1		0	0						10	11	9	5.2	
NEW YORK																																
ALBANY	84	1005.8	1016.7	7.9	- 1.7	3.1	-0.8	16.7	4	- 8.9	10	0	19	- 2.2	69	48	- 21	14	12	1	13	T	1.8	26	17.9	NW	18	0	11	19	8.2	32
BINGHAMTON	485	955.3	1016.4	6.1	- 0.6	2.7	-0.6	16.1	6	- 7.2	2	0	18	- 1.1	76	58	- 5	14	17	3	114	76	2.4	25	16.5	NW	18	0	7	23	8.7	34
BUFFALO	215	989.8	1015.9	8.3	0.6	4.4	0.5	17.8	3	- 6.1	29	0	14	0.6	79	119	28	41	17	5	310	203	2.6	24	17.0	W	27+	1	4	25	8.9	22
NEW YORK U	4	1014.9	1018.1	11.7	4.4	8.2	-0.1	21.7	4	- 0.6	30+	0	3	1.1	65	37	- 49	14	12	0	0	0	2.0	26	14.8	NW	18	12	9	9	5.4	51
J.F. KENNEDY	5	1016.9	1017.6	11.7	3.3	7.4	-0.4	22.8	4	- 1.7	30	0	8	1.1	68	35	- 55	17	11	1	T	0	2.3	29	17.9	32	18	11	8	11	5.9	
NEW YORK LA GUARDIA	3	1015.9	1017.7	10.6	5.[illegible]	7.7	-0.8	19.4	7	- 1.7	2	0	1	- 0.6	59	33	- 58	12	13	1	T	0	2.4	29	15.2	NW	18+	9	7	14	6.2	
ROCHESTER	167	995.9	1016.7	8.9	0.[illegible]	4.3	-0.2	20.0	3	- 7.8	29	0	19	- 1.6	72	86	23	25	15	2	203	127	2.5	24	18.8	SW	17	2	4	24	8.7	21
SYRACUSE	125	[illegible]	1015.[illegible]	8.1	- 0.6	3.7	-0.8	18.3	3	- 8.3	2	0	17	- 0.6	77	75	2	26	2	2	69	51	2.1	26	16.5	W	17	1	6	23	8.6	28
NORTH CAROLINA																																
ASHEVILLE	652	943.1	[illegible]	15.6	0.6	8.[illegible]	1.0	21.1	8+	- 6.1	30	0	13	2.2	74	33	- 37	14	8	1	T	0	1.[illegible]	34	14.8	35	18+	10	8	1[illegible]	5.4	[illegible]
CAPE HATTERAS	2	1018.6	[illegible]	[illegible]	8.9	13.3	-0.1	23.9	8	1.1	21+	0	0	9.7	72	37	- 67	17	5	1	[illegible]	0	1.6	34	13.9	SW	27+	7	10	13	6.1	55
CHARLOTTE	224	991.9	1019.6	16.7	4.4	10.8	0.6	23.3	8	- 2.8	30	0	4	2.9	67	81	17	38	[illegible]	[illegible]		0	[illegible]	33	9.8	SW	1[illegible]	[illegible]	11	10	[illegible]	64

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station ○	Pressure: Sea level	Temperature: Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No of days: Max 32.2 °C or above	No of days: Min 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	No of days: 25 mm or more	No of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile: Direction	Fastest mile: Date	No of days (sunrise to sunset): Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm	M.p.s		M.p.s							%
NORTH CAROLINA																																
GREENSBORO	273	987.8	1020.0	16.7	3.3	10.1	1.2	23.9	8+	- 5.0	30	0	6	2.8	56	33	- 35	11	7	0	0	0	0.8	28	13.0	NW	17	9	11	10	5.8	59
RALEIGH	132	1003.7	1019.6	17.2	3.9	10.5	0.5	24.4	8+	- 5.6	30	0	6	3.3	64	31	- 39	19	5	1	0	0	0.7	28	11.6	31	17	10	10	10	5.3	63
WILMINGTON	9	1018.3	1019.7	20.6	7.8	14.2	1.2	25.0	16+	0.0	30	0	1	7.8	69	28	- 50	14	5	0	0	0	0.8	35	11.6	NW	17	10	12	8	5.5	56
NORTH DAKOTA																																
BISMARCK	502	955.6	1017.1	5.6	- 7.8	- 1.1	0.7	23.3	2	-17.8	29	0	30	- 7.8	65	5	- 10	2	4	0	10	T	1.3	31	19.2	NW	15	5	12	13	6.6	49
FARGO	273	983.4	1017.5	2.8	- 8.9	- 3.3	-1.2	21.1	2	-18.3	29	0	29	- 7.2	75	20	- 1	13	7	0	155	152	1.0	31	17.4	N	16	3	6	21	7.7	42
WILLISTON	579			2.8	- 8.9	- 2.9	-0.5	20.6	2	-20.6	27	0	29			5	- 9	2	4		56	T			14.3	NW	15	6	9	15	7.0	43
OHIO																																
AKRON	368	972.9	1018.1	10.6	1.1	5.7	0.8	21.1	3	- 7.2	29	0	16	0.6	73	61	4	30	13	3	23	T	2.7	24	13.0	25	27	4	5	21	7.8	
CINCINNATI OBS	232			12.8	3.3	8.1	1.1	23.3	5	- 5.6	30+	0	9			47	- 28	17	7		T	0			14.8	SW	26					53
CLEVELAND	237	987.8	1017.3	10.6	1.1	5.8	1.2	22.8	3	- 5.6	30+	0	15	1.1	74	48	- 18	21	12	2	30	T	3.2	23	17.0	SW	27	4	6	20	7.8	31
COLUMBUS	247	988.2	1018.8	11.7	1.1	6.3	1.2	22.2	3	- 7.2	29	0	13	1.1	71	30	- 33	13	10	4	5	T	1.8	24	25.0	W	27	5	7	18	7.2	48
DAYTON	305	982.1	1018.9	10.6	0.6	5.7	0.3	21.7	6+	- 7.8	29	0	15	1.1	74	30	- 37	10	8	4	T	T	2.2	22	16.5	SW	27	6	6	18	7.2	47
MANSFIELD	395			9.4	0.0	4.8	0.7	20.0	3	- 8.3	30	0	17			63	- 6	19	9	6	T	T						4	5	21	7.5	
TOLEDO	206	991.9	1017.7	9.4	- 1.1	4.2	0.5	22.2	3	- 7.8	29	0	19	- 1.1	71	44	- 7	19	10	3	T	T	2.9	24	17.0	SW	12	4	8	18	7.2	45
YOUNGSTOWN	359	974.3	1017.8	10.0	0.6	5.4	1.3	21.7	3	- 6.1	29	0	17	1.1	75	67	- 4	24	12	2	79	51	2.7	24	13.4	35	8	4	3	23	8.2	
OKLAHOMA																																
OKLAHOMA CITY	390	971.2	1017.8	19.4	7.2	13.5	4.4	28.9	25	- 2.8	30	0	3	6.7	67	2	- 38	1	2	0	0	0	0.7	17	17.9	W	26	7	5	18	7.0	54
TULSA	198	993.6	1018.1	20.6	6.1	13.2	4.5	28.9	25	- 7.8	30	0	4	5.6	65	1	- 57	1	2	0	0	0	1.2	18	16.1	NW	26	6	8	16	6.5	62
OREGON																																
ASTORIA	2	1010.5	1011.4	12.8	6.1	9.3	1.4	16.7	17	- 2.2	25	0	3	7.8	89	300	16	52	27	0	0	0	1.9	13	15.6	18	18	1	2	27	9.2	
BURNS U	1265	871.3	1016.1	9.4	- 3.3	3.1	0.8	20.6	1	-15.0	29	0	26	- 1.7	74	44	15	15	13		107	51	0.2	26				2	10	18	7.8	
EUGENE	109	999.7	1013.1	12.8	6.7	9.7	2.2	17.2	18+	- 0.6	29+	0	2	7.2	90	189	46	47	21	0	0	0	1.9	17	11.2	18	18	1	3	26	8.9	
MEACHAM	1234			6.7	1.1	3.8	2.4	17.8	1	- 4.4	28+	0	11			61	- 44	14	16		183	152						1	3	26	9.0	
MEDFORD	396	966.5	1014.6	13.3	3.3	8.1	2.3	21.1	3	- 3.9	29+	0	5	4.4	81	65	- 1	17	15	0	T	T	0.3	16	13.9	14	13	1	4	25	8.6	
PENDLETON	452	960.7	1015.0	10.6	3.3	7.1	1.9	23.3	1	- 3.3	29	0	4	2.2	77	50	14	10	15	0	T	0	0.7	23	11.6	26	20	1	4	25	9.0	
PORTLAND	6	1011.5	1012.8	13.3	6.7	9.8	2.6	17.2	6+	0.0	29+	0	3	6.7	81	143	8	30	18	0	0	0	2.7	14	17.0	S	18	2	0	28	9.1	25
SALEM	60	1005.4	1012.9	12.8	5.0	8.8	1.5	16.7	5+	- 3.3	29	0	3	6.7	88	178	33	40	21	1	0	0	2.1	17	15.6	18	18	1	3	26	8.8	
SEXTON SUMMIT R	1169	880.8	1014.0	7.8	2.2	5.1	-0.9	17.2	1	- 2.8	27+	0	6			119	8	31	18		191	102			17.4	17	18+	4	2	24	8.4	
PACIFIC AREA																																
CANTON ISLAND	2			31.7	24.4	28.1	-0.6	33.3	23	22.2	15+	13	0			428	387	125	22		0	0						0	3	27	9.3	
ENIWETOK	4	1009.1	1009.9	30.6	25.0	27.9	-0.2	31.7	30+	23.3	22+	0	0	23.3	75	98	- 62	36	18		0	0	6.6	5								
TAGUAC GUAM R	110			29.4	22.8	25.9	-0.3	30.6	4+	20.0	15	0	0			177	- 84	50	24		0	0			11.2	E	20+					
JOHNSTON	2	1011.2	1011.8	28.3	24.4	26.6	0.1	29.4	21+	21.1	27	0	0	21.7	75	42	- 10	11	11	0	0	0	4.9	9	14.8	E	30	3	14	13	6.9	41
KOROR R	29	1006.4	1010.0	31.1	24.4	27.9	0.6	31.7	28+	23.3	30+	0	0	24.4	34	156	-172	39	21	3	0	0	1.1	6	10.3	NE	29	1	4	25	8.9	51
KWAJALEIN	2	1008.1	1008.9	29.4	24.4	27.2	-0.2	31.1	7	21.7	9	0	0	22.9	83	233	- 75	46	23	0	0	0	4.3	6	19.7	3	9	0	2	28	9.3	
MAJURO	3	1008.8	1009.2	30.0	24.4	27.2	0.3	31.1	8	22.8	10+	0	0	24.4	84	308	- 97	86	28	5	0	0	2.1	8	12.1	NE	9	2	7	21	8.4	51
MARCUS ISLAND	6			28.3	23.3	25.9	-0.4	30.0	11	21.7	20+	0	0			41	- 42	11	15		0	0			15.2	E	20	8	19	3	5.0	82
PONAPE R	37	1004.1	1009.4	30.0	23.3	26.7	0.1	31.1	11+	21.7	28	0	0	23.9	86	394	- 34	127	25	2	0	0	1.5	6	9.4	SE	24	0	2	28	9.3	30
TRUK MOEN ISLAND	2	1009.1	1009.5	30.0	24.4	27.2	0.1	31.1	15+	22.8	21	0	0	23.9	82	141	-173	24	22	4	0	0	2.5	6	13.4	NE	10	0	6	24	8.8	54
WAKE	3	1014.2	1014.4	27.8	23.3	25.7	-1.2	30.0	5+	19.4	27	0	0	19.4	68	49	- 29	38	5	0	0	0	7.1	4	16.5	4	30+	11	10	9	5.6	
YAP R	17			30.0	24.4	27.2	-0.3	31.7	1	23.3	30+	0	0			305	22	65	24	2	0	0	2.8	6	10.7	NE	1	0	7	23	9.0	49
PENNSYLVANIA																																
ALLENTOWN	115	1003.7	1018.0	10.0	0.0	5.2	-0.3	19.4	4	- 6.1	30	0	18	0.0	71	42	- 42	13	9	1	T	0	2.1	28	16.1	30	18+	7	8	15	6.3	
ERIE	223	989.8	1017.0	10.0	1.7	5.8	0.7	22.2	3	- 5.6	29+	0	9	1.1	74	108	23	33	15	5	467	356	3.2	24	17.0	27	27	2	2	26	8.7	
HARRISBURG	103	1005.4	1018.3	10.6	1.1	5.7	-0.7	20.0	4	- 5.6	15	0	15	- 1.1	65	41	- 34	13	10	1	T	0	1.7	28	16.5	NW	18	4	13	13	6.7	43
PHILADELPHIA	2	1017.3	1018.4	11.7	2.2	6.8	-0.1	21.7	4	- 6.1	25	0	11	0.0	65	27	- 60	9	9	1	0	0	1.7	28	15.6	W	17	8	9	13	6.1	48
PITTSBURGH	347	973.2	1018.2	10.0	0.6	5.2	0.3	20.0	3	- 6.1	29	0	14	0.0	70	60	3	18	10	3	5	T	2.8	25	17.0	25	27	3	7	20	8.0	37
READING U	81			11.1	3.3	7.2	-0.1	21.1	4	- 2.2	30+	0	5			48	- 38	15	12		T	T			22.8	W	18	5	10	15	6.3	47
SCRANTON	283	982.7	1017.8	8.9	0.6	4.7	0.4	17.2	7	- 5.6	10	0	14	- 0.6	71	36	- 38	10	13	1	13	T	2.0	25	14.8	SW	27	3	7	20	7.8	35
WILLIAMSPORT	161	998.3	1017.9	10.0	0.6	5.2	0.2	17.2	4+	- 6.1	2	0	14	- 0.6	69	43	- 45	13	12	4	T	T	1.2	27	13.0	28	17	2	10	18	7.7	
RHODE ISLAND																																
BLOCK ISLAND	34			9.4	2.8	6.1	-1.3	17.2	4	- 2.8	25	0	7			32	- 62	13	11		T	0						7	9	14	6.2	
PROVIDENCE	16	1014.2	1016.6	10.0	0.0	5.1	-1.1	21.7	4	- 5.6	20	0	17	- 1.1	65	53	- 52	21	12	1	T	0	2.2	28	13.4	29	4	10	9	11	5.7	56

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min. 0 C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .25 mm or more	Precipitation: No. of days: With thunderstorms	Snow, Sleet: Total	Snow, Sleet: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days: Partly cloudy, 4-7	No. of days: Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
SOUTH CAROLINA																																
CHARLESTON	12	1018.0	1019.6	20.6	7.8	14.2	0.9	26.1	16	- 1.7	30+	0	2	8.9	74	22	- 31	12	5	0	0	0	0.9	36	16.1Y	SW	27+	6	9	15	6.5	46
CHARLESTON U	3			20.0	11.7	15.8	1.0	24.4	17+	2.2	30	0	0			21	- 28	9	5		0	0			13.0	W	17					
COLUMBIA	66	1011.5	1019.7	20.0	5.0	12.6	0.6	26.1	9	- 2.2	30	0	5	6.1	71	45	- 15	29	7	2	0	0	0.7	29	9.8	29	17	10	8	12	5.7	56
GNVLE SPARTANBURG	292	985.1	1020.1	17.2	5.0	11.3	0.3	23.9	9+	- 4.4	30	0	2	3.3	63	72	- 1	43	7	2	0	0	0.5	1	12.5	SW	27	9	11	10	5.7	53
SOUTH DAKOTA																																
ABERDEEN	395	968.8	1017.2	6.1	- 9.4	- 1.6	-0.6	22.2	2	-22.8	30	0	30	- 7.8	65	17	- 2	14	5	0	147	152	0.8	31	13.4	17	4	11	9	10	5.5	
HURON	391	969.2	1017.1	7.2	- 6.7	0.2	0.7	23.3	2	-17.2	29	0	28	- 5.0	72	11	- 6	6	3	0	58	51	0.7	27	15.2	NW	16+	9	9	12	5.7	71
RAPID CITY	965	903.2	1015.9	10.6	- 3.3	3.4	1.7	25.0	1	-10.5	29+	0	24	- 3.9	65	4	- 7	2	3	0	20	T	1.3	34	20.1	NW	15	6	9	15	6.5	54
SIOUX FALLS	432	964.4	1017.3	7.2	- 6.1	0.4	0.1	22.2	2	-18.9	30	0	24	- 4.4	74	7	- 19	4	5	1	41	51	1.1	27	16.1	32	16	10	7	13	5.9	
TENNESSEE																																
BRISTOL	459	965.5	1020.5	15.[illegible]	2.2	8.7	0.9	22.2	5	- 7.8	30	0	10	1.7	67	47	- 17	19	9	0	T	T	0.6	29	15.6	29	27	6	7	17	6.6	
CHATTANOOGA	204	995.3	1020.1	17.2	4.4	10.8	1.1	23.3	8+	- 5.6	30	0	6	5.6	76	114	21	80	7	2	0	0	0.3	31	14.3	NW	27	8	9	13	6.4	46
KNOXVILLE	299	984.8	1020.5	16.7	5.0	10.9	1.7	22.8	26+	- 5.0	30	0	5	4.4	69	64	- 19	35	7	0	T	0	0.7	30	16.5	W	17	9	5	16	6.3	52
MEMPHIS	78	1009.1	1019.6	18.9	7.8	13.2	3.2	27.8	26	- 4.4	30+	0	2	5.6	62	19	- 92	10	7	2	0	0	0.5	18	14.3	SW	26	7	7	16	6.6	53
NASHVILLE	180	997.6	1019.7	16.7	5.0	11.1	1.9	24.4	7+	- 7.8	30	0	5	3.9	63	46	- 37	27	8	3	T	T	0.8	20	15.2	S	26	6	6	18	6.9	47
OAK RIDGE	276			16.1	3.3	9.7	1.2	22.8	7+	- 6.7	30	0	5			74	- 22	45	8		0	0			14.3		27	10	5	15	6.0	
TEXAS																																
ABILENE	537	955.6	1017.1	23.3	10.6	16.8	5.2	32.2	25	- 1.1	29	1	1	6.7	57	47	19	43	2	1	0	0	1.6	19	14.3	W	26	6	6	18	7.3	66
AMARILLO	1098	892.3	1015.9	18.9	3.9	11.4	3.6	27.2	25	- 5.0	27	0	6	- 0.6	50	2	- 15	2	1	1	0	0	2.4	22	20.1	W	26	7	13	10	5.7	69
AUSTIN	182	995.9	1018.0	22.8	12.8	17.8	2.9	30.6	24	2.2	30	0	0	12.8	78	67	13	41	6	1	0	0	1.2	29	10.7	NW	26	3	12	15	7.2	39
BROWNSVILLE	5	1015.9	1016.5	27.2	17.8	22.3	2.5	31.1	25	10.0	30	0	0	18.9	85	66	33	29	9	3	0	0	1.2	13	13.0	S	26	8	13	9	5.7	57
CORPUS CHRISTI	12	1015.6	1017.0	27.2	16.7	21.8	3.9	33.3	26	6.7	30	1	0	17.8	82	50	6	25	5	2	0	0	1.4	10	14.8	S	26	3	13	14	6.7	51
DALLAS	147	1000.3	1017.7	21.7	11.7	16.6	3.9	30.0	26	1.7	29	0	0	11.1	74	51	- 18	41	3	0	0	0	1.2	16	14.3	NW	26	2	9	19	7.7	38
DEL RIO	313	981.4	1017.3	24.4	12.8	18.6	3.7	32.2	26	2.8	30	1	0	11.7	71	32	16	27	4	2	0	0	1.5	11	7.2	33	28	4	7	19	7.4	
EL PASO	1194	884.2	1016.3	21.7	5.6	13.8	3.1	26.1	25	- 1.1	29	0	2	- 1.7	37	3	- 5	3	1	1	0	0	2.5	30	24.1	SW	25	11	7	12	5.5	72
FORT WORTH	164	997.6	1018.1	22.8	11.7	17.2	4.5	31.1	26+	1.1	30	0	0	11.1	73	62	- 1	54	4	0	0	0	0.7	17	11.2	36	28+	3	7	20	7.5	
GALVESTON U	2			23.3	19.4	21.3	4.1	25.6	26+	10.6	29	0	0			108	18	38	9		0	0			11.6	NE	29+					53
HOUSTON U	12			25.0	16.7	20.8	4.3	28.9	26+	8.9	30	0	0			97	- 6	36	8		0	0										
HOUSTON	15	1015.9	1018.0	25.6	15.6	20.6	4.6	30.0	26	3.9	30	0	0	15.6	76	122	24	49	8	1	0	0	1.1	12	12.5	23	21	1	11	18	7.7	57
LUBBOCK	988	904.8	1016.[illegible]	22.2	6.1	14.1	5.2	30.0	25	- 3.3	30+	0	4	1.1	47	1	- 13	1	1	1	0	0	1.5	24	16.5	26	26	5	14	11	6.2	
MIDLAND	869	917.7	1016.2	22.2	6.1	14.1	2.7	29.4	25	- 2.8	30+	0	3	4.4	60	7	- 5	7	1	1	0	0	1.2	20	14.3	29	26	9	7	14	6.1	
PORT ARTHUR	5	1017.6	1018.3	25.6	15.[illegible]	20.1	4.7	28.9	25+	2.8	30	0	0	15.6	79	58	- 30	24	7	1	0	0	1.3	12	15.2	SW	26	1	14	15	7.3	7[illegible]
SAN ANGELO	58[illegible]	950.2	1017.0	23.9	8.9	16.2	3.6	32.2	25	- 2.2	30+	1	2	7.8	64	10	- 10	9	3	0	0	0	1.3	22	19.2	28	26	7	5	18	6.8	
SAN ANTONIO	24[illegible]	989.8	1018.0	23.9	12.2	18.1	2.8	27.8	24+	- 1.1	30	0	1	13.3	79	23	- 12	11	6	1	0	0	0.7	3	10.3	NE	29+	6	8	16	6.9	49
VICTORIA	32	1013.2	1017.5	25.6	15.6	20.4	3.5	31.1	26	2.8	30	0	0	16.1	81	53	- 7	28	7	1	0	0	0.7	8	14.3Y	SW	26	3	12	15	7.5	
WACO	152	999.7	1017.7	22.8	11.7	17.3	3.6	30.6	26+	1.7	30	0	0	11.1	71	118	62	84	4	2	0	0	1.0	20	11.2	32	26	5	8	17	7.2	
WICHITA FALLS	3[illegible]3	98[illegible].4	1017.2	21.1	6.7	13.9	2.5	31.7	25	- 3.3	30	0	3	7.8	73	T	- 36	T	1	0	0	0	0.8	21	19.2	26	26	4	7	19	7.6	
UTAH																																
MILFORD	1533			13.3	- 2.2	5.7	3.4	24.4	1	-11.7	29+	0	20			31	18	11	8		61	51						8	4	18	6.6	
SALT LAKE CITY	1286	872.3	1017.3	13.9	1.7	7.8	5.2	22.8	2	- 8.9	30	0	10	- 0.6	62	29	- 4	10	11	0	66	T	1.8	17	15.6	S	14	6	5	19	7.1	52
WENDOVER	1291			10.6	1.7	5.9	2.8	15.6	23	- 7.8	29	0	8			10	3	4	9		13	T						7	9	14	6.3	
VERMONT																																
BURLINGTON	101	1002.7	1015.5	4.4	- 3.3	0.5	-1.3	14.4	4	- 9.4	19	0	26	- 3.3	76	67	1	24	14	1	315	178	1.4	24	16.5	W	4	0	6	24	8.9	25
VIRGINIA																																
LYNCHBURG	279			13.9	2.8	8.5	0.2	25.0	7	- 5.6	30	0	8			25	- 40	10	7	0	0	0			14.3	NW	17	11	8	11	5.6	56
NORFOLK	8	1018.3	1019.2	16.1	5.6	10.9	0.1	25.0	8	0.0	30	0	1	3.9	65	12	- 65	7	3	0	0	0	0.6	27	15.2	SW	27	14	7	9	4.7	64
RICHMOND	49	1013.5	1019.6	15.6	2.2	9.0	-0.2	24.4	8+	- 8.3	30	0	8	0.6	61	9	- 68	6	5	0	0	0	0.8	26	13.[illegible]	W	27+	9	1[illegible]	[illegible]	[illegible]	6[illegible]
ROANOKE	35[illegible]	977.[illegible]	1019.4	14.4	2.8	8.6	0.4	23.9	7	- 6.7	30	0	6	0.6	61	24	- 44	9	7	0	T	0	1.4	28	14.3	[illegible]	17	12	8	10	5.4	
WASHINGTON																																
OLYMPIA	59	1004.7	1012.1	11.7	5.0	8.1	1.6	16.7	1	- 2.2	29+	0	4	6.7	90	148	- 46	25	26	1	0	0	1.7	20	13.9	17	18	0	3	27	9.4	
SEATTLE TACOMA	122	995.9	1012.4	12.8	6.7	9.7	3.1	20.0	16	0.0	23	0	1	6.1	79	126	- 9	29	21	1	0	0	1.4	17	14.8	20	19	0	4	26	9.2	19
SPOKANE	718	929.0	1014.8	6.7	0.0	3.3	1.3	18.3	1	- 6.1	30	0	14	0.6	84	43	- 13	15	13	0	160	1[illegible]2	0.9	17	14.3	W	19	0	3	27	8.5	11
STAMPEDE PASS R	1206			2.8	- 0.6	1.3	1.6	11.1	1	- 5.6	23	0	16			209	-110	28	23		630	483						0	0	30	9.8	
TATOOSH ISLAND R	31	1006.4	1009.6	11.7	7.8	9.7	1.3	13.9	18+	4.4	25+	0	0	6.7	82	263	- 4	33	27	4	0	0	5.5	1[illegible]	29.5	SW	19	0	4	26	9.2	15
WALLA WALLA U	289			1[illegible].6	4.4	7.5	1.3	20.0	1	- 1.7	30+	0	3			49	6	12	15		56	T			11.6	W	[illegible]	0	0	30	9.8	14
YAKIMA	321	975.6	1014.6	1[illegible]	1.7	5.8	2.8	18.3	1	- 4.4	27	0	8	1.7	78	36	12	12	10		36	T	1.2	2[illegible]	10.7	13	21	1	4	25	8.9	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
WEST INDIES																																
SAN JUAN P.R.	5	1011.5	1013.8	30.0	22.8	26.6	0.9	31.7	1	20.0	30+	0	0	21.7	77	100	- 65	35	14	3	0	0	2.3	8	14.8	E	4	2	19	9	6.3	60
SWAN ISLAND	9			28.9	25.0	26.9	0.2	30.0	13+	23.3	24+	0	0			99	- 89	40	10		0	0						8		13	6.4	
WEST VIRGINIA																																
BECKLEY	763	929.9	1020.0	11.7	1.7	6.7		19.4	3	- 8.3	30	0	11	0.0	66	24		12	8	0	15	T	1.7	24	17.9	29	27	7	6	17	6.8	
CHARLESTON	286	984.4	1019.2	13.9	1.7	7.8	0.4	22.8	3	-10.6	30	0	13	1.7	67	16	- 55	12	5	0	T	0	1.7	23	13.9	25	28	5	9	16	6.7	
ELKINS	600	947.2	1019.4	12.2	- 1.1	5.5	0.7	21.1	3	- 8.9	30	0	17	0.0	74	36	- 34	11	13	1	41	T	2.1	27	14.8	30	17	4	9	17	7.6	
HUNTINGTON	252	988.8	1019.3	15.0	2.8	8.8	1.3	23.3	8	- 6.1	30	0	10	2.2	68	24	- 38	18	4	2	T	0	1.3	23	14.3	25	28	7	7	16	6.6	
PARKERSBURG U	187			13.3	2.8	8.1	1.0	22.8	3	- 3.9	30+	0	8			47	- 13	17	7		T	T			17.0	W	27					38
WISCONSIN																																
GREEN BAY	208	989.5	1015.7	6.1	- 2.2	1.8	0.6	20.0	3	- 9.4	14	0	21	- 1.7	78	56	7	24	8	1	8	T	2.3	27	15.2	SW	27	5	6	19	7.6	30
LA CROSSE	198	991.9	1017.2	6.1	- 2.8	1.8	0.6	20.0	3	-10.0	28	0	22	- 1.7	80	76	26	24	8	2	5	T	1.3	26	14.3	28	27	8	4	18	6.9	
MADISON	262	984.1	1016.3	7.2	- 2.8	2.0	0.9	18.9	3	-10.0	30	0	23	- 1.1	80	50	- 5	23	8	2	T	0	2.1	26	15.6	W	27	8	4	18	6.8	40
MILWAUKEE	205	990.9	1016.7	7.8	- 0.6	3.6	1.5	20.6	3	- 7.8	28	0	18	- 0.6	76	51	- 4	25	7	0	T	T	2.9	26	17.9	W	27	8	5	17	6.8	46
WYOMING																																
CASPER	1627	836.1	1015.4	11.7	- 2.8	4.3	3.4	21.7	1	- 8.9	26	0	22	- 6.7	49	2	- 16	2	2	0	13	T	4.3	25	15.6	35	11	7	9	14	6.4	
CHEYENNE	1867	811.4	1016.1	11.7	- 1.1	5.2	4.0	21.1	1	- 8.3	29	0	23	- 7.2	45	T	- 16	T	0	0	T	0	4.5	28	23.2	W	15	8	8	14	6.3	62
LANDER	1696	827.6	1015.8	10.6	- 3.3	3.7	4.2	19.4	4	-11.1	26	0	24	- 6.1	53	11	- 12	11	1	0	132	127	1.2	26	15.2	W	15	7	13	10	5.5	76
SHERIDAN	1208	877.4	1016.6	11.1	- 4.4	3.4	2.6	25.0	2	- 8.9	26+	0	30	- 5.6	58	6	- 15	5	4	0	114	102	1.0	29	16.1	NW	15	3	10	17	7.1	65

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.
A Maximum hourly average.
B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

V Sun below horizon November 19 - 30, inclusive.
X Sun below horizon November 24 - 30, inclusive.

HEATING DEGREE DAYS

(Base 65°F.)

NOVEMBER 1965

State and station	Current season		Normals
	This month	Period July through this month	July through this month
ALABAMA			
BIRMINGHAM	305	489	462
HUNTSVILLE	268	418	565
MOBILE	100	143	235
MONTGOMERY	209	316	398
ALASKA			
ANCHORAGE	1328	3155	
ANNETTE	778	2017	2082
BARROW	1566	5999	6149
BARTER ISLAND	1725	6211	5923
BETHEL	1264	3877	3801
COLD BAY	864	3159	3114
FAIRBANKS	1833	4435	4181
JUNEAU	1045	2723	2768
KING SALMON	1265	3700	3346
KOTZEBUE	1449	4547	4527
MC GRATH	1686	4445	4154
NOME	1275	4381	4219
ST. PAUL ISLAND	917	3643	3581
SHEMYA	870	3219	3213
YAKUTAT	1135	3355	2811
ARIZONA			
FLAGSTAFF	753	1637	1740
PHOENIX	116	127	256
TUCSON	110	151	256
WINSLOW	532	845	962
YUMA	65	65	108
ARKANSAS			
FORT SMITH	286	446	589
LITTLE ROCK	257	413	601
TEXARKANA	136	244	423
CALIFORNIA			
BAKERSFIELD	232	250	319
BISHOP	553	784	866
BLUE CANYON	671	1128	1130
BURBANK	159	176	226
EUREKA U	305	1406	1528
FRESNO	302	355	417
LONG BEACH	126	136	208
LOS ANGELES	127	149	292
LOS ANGLES U	98	99	169
MT SHASTA R	693	1233	1284
OAKLAND	229	441	584
RED BLUFF	362	409	371
SACRAMENTO	303	354	456
SANDBERG U	526	785	712
SAN DIEGO	118	130	181
SAN FRANCISCO	287	704	668
SAN FRANCISCO U	199	745	817
SANTA CATALINA	213	379	240
SANTA MARIA	253	577	704
STOCKTON	328	381	437
COLORADO			
ALAMOSA	899	2013	2147
COLORADO SPRINGS	632	1343	1447
DENVER	645	1256	1379
GRAND JUNCTION	496	843	1129
PUEBLO	566	1022	1130
CONNECTICUT			
BRIDGEPORT	587	956	988
HARTFORD	753	1325	1188
NEW HAVEN	663	1152	1094
DELAWARE			
WILMINGTON	593	994	909
DIST.OF COLUMBIA			
WASH NATL AP	458	713	769
FLORIDA			
APALACHICOLA U	74	112	169
DAYTONA BEACH	57	67	75
FORT MYERS	7	7	24
JACKSONVILLE	81	119	156
KEY WEST	0	0	0
LAKELAND U	26	30	57
MIAMI	0	0	0
ORLANDO	19	20	72
PENSACOLA	106	154	214
TALLAHASSEE	93	151	226
TAMPA	37	42	60
WEST PALM BEACH	3	3	6
GEORGIA			
ATHENS	322	495	532
ATLANTA	332	511	559
AUGUSTA	276	395	411
COLUMBUS	219	324	420
MACON	279	412	368
ROME	378	590	659
SAVANNAH	204	296	293
IDAHO			
BOISE	613	1150	1339
IDAHO FALLS 42NW R	896	2129	2093
IDAHO FALLS 46W R	855	2035	1999
LEWISTON	613	1090	1282
POCATELLO	725	1634	1565
ILLINOIS			
CAIRO U	347	567	713
CHICAGO O HARE	733	1278	1317
CHICAGO MIDWAY	683	1158	1160
MOLINE	722	1221	1217
PEORIA	707	1216	1178
ROCKFORD	758	1315	1366
SPRINGFIELD	575	963	1059
INDIANA			
EVANSVILLE	500	827	892
FORT WAYNE	673	1172	1275
INDIANAPOLIS	603	1042	1129
SOUTH BEND	727	1318	1266
IOWA			
BURLINGTON	646	1092	1183
DES MOINES	715	1193	1308
DUBUQUE	822	1478	1555
SIOUX CITY	795	1363	1353
WATERLOO	793	1476	1506
KANSAS			
CONCORDIA	580	928	1038
DODGE CITY	473	778	950
GOODLAND	646	1260	1278
TOPEKA	572	899	999
WICHITA	428	681	880
KENTUCKY			
COVINGTON	614	1057	1035
LEXINGTON	558	965	902
LOUISVILLE	526	877	911
LOUISIANA			
ALEXANDRIA	121	239	329
BATON ROUGE	86	151	247
LAKE CHARLES	54	106	229
NEW ORLEANS	84	138	211
SHREVEPORT	103	184	344
MAINE			
CARIBOU	1191	2555	2255
PORTLAND	845	1721	1575
MARYLAND			
BALTIMORE	576	951	897
MASSACHUSETTS			
BLUE HILL OBS R	776	1381	1201
BOSTON	680	1226	988
NANTUCKET	683	1332	1032
PITTSFIELD	898	1820	1658
WORCESTER	843	1567	1411
MICHIGAN			
ALPENA	917	2090	1938
DETROIT	663	1201	1185
DETROIT M WAYNE CO	729	1433	1187
DETROIT WILLOW RUN	750	1505	1197
FLINT	717	1437	1523
GRAND RAPIDS	743	1405	1436
HOUGHTON LAKE	883	1974	
LANSING	764	1501	[illegible]
MARQUETTE U	929	2067	1843
MUSKEGON	748	1306	1322
SAULT STE MARIE	976	2339	2011
MINNESOTA			
DULUTH	1109	2517	2273
INTERNATIONAL FALLS	1196	2621	2483
MINNEAPOLIS	950	1812	1761
ROCHESTER	933	1777	1724
ST CLOUD	1054	2059	1914
MISSISSIPPI			
JACKSON	173	311	361
MERIDIAN	208	347	420
VICKSBURG U	101	189	332
MISSOURI			
COLUMBIA	491	773	956
KANSAS CITY	497	716	871
ST JOSEPH	540	774	1059
ST LOUIS	489	831	938
SPRINGFIELD	460	778	868
MONTANA			
BILLINGS	806	1702	1591
GLASGOW	1137	2080	2060
GREAT FALLS	894	1914	1803
HAVRE	1202	2272	2047
HELENA	[illegible]	2042	1987
KALISPELL	914	2284	2144
MILES CITY	963	1877	1660
MISSOULA	849	2045	2097
NEBRASKA			
GRAND ISLAND	705	1271	1329
LINCOLN U	657	1082	1108
NORFOLK	825	1487	1390
NORTH PLATTE	718	1409	1454
OMAHA	670	1101	1205
SCOTTSBLUFF	698	1421	1473
VALENTINE	864	1645	1621
NEVADA			
ELKO	793	1674	1753
ELY	814	1831	1836
LAS VEGAS	266	298	465
RENO	694	1440	1625
WINNEMUCCA	716	1503	1656
NEW HAMPSHIRE			
CONCORD	899	1810	1560
MT WASHINGTON OBS	1489	4486	4147
NEW JERSEY			
ATLANTIC CITY	596	1061	[illegible]
ATLANTIC CITY U	528	843	766
NEWARK	610	[illegible]	851
TRENTON U	586	985	897
NEW MEXICO			
ALBUQUERQUE	492	765	883
CLAYTON	[illegible]	963	1081
RATON	637	1259	1419
ROSWELL	372	606	793
SILVER CITY	382	625	714
NEW YORK			
ALBANY	817	1418	1374
BINGHAMTON	836	1695	1569
BUFFALO	742	1459	1414
NEW YORK U	538	844	803
J.F. KENNEDY	584	945	848
NEW YORK LA GUARDIA	565	876	778
ROCHESTER	748	1443	1328
SYRACUSE	782	1524	1325
NORTH CAROLINA			
ASHEVILLE	550	940	981
CAPE HATTERAS R	267	402	351
CHARLOTTE	403	604	568
GREENSBORO	441	689	738
RALEIGH	416	636	635
WILMINGTON	217	319	365
NORTH DAKOTA			
BISMARCK	1040	2146	1944
FARGO	1161	2260	1965
WILLISTON	1142	2281	2058
OHIO			
AKRON	675	1247	1212
CINCINNATI OBS	551	906	914
CLEVELAND	671	1229	1261
COLUMBUS	645	1060	1151
DAYTON	677	1129	1090
MANSFIELD	728	1425	1310
TOLEDO	759	1458	1331
YOUNGSTOWN	694	1365	1328
OKLAHOMA			
OKLAHOMA CITY	262	419	677
TULSA	283	420	698
OREGON			
ASTORIA	476	1248	1422
BURNS U	815	1725	1641
EUGENE	461	929	1148
MEACHAM	778	1895	1994
MEDFORD	544	892	1128
PENDLETON	602	1015	1172
PORTLAND	451	855	1099
SALEM	505	1036	1111
SEXTON SUMMIT R	711	1422	1442
PENNSYLVANIA			
ALLENTOWN	705	1241	1136
ERIE	673	1260	1232
HARRISBURG	677	1085	1009
PHILADELPHIA	614	1015	972
PITTSBURGH	702	1368	1215
PITTSBURGH U	593	1052	966
READING U	594	973	908
SCRANTON	731	1343	1347
WILLIAMSPORT	702	1365	1212
RHODE ISLAND			
BLOCK ISLAND	657	1179	995
PROVIDENCE	711	1237	1144
SOUTH CAROLINA			
CHARLESTON	225	320	341
CHARLESTON U	145	209	244
COLUMBIA	303	443	429
GNVLE-SPARTANBURG	375	567	550
SOUTH DAKOTA			
ABERDEEN	1069	2015	1807
HURON	971	1867	1708
RAPID CITY	797	1600	1577
SIOUX FALLS	964	1816	1646
TENNESSEE			
BRISTOL	518	924	[illegible]
CHATTANOOGA	399	629	629
KNOXVILLE	393	606	690
MEMPHIS	275	459	595
NASHVILLE	386	610	[illegible]
OAK RIDGE	460	761	762
TEXAS			
ABILENE	117	188	465
AMARILLO	376	640	[illegible]
AUSTIN	76	136	[illegible]
BROWNSVILLE	8	16	66
CORPUS CHRISTI	14	36	[illegible]
DALLAS	124	204	[illegible]
DEL RIO	41	60	249
EL PASO	240	351	498
FORT WORTH	103	165	[illegible]
GALVESTON U	12	17	[illegible]
HOUSTON U	18	37	165
HOUSTON	23	45	189
LUBBOCK	235	351	705
MIDLAND	232	339	468
PORT ARTHUR	34	77	229
SAN ANGELO	144	220	[illegible]
SAN ANTONIO	64	128	235
VICTORIA	25	55	[illegible]
WACO	100	174	313
WICHITA FALLS	241	374	[illegible]
UTAH			
MILFORD	674	1340	[illegible]
SALT LAKE CITY	564	1140	1349
WENDOVER	660	1189	1242
VERMONT			
BURLINGTON	956	1873	1730
VIRGINIA			
LYNCHBURG	522	891	814
NORFOLK	398	600	544
RICHMOND	498	804	745
ROANOKE	520	854	[illegible]
WASHINGTON			
OLYMPIA	546	[illegible]	[illegible]
SEATTLE TACOMA	462	985	1304
SPOKANE	804	1604	1574
STAMPEDE PASS R	914	2476	2666
TATOOSH ISLAND R	458	1749	[illegible]
WALLA WALLA U	577	917	[illegible]
YAKIMA	671	[illegible]	[illegible]
WEST VIRGINIA			
BECKLEY	621	1213	
CHARLESTON	561	[illegible]	[illegible]
ELKINS	688	[illegible]	[illegible]
HUNTINGTON	[illegible]	916	[illegible]
PARKERSBURG U	547	944	930
WISCONSIN			
GREEN BAY	885	1692	[illegible]
LA CROSSE	884	1665	1545
MADISON	878	[illegible]	[illegible]
MILWAUKEE	793	1456	1611
WYOMING			
CASPER	749	1715	[illegible]
CHEYENNE	702	1611	1727
LANDER	786	[illegible]	1804
SHERIDAN	800	1746	1762

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

NOVEMBER 1965

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				ø ALL OTHER			
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE	
								PROP-ERTY	CROPS			PROP-ERTY	CROPS			PROP-ERTY	CROPS			PROP-ERTY	CROPS			PROP-ERTY	CROPS			PROP-ERTY	CROPS
Alabama	1	1	0	0	4	0	0	2	0	0	0	4	0																
Alaska										0	0	4	0																
Arizona *																													
Arkansas	2	1	0	0	5									0	0	5	0												
California	1	1	0	0	4					0	0	3	0													8	0	6	0
Colorado *																													
Connecticut										0	1	0	0																
Delaware										0	0	4	0																
Florida *																													
Georgia						0	0	3	0	0	0	4	0	0	0	4	0												
Hawaii																										R 2	1	°5	C
Idaho *																													
Illinois	8	2	2	95	7					0	0	5	0																
Indiana	7	2	0	22	6	0	0	3	0	0	2	5	0																
Iowa *																													
Kansas *																													
Kentucky	3	2	1	11	6						7	?																	
Louisiana										0	0	2	0																
Maine										0	0	4	0	0	0	3	0					0	0	2	0				
Maryland										0	0	4	0																
Massachusetts										0	2	5	0	0	0	4	0												
Michigan						0	0	4	0	0	1	6	0	0	0	5	0												
Minnesota																		0	1	5	0								
Mississippi	1	1	0	0	3					0	0	3	0	0	0	3	0												
Missouri										0	2	4	0																
Montana *																													
Nebraska *																													
Nevada																		0	0	4	3								
New Hampshire										0	0	5	0	0	0	3	0					0	0	3	0				
New Jersey *																													
New Mexico *																													
New York										1	7	5				4													
North Carolina *																													
North Dakota																		0	0	3	0								
Ohio	8	3	2	29	6					0	7	5	0																
Oklahoma										0	1	4	4													1	0	4	0
Oregon	1	1	0	0	3																								
Pacific Area *																													
Pennsylvania	1	1	0	6	5					2	5	5	0	0	0	4	0												
Puerto Rico *																													
Rhode Island *																													
South Carolina						0	0	3	0																				
South Dakota *																													
Tennessee						0	0	?	0	0	0	5	0																
Texas *																													
Utah *																													
Vermont										0	3	5	0					0	0	3	0	0	0	3	0				
U. S. Virgin Is.*																													
Virginia										1	3	4	0																
Washington	2	1			4							4																	
West Virginia										0	0	4	0	0	0	4	0												
Wisconsin										0	0	5	0																
Wyoming *																													

° Includes crop damage
C Crop damage
R Rain

* No occurrence of storms or unusual weather phenomena.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
ø For breakdown of "All Others", and for detailed listing of other storms, see the U. S. Weather Bureau monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:

1	Less than $50
2	$50 to $500
3	$500 to $5,000
4	$5,000 to $50,000
5	$50,000 to $500,000
6	$500,000 to $5,000,000
7	$5,000,000 to $50,000,000
8	$50,000,000 to $500,000,000
9	$500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

NOVEMBER 1965

Flooding reported in the continental United States during November was very sparse and minor.

In Hawaii, on the island of Oahu, heavy rains during the period from November 10 through November 14 caused major landslides and localized flooding. Rainfall amounts for the 5-day period ranged from slightly less than 14 inches on leeward Oahu to nearly 25 inches in the mountains. Windward Oahu received about 20 inches. Rainfall on Oahu during the month exceeded the previous maximum for November by 50 percent. Moderate to heavy rains were also reported on the islands of Molaki and Lanai. Damage was widespread on all the islands except Hawaii, which escaped the storms of November 10-14. Two hundred families on Oahu were evacuated from their homes; numerous landslides were responsible for property damage. Major arteries between Honolulu and Kailua were closed by landslides.

WEST GULF OF MEXICO DRAINAGE

Moderate to heavy rainfall on the 4th over the upper basins of the Lavaca and Navidad Rivers in Texas caused some flooding along these streams. Additional heavy rain on the 8th caused another overflow on the Navidad at Ganado, Tex., from the 10th to the 13th. Rainfall reports on the 4th ranged up to nearly 8 inches at Halletsville, Texas. Precipitation amounts to the southeast toward Edna and Ganado fell off sharply. An additional 2 to 4 inches of precipitation on the 8th resulted in heavy runoff. Damages were generally confined to pastureland.

PACIFIC SLOPE DARINAGE

California Coast Drainage.--Heavy rain in southern California during the period from the 14th to the 25th caused flash flooding on several streams. In the Palm Springs area many cars were washed away by flash floods, mostly at Dip Crossings. In San Diego, flash flooding along the Sweetwater River inundated one housing subdivision. There was also considerable flash flooding in San Bernardino County. Streamflow was excessive in most of the State except in the extreme northern part where it was appreciably below median.

Southern California had the most precipitation for November since 1900. Los Angeles reported a total of 11.3 inches. In the San Gabriel Mountains, a total of 30 inches of precipitation occurred during the month.

Most of the damage was from mudslides, particularly in areas where construction was in progress. Homes in isolated areas were flooded. Damage to highways and private property in San Bernardino Valley was estimated at $5 million.

Columbia Basin.--There were frequent rainy periods, but no unusually heavy daily amounts in the Columbia Basin during November. Total precipitation for the month was above average over the western half of the Willamette Basin and along a broad area extending from central Oregon into central Washington. Elsewhere in the basin precipitation was near normal.

The mean monthly stage of the Willamette River at Portland, Oreg., was 3.5 feet, 0.5 foot below the longterm range.

FLOOD STAGE DATA

(All dates in November unless otherwise specified)

NOVEMBER 1965

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
WEST GULF OF MEXICO DRAINAGE	*Ft.*			*Ft.*	
Navidad: Ganado, Tex.	21	6	9	22.95	7
		10	13	24.75	12
Lavaca: Edna, Tex.	21	6	7	22.45	6

* Provisional

RAWINSONDE DATA

Average monthly values

NOVEMBER 1965

ALBANY, N. Y.
[illegible] MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	86	1.1	76	262	3.1
1000	30	[illegible]			276	2.9
950	30	544	.7	72	265	10.1
900	30	977	- 1.3	74	277	16.5
850	30	1,431	- 3.3	77	[illegible]	20.2
800	30	1,910	- 4.6	68	283	24.0
750	30	2,417	- 6.1	56	[illegible]	26.4
700	30	2,956	- 8.2	50	281	29.7
650	30	3,524	-11.0	47	279	33.0
600	30	4,140	-14.2	47	278	36.5
550	30	4,792	-18.2	43	279	41.2
500	30	5,502	-22.7	38	279	42.2
450	30	6,262	-28.1	39	279	45.1
400	30	7,102	-34.1	42	277	49.0
350	30	8,023	-41.1	42	278	50.3
300	30	9,056	-47.8		276	53.8
250	30	10,241	-54.1		271	60.8
200	30	11,655	-58.3		275	60.0
175	30	12,495	-57.6		273	56.1
150	29	13,466	-56.7		272	[illegible]
125	29	14,618	-57.7		272	46.2
100	28	16,019	-59.4		269	45.1
80	28	17,414	-59.6		269	43.1
70	28	18,248	-59.6		268	41.8
60	28	19,213	-59.6		267	40.6
50	28	20,255	-58.9		263	[illegible]
40	28	21,753	-59.0		260	[illegible]
30	28	23,565	-57.4		259	50.5
25	28	24,720	-56.5		256	[illegible]
20	25	26,154	-54.5		257	66.4
15	21	27,986	-53.0		257	74.8
10						
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ALBUQUERQUE, N. MEX.
84[illegible] MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	1,619	4.3	58	31	2.1
1000	30	177				
950	30	615				
900	30	1,058				
850	30	1,524				
800	30	2,022	7.5	38	289	4.9
750	30	2,552	4.7	37	275	10.5
700	30	3,110	1.4	39	276	16.7
650	30	3,701	- 2.1	40	274	21.8
600	30	4,336	- 5.9	39	265	25.1
550	30	5,010	- 9.7	37	268	29.1
500	30	5,744	-14.5	38	267	36.1
450	30	6,530	-19.7	36	264	40.8
400	30	7,401	-25.6	36	265	[illegible]
350	29	8,353	-32.5	36	264	47.0
300	29	9,420	-41.1	42	266	51.3
250	29	10,633	-50.3		266	60.0
200	29	12,060	-58.9		268	61.6
175	29	[illegible]	-62.2		269	61.8
150	29	13,837	-64.1		267	56.7
125	29	14,948	-66.6		267	51.9
100	28	16,286	-68.9		270	46.0
80	28	17,627	-66.5		273	40.0
70	28	18,438	-64.4		276	32.1
60	28	19,382	[illegible]		276	27.2
50	27	20,498	-63.2		274	27.4
40	25	21,881	-60.7		275	27.9
30	23	23,681	-58.6		273	33.0
25	23	24,833	-56.8		268	42.2
20	22	26,251	-55.3		265	49.9
15	13	28,178	-51.5			
10						
7						

AMARILLO, TEXAS
893 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	1,095	6.4	65	246	5.6
1000	30	152				
950	30	581				
900	30	1,035				
850	30	1,499	10.2	52	244	11.3
800	30	2,003	8.9	41	259	13.0
750	30	2,531	5.9	37	268	14.6
700	30	3,095	2.4	37	269	16.7
650	30	3,687	- 1.0	32	267	20.0
600	30	4,325	- 4.8	31	270	23.7
550	30	4,995	- 8.9	31	272	28.9
500	30	5,736	-13.7	32	271	32.8
450	30	6,524	-19.4	35	270	35.4
400	30	7,394	-25.6	36	272	40.2
350	30	8,348	-32.9	38	269	47.0
300	30	9,415	-41.2	49	271	52.8
250	30	10,628	-50.5		272	61.0
200	29	12,051	-59.6		272	68.0
175	29	12,880	-62.8		275	65.7
150	29	13,825	-64.7		272	63.1
125	28	14,931	-66.9		273	60.0
100	27	16,276	-68.6		270	50.7
80	26	17,617	-66.5		275	43.9
70	26	18,427	-65.5		276	33.8
60	25	19,364	-64.6		274	28.9
50	25	20,481	-63.0		277	26.2
40	24	21,857	-61.2		271	26.8
30	24	23,655	-58.4		271	33.8
25	24	24,805	-57.0		268	40.8
20	21	26,226	-55.6		265	47.8
15	17	28,052	-54.4		265	58.1
10	10	30,650	-50.2			
7	7	33,003	-46.7			

ANCHORAGE, ALASKA
1005 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	29	- 7.6	69	5	1.6
1000	30	80			57	1.9
950	30	484	- 3.9	66	7	3.7
900	30	913	- 3.4	60	16	3.3
850	30	1,362	- 4.5	58	25	2.1
800	30	1,838	- 6.2	55	96	1.0
750	30	2,340	- 8.5	55	127	2.1
700	30	2,874	-10.9	49	192	2.1
650	30	3,438	-14.3	45	254	2.9
600	30	4,043	-18.3	47	276	5.2
550	30	4,682	-22.5	47	268	5.6
500	30	5,381	-27.2	44	274	6.6
450	30	6,123	-32.6	44	267	6.8
400	30	6,952	-38.5	45	273	8.7
350	30	7,857	-44.2	43	274	9.7
300	30	8,879	-48.9		281	12.6
250	30	10,065	-53.0		256	9.9
200	30	11,495	-54.6		279	13.0
175	30	12,351	-53.6		277	14.6
150	30	13,344	-52.7		279	15.7
125	30	14,522	-52.2		284	15.7
100	30	15,967	-52.6		289	13.8
80	30	17,406	-52.9		300	17.1
70	30	18,267	-53.1		304	16.7
60	30	19,259	-53.6		305	17.1
50	29	20,433	-54.4		313	20.2
40	28	21,965	-54.8		322	21.6
30	27	23,703	-55.4		323	27.6
25	27	24,864	-56.1		326	31.7
20	26	26,287	-56.3		329	35.7
15	24	28,123	-56.3		333	42.3
10	7	30,693	-58.2			
7						

* ANNETTE, ALASKA
1004 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	37	3.0	78	87	3.3
1000	30	71			59	4.1
950	30	488	1.9	76	129	8.2
900	30	921	- .3	77	153	10.3
850	30	1,377	- 2.4	77	173	10.7
800	30	1,857	- 4.9	75	182	10.3
750	30	2,361	- 7.5	68	196	9.5
700	30	2,898	-10.6	62	201	10.5
650	30	3,464	-13.7	58	211	12.0
600	30	4,070	-17.8	56	211	13.2
550	30	4,712	-22.3	57	205	14.6
500	30	5,409	-27.3	53	203	15.9
450	30	6,152	-32.8	49	210	14.0
400	30	6,981	-38.6	48	214	11.5
350	30	7,886	-44.8		216	12.6
300	30	8,904	-50.3		240	8.2
250	30	10,082	-54.2		270	6.8
200	30	11,510	-54.1		286	10.9
175	30	12,368	-53.5		292	12.8
150	30	13,359	-53.6		293	13.4
125	30	14,529	-54.1		303	15.5
100	30	15,959	-54.6		311	16.3
80	30	17,384	-55.6		317	16.9
70	30	18,233	-56.1		319	16.7
60	29	19,211	-56.8		322	18.5
50	29	20,364	-57.7		328	22.1
40	29	21,770	-58.3		334	23.5
30	29	23,576	-59.3		339	29.5
25	28	24,713	-60.1		340	32.6
20	23	26,099	-61.0		341	44.3
15	18	27,852	-62.1		343	50.3
10	11	30,340	-60.4			
7						

ATHENS, GA.
991 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	246	7.9	85	347	2.1
1000	30	170				
950	30	600	11.5	60	306	3.5
900	30	1,049	9.9	55	280	7.2
850	30	1,522	7.4	55	274	10.3
800	30	2,020	5.0	41	275	14.0
750	30	2,545	2.6	39	277	18.6
700	30	[illegible]	.1	40	274	22.7
650	30	3,691	- 3.0	40	275	28.4
600	30	4,321	- 6.5	39	277	32.1
550	30	4,994	-10.3	40	278	[illegible]
500	30	5,726	-14.7	43	281	42.3
450	30	6,511	-20.0	41	[illegible]	46.4
400	30	7,381	-26.4	41	281	49.0
350	30	8,331	-34.0	40	282	57.7
300	30	9,391	-42.3	42	282	60.0
250	30	[illegible]	-51.2		287	[illegible]
200	30	12,022	-59.3		288	75.0
175	30	12,853	-61.7		287	77.1
150	30	13,802	-63.7		[illegible]	73.6
125	30	14,916	-65.7		282	61.4
100	30	16,265	-67.0		280	51.1
80	30	17,614	-65.9		277	[illegible]
70	30	18,426	-64.7		274	32.2
60	30	19,370	-63.2		273	27.8
50	30	20,498	-60.4		266	26.8
40	29	21,903	-57.3		264	31.5
30	29	23,740	-52.6		255	38.9
25	26	24,925	-51.7		254	43.7
20	25	26,370	-50.3		256	45.1
15	17	28,252	-49.1		257	54.6
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* BARROW, ALASKA
1009 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	8	-10.3	84	170	4.3
1000	30	73			197	5.6
950	30	473	- 8.7	80	202	7.8
900	30	889	- 9.9	78	213	8.2
850	30	1,329	-10.9	73	210	8.0
800	30	1,794	-11.9	66	218	9.3
750	30	2,283	-13.9	62	223	10.3
700	30	2,808	-16.4	60	221	11.7
650	30	3,361	-19.1	54	229	12.4
600	30	3,955	-22.0	56	233	14.2
550	30	4,588	-25.5	56	236	15.7
500	30	5,278	-29.5	55	237	16.5
450	30	6,017	-34.4	55	249	15.7
400	30	6,837	-40.2	54	246	17.7
350	30	7,736	-46.4		246	19.6
300	30	8,746	-52.1		248	23.9
250	30	9,918	-54.7		242	23.9
200	30	11,347	-53.9		242	22.1
175	30	12,206	-52.8		244	21.4
150	30	13,202	-52.2		245	18.5
125	30	14,383	-52.0		250	18.1
100	30	15,827	-52.1		266	19.6
80	30	17,266	-53.2		275	21.2
70	30	18,124	-53.9		281	22.1
60	30	19,112	-54.4		283	24.9
50	30	20,277	-55.2		288	26.2
40	30	21,697	-56.1		292	32.6
30	29	23,534	-56.8		299	36.9
25	29	24,686	-57.7		301	40.8
20	26	26,103	-58.3		301	45.3
15	24	27,936	-58.5		304	53.8
10	17	30,503	-59.5		308	62.7
7	9	32,886	-59.8			

BARTER IS., ALASKA
1011 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	15	-13.5	89	220	3.1
1000	30	95			257	5.6
950	30	493	- 8.5	79	268	8.0
900	30	[illegible]	- 8.5	74	273	10.3
850	30	1,353	- 9.5	71	275	10.3
800	30	1,821	-11.1	70	274	10.1
750	30	2,312	-13.0	66	266	8.7
700	30	2,838	-15.4	63	267	7.8
650	30	3,393	-17.9	63	[illegible]	9.5
600	30	3,991	-21.3	62	270	9.5
550	30	4,622	-25.3	59	270	10.9
500	30	5,314	-29.3	56	280	15.0
450	30	6,054	-34.4	54	281	17.1
400	30	6,974	-39.9	55	286	20.8
350	30	7,774	-45.9		287	23.1
300	30	8,785	-52.0		288	26.4
250	30	9,955	-55.3		284	26.6
200	30	11,381	-54.0		282	23.9
175	30	12,240	-53.1		284	22.5
150	30	13,234	-52.8		287	21.4
125	30	14,411	-52.7		292	21.0
100	30	15,851	-53.3		301	22.0
80	30	17,284	-54.5		302	23.1
70	29	18,135	-55.1		305	25.3
60	29	19,117	-55.7		312	27.0
50	29	20,275	-56.6		312	31.7
40	29	21,688	-57.4		315	34.0
30	27	23,486	-59.3		316	40.2
25	27	24,626	-60.2		319	48.2
20	24	26,043	-60.5		318	48.6
15	14	27,828	-60.9		319	56.5
10	7	30,394	-61.4			
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BETHEL, ALASKA
1004 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	39	- 5.7	86	139	1.7
1000	30	68			184	2.7
950	30	474	- 3.9	82	180	5.8
900	30	900	- 4.4	78	196	8.0
850	30	1,350	- 5.8	69	211	9.1
800	30	1,824	- 7.3	63	218	10.9
750	30	2,322	- 9.6	60	223	12.0
700	30	2,856	-12.3	60	220	13.2
650	30	3,414	-15.7	60	221	13.6
600	30	4,019	-19.2	60	216	13.6
550	30	4,657	-23.0	56	220	16.5
500	30	5,354	-27.9	53	222	18.8
450	30	6,095	-33.2	50	225	21.6
400	30	6,921	-38.7	45	231	22.1
350	30	7,827	-44.0	53	228	27.8
300	30	8,850	-48.8		230	31.9
250	30	10,037	-52.2		232	31.7
200	30	11,474	-53.7		241	30.1
175	30	12,334	-52.5		245	28.7
150	29	13,334	-51.4		244	23.9
125	29	14,517	-51.0		244	19.8
100	29	15,969	-50.8		254	17.3
80	29	17,420	-51.6		256	15.3
70	29	18,284	-52.0		260	14.8
60	29	19,283	-52.4		268	15.2
50	28	20,464	-52.7		280	15.0
40	27	21,906	-52.8		287	15.2
30	25	23,768	-53.0		301	18.1
25	24	24,943	-53.2		303	18.1
20	21	26,382	-53.6		314	19.0
15	13	28,204	-54.6			
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BISMARCK, N. DAK.
956 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	505	- 4.2	73	325	3.5
1000	30	146				
950	30	552			313	2.9
900	30	981	- 1.7	61	278	9.7
850	30	1,437	- .6	55	290	15.2
800	30	1,921	- 1.9	49	298	19.0
750	30	2,428	- 4.1	47	300	23.3
700	30	2,974	- 6.5	44	296	25.8
650	30	3,545	- 9.8	41	292	29.5
600	30	4,164	-13.6	41	291	33.4
550	30	4,814	-17.9	39	293	35.9
500	30	5,526	-22.8	40	292	37.1
450	30	6,282	-28.4	38	292	39.0
400	30	7,125	-34.7	35	289	41.8
350	30	8,043	-41.8	38	287	46.2
300	30	9,071	-49.2		288	51.1
250	30	10,248	-55.4		287	56.5
200	30	11,656	-58.6		285	58.9
175	29	12,488	-58.9		285	59.4
150	28	13,457	-59.0		285	54.6
125	28	14,599	-59.4		284	49.9
100	27	15,990	-59.9		286	47.8
80	26	17,387	-60.8		288	43.9
70	26	18,216	-61.2		289	39.6
60	26	19,174	-61.8		291	37.1
50	24	20,294	-62.9		291	38.1
40	24	21,667	-63.3		290	35.9
30	22	23,440	-63.5		290	40.4
25	21	24,565	-63.2		290	42.5
20	16	25,924	-63.3		290	43.3
15	9	27,683	-61.5			
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BOISE, IDAHO
916 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	864	4.1	76	[illegible]	[illegible]
1000	30	147				
950	30	573				
900	30	1,011	7.1	59	116	[illegible]
850	30	1,481	6.0	50	177	5.8
800	30	1,974	3.1	50	[illegible]	7.6
750	30	2,493	- .2	52	235	9.9
700	30	3,043	- 4.1	56	244	14.2
650	30	3,620	- 7.9	56	249	18.5
600	30	4,242	-11.7	51	251	21.8
550	30	4,899	-16.0	45	254	23.9
500	[illegible]	5,615	-21.0	43	251	25.3
450	[illegible]	6,382	-26.5	40	251	28.9
400	[illegible]	7,226	-32.8	37	[illegible]	31.3
350	30	8,154	-39.4	834	254	35.5
300	30	9,193	-46.4		258	42.7
250		10,381	-54.2		257	[illegible]
200	30	11,794	-59.2		258	51.9
175	30	12,630	-59.6		[illegible]	47.2
150	30	13,595	-59.1		260	43.5
125		14,738	-59.2		263	[illegible]
100	30	[illegible]	-60.2		267	[illegible]
80	[illegible]	[illegible]	-60.5		271	28.9
70	[illegible]	18,355	-61.0		275	25.4
60	27	19,313	-61.4		[illegible]	23.1
50	[illegible]	[illegible]	-61.6		286	22.7
40	25	21,828	-61.7		294	21.0
30	25	23,609	-61.7		293	24.3
25	23	[illegible]	-61.3		299	[illegible]
20	[illegible]	26,111	-60.7		299	28.7
15	[illegible]	[illegible]	-59.9		294	[illegible]
10						
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5						

* BROWNSVILLE, TEXAS
1015 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	7	18.5	96	184	.6
1000	30	139	20.8	91	166	3.3
950	30	585	18.7	82	177	9.1
900	30	1,046	17.3	66	[illegible]	7.0
850	30	1,534	15.6	56	175	3.7
800	30	2,046	13.5	47	220	1.6
750	30	2,587	10.6	48	237	2.7
700	30	3,160	7.3	44	257	5.4
650	30	3,764	3.5	40	273	7.8
600	30	4,411	- .2	37	274	11.5
550	30	5,098	- 4.5	37	269	14.2
500	30	5,847	- 9.3	36	264	17.3
450	30	6,648	-14.8	33	264	19.8
400	30	7,537	-21.4	34	264	[illegible]
350	30	8,507	-28.5	32	262	25.8
300	30	9,592	-37.2	29	265	31.5
250	30	10,825	-47.1		[illegible]	35.7
200	30	12,265	-57.7		273	44.5
175	30	13,097	-63.1		270	44.7
150	30	14,032	-68.3		268	42.7
125	30	15,114	-72.4		270	39.6
100	29	16,419	-74.2		274	30.9
80	27	17,720	-72.2		278	21.8
70	25	18,510	-69.9		287	15.2
60	25	19,436	-66.2		298	11.1
50	25	20,551	-62.3		283	9.7
40	23	21,942	-58.8		267	12.2
30	23	23,762	-55.1		276	11.8
25	23	24,931	-53.1		265	8.7
20	22	26,374	-50.8		260	11.1
15	20	28,253	-48.0		260	14.2
10	17	30,935	-42.9		252	27.2
7	11	[illegible]	-37.5			
5	7	35,794	-32.1			

BUFFALO, N. Y.
989 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	218	2.9	85	232	4.9
1000	30	131				
950	30	545	1.9	81	251	12.0
900	30	981	- .3	79	257	18.3
850	30	1,437	- 2.2	72	262	22.9
800	30	1,917	- 4.1	65	270	24.7
750	30	2,425	- 6.0	57	276	27.6
700	30	2,963	- 8.3	59	277	31.3
650	30	3,533	-10.9	56	276	33.8
600	30	4,147	-14.3	55	278	36.1
550	30	4,799	-18.4	51	280	36.9
500	30	5,507	-23.2	48	278	38.7
450	30	6,266	-28.6	50	281	40.8
400	30	7,104	-34.6	47	282	45.5
350	30	8,025	-40.9	52	280	52.9
300	30	9,059	-47.5		279	55.8
250	30	10,245	-54.4		277	62.0
200	30	[illegible]	-58.1		277	58.3
175	30	12,502	-57.4		276	54.8
150	30	13,476	-57.6		272	53.0
125	30	14,624	-58.7		274	51.7
100	30	16,024	-58.7		276	46.4
80	28	17,421	-59.8		271	40.8
70	28	18,253	-60.4		269	39.4
60	27	19,210	-60.4		270	39.2
50	27	20,346	-60.0		270	37.1
40	26	21,735	-59.6		265	38.5
30	25	23,538	-59.4		260	46.6
25	25	24,687	-57.1		259	51.3
20	25	26,104	-55.5		256	56.3
15	24	27,947	-54.6		251	72.3
10	9	30,580	-51.8			
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5						

*CANTON IS., PACIFIC AREA
+ 1008 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	29	4	30.0	71	1	1.6
1000	29	72	28.7	70	43	2.5
950	29	520	23.9	71	14	2.5
900	29	998	21.3	66	335	2.1
850	29	1,492	18.6	64	313	2.7
800	29	2,010	15.9	59	303	3.1
750	29	2,550	13.2	55	338	3.5
700	29	3,135	10.1	53	334	3.1
650	29	3,743	6.8	48	355	3.1
600	29	4,402	3.1	44	360	3.3
550	29	5,096	- 1.0	43	36	2.9
500	29	5,857	- 5.0	45	58	6.2
450	29	6,674	- 9.7	38	87	7.0
400	29	7,580	-15.0	33	68	6.6
350	29	8,576	-21.8	30	86	6.4
300	29	9,693	-30.1	27	94	5.4
250	29	10,963	-40.4	26	111	4.9
200	29	12,442	-53.0		103	7.6
175	29	13,289	-60.2		108	9.5
150	29	14,234	-67.6		101	12.2
125	29	15,309	-75.5		95	15.2
100	28	16,582	-80.5		35	1.2
80	28	17,847	-77.8		258	8.2
70	28	18,618	-74.0		104	2.3
60	28	19,526	-69.9		84	23.9
50	28	20,624	-65.5		88	43.5
40	28	21,998	-60.7		91	56.9
30	28	23,808	-55.9		88	67.4
25	28	24,979	-51.7		89	67.2
20	27	26,446	-45.6		86	52.4
15	23	28,394	-40.2		98	7.0
10	18	31,193	-35.2		272	8.0
7	10	33,697	-32.4			
5	6	36,120	-27.7			

* CAPE HATTERAS, N. C.
1018 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	4	12.0	79	340	4.3
1000	30	155	13.1	66	352	6.4
950	30	585	10.6	58	333	6.8
900	30	1,034	8.2	50	299	9.9
850	30	1,505	6.1	47	276	12.4
800	30	2,000	4.1	41	275	15.2
750	30	2,518	1.6	41	274	18.3
700	30	3,076	- 1.2	38	273	22.1
650	30	3,659	- 4.6	38	274	26.2
600	30	4,291	- 7.8	34	272	29.9
550	30	4,956	-11.8	37	274	32.2
500	30	5,687	-16.4	39	277	37.7
450	30	6,466	-21.8	40	277	42.7
400	30	7,330	-27.8	37	276	44.3
350	30	8,276	-35.1	38	276	51.3
300	30	9,333	-43.1		278	57.7
250	30	10,537	-52.2		278	60.2
200	28	11,947	-59.4		284	62.7
175	28	12,781	-60.1		284	62.2
150	28	13,742	-60.9		282	57.9
125	28	14,869	-63.0		278	54.0
100	28	16,237	-64.0		278	45.6
80	28	17,607	-63.0		274	36.1
70	28	18,430	-61.9		277	28.9
60	28	19,386	-60.3		267	26.4
50	28	20,527	-58.1		265	28.6
40	27	21,933	-56.0		258	28.7
30	26	23,777	-52.0		255	37.9
25	25	24,961	-50.7		254	41.0
20	23	26,417	-49.1		252	41.4
15	20	28,297	-47.9		252	49.8
10	20	30,982	-46.0		251	63.5
7	5	33,436	-41.3			
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

NOVEMBER 196[illegible]

* CARIBOU, ME. 991 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	191	- 5.2	86	276	3.5
1000	30	115				
950	30	519	- 4.9	80	270	6.6
900	30	942	- 6.6	81	276	11.3
850	30	1,388	- 8.1	77	281	13.4
800	30	1,858	- 8.9	72	273	15.5
750	30	2,356	-10.7	66	272	20.4
700	30	2,885	-12.9	60	270	24.1
650	30	3,447	-15.7	56	267	27.2
600	30	4,049	-18.6	52	267	31.1
550	30	4,690	-22.3	52	268	34.6
500	30	5,387	-26.9	52	265	39.8
450	30	6,137	-31.8	45	262	43.3
400	30	6,964	-37.2	43	262	48.6
350	30	7,875	-43.6	52	260	53.4
300	30	8,896	-50.0		258	58.9
250	30	10,074	-54.6		255	57.5
200	30	11,498	-55.2		258	55.6
175	30	12,351	-55.0		254	53.2
150	30	13,335	-55.5		253	48.2
125	30	14,494	-56.4		255	47.0
100	30	15,906	-57.7		255	43.9
80	30	17,311	-58.4		256	47.4
70	30	18,150	-58.9		254	45.3
60	29	19,108	-59.9		253	44.1
50	29	20,247	-59.6		254	47.8
40	29	21,639	-60.6		252	47.6
30	29	23,430	-59.9		252	58.5
25	29	24,570	-58.7		252	68.0
20	27	25,984	-57.8		254	76.3
15	24	27,824	-55.9		255	82.0
10	22	30,420	-53.7		254	95.4
7	5	32,698	-53.5			

CHARLESTON, S. C. 1018 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	13	9.9	88	344	2.7
1000	30	162	13.7	74	6	4.1
950	30	595	13.1	62	344	1.6
900	30	1,049	10.9	57	310	4.3
850	30	1,524	8.6	52	282	6.2
800	30	2,023	6.4	45	273	9.7
750	30	2,552	3.8	41	273	13.2
700	30	3,109	.9	42	273	18.3
650	30	3,700	- 1.9	40	273	22.3
600	30	4,335	- 5.5	37	276	26.0
550	30	5,008	- 9.7	34	277	30.5
500	30	5,743	-14.2	39	279	35.0
450	30	6,530	-19.5	42	[illegible]	42.5
400	30	7,402	-25.6	40	278	45.8
350	30	8,356	-33.2	40	277	48.0
300	30	9,420	-41.6	47	280	53.4
250	30	10,632	-50.9		282	62.9
200	30	12,055	-59.2		284	67.8
175	30	12,887	-61.6		284	69.7
150	30	13,838	-63.1		281	68.9
125	29	14,953	-65.6		277	60.[illegible]
100	29	16,303	-66.7		277	46.6
80	29	17,653	-66.3		274	34.4
70	29	18,463	-64.9		272	27.5
60	29	19,406	-62.4		269	26.6
50	29	20,540	-59.6		262	26.4
40	28	21,953	-55.8		257	28.2
30	28	23,797	-52.3		258	32.4
25	26	24,979	-51.2		258	32.6
20	23	26,427	-49.9		256	37.1
15	22	28,315	-46.8		249	39.4
10						
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* COLD BAY, ALASKA 10[illegible]9 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	30	2.0	80	239	5.8
1000	30	[illegible]			247	[illegible]
950	30	[illegible]	.6	74	[illegible]	[illegible]
900	30	939	- 1.2	69	270	17.9
850	30	1,393	- 3.4	66	[illegible]	[illegible]
800	30	1,871	- 5.8	65	278	20.8
750	30	2,372	- 8.5	61	274	22.8
700	30	2,907	-11.1	56	275	21.6
650	30	3,471	-14.0	52	274	22.[illegible]
600	30	4,077	-17.5	54	271	22.9
550	30	4,718	-21.4	53	269	24.1
500	30	5,42[illegible]	-25.6	48	272	27.[illegible]
450	30	6,17[illegible]	-3[illegible].4	50	272	29.1
400	30	7,006	-35.6	48	268	31.9
350	30	7,923	-41.3	49	264	31.[illegible]
300	30	8,956	-47.2		270	28.9
250	30	10,149	-51.6		276	34.4
200	30	11,587	-54.0		266	28.4
175	30	12,445	-53.1		260	26.2
150	30	13,44[illegible]	-52.6		259	23.7
125	30	14,618	-52.5		263	22.7
100	30	16,062	-52.1		265	17.1
80	30	17,504	-52.2		26[illegible]	13.6
70	30	18,368	-52.3		272	11.8
60	30	19,363	-52.4		293	9.9
50	30	20,541	-52.5		293	8.5
40	29	21,983	-52.6		316	9.7
30	29	23,842	-52.2		332	11.[illegible]
25	29	25,021	-52.2		343	12.[illegible]
20	28	26,465	-52.3		358	15.2
15	22	28,313	-53.2		354	16.1
10	17	30,92[illegible]	-53.3		344	26.4
7	11	33,223	-54.8			

COLUMBIA, MO. 989 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	238	5.8	78	172	1.6
1000	[illegible]	147				
950	30	567	6.8	70	[illegible]	[illegible]
900	30	1,011	6.8	59	245	12.9
850	[illegible]	1,482	5.6	61	[illegible]	[illegible]
800	30	1,976	3.5	49	[illegible]	[illegible]
750	30	2,495	.5	47	[illegible]	[illegible]
700	30	3,049	- [illegible]	[illegible]	[illegible]	24.1
650	30	3,630	- 5.9	42	284	27.2
600	30	4,257	- 9.5	33	282	30.1
550	30	4,919	-13.4	34	281	34.2
500	30	5,644	-18.1	36	28[illegible]	38.[illegible]
450	30	6,415	-23.5	35	282	[illegible]
400	30	7,275	-29.6	[illegible]	[illegible]	49.5
350	30	8,214	-36.[illegible]	[illegible]	[illegible]	55.4
300	30	9,26[illegible]	-44.3		28[illegible]	62.2
250	30	10,464	-52.4		282	67.9
200	30	11,88[illegible]	-59.4		283	67.[illegible]
175	30	12,712	-61.1		282	66.[illegible]
150	30	13,667	-62.3		280	61.6
125	30	14,789	-63.7		281	54.[illegible]
100	30	16,153	-64.8		279	[illegible]
80	28	17,515	-64.3		279	41.[illegible]
70	28	18,330	-64.3		279	35.4
60	28	19,274	-63.5		279	31.[illegible]
50	28	20,395	-63.[illegible]		[illegible]	[illegible]
40	26	21,780	-61.5		274	33.[illegible]
30	25	23,571	-59.7		265	40.0
25	21	24,711	-58.7		265	41.0
20	15	26,172	-55.[illegible]		261	51.5
15	8	28,017	-53.9			
10						
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CORPUS CHRISTI, TEXAS 1015 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	29	6	21.2	[illegible]	[illegible]	1.4
1000	29	[illegible]	[illegible]	92	[illegible]	3.1
950	[illegible]	[illegible]	18.4	[illegible]	[illegible]	[illegible]
900	[illegible]	[illegible]	17.2	[illegible]	[illegible]	[illegible]
850	29	[illegible]	15.[illegible]	[illegible]	[illegible]	[illegible]
800	[illegible]	[illegible]	13.2	[illegible]	[illegible]	[illegible]
750	29	[illegible]	10.3	[illegible]	250	[illegible]
700	29	3,154	7.[illegible]	[illegible]	253	[illegible]
650	29	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
600	[illegible]	4,404	.3	55	[illegible]	[illegible]
550	[illegible]	5,088	- 4.9	55	264	[illegible]
500	29	[illegible]	- 9.[illegible]	[illegible]	[illegible]	[illegible]
450	[illegible]	[illegible]	-14.9	[illegible]	264	22.7
400	29	7,526	-21.1	49	266	26.4
350	29	8,496	-28.[illegible]	52	270	28.7
300	29	9,579	-37.4	49	270	[illegible]
250	29	10,810	-47.6		271	[illegible]
200	29	12,249	-57.[illegible]		271	[illegible]
175	28	[illegible]	-63.0		[illegible]	37.3
150	28	[illegible]	-67.[illegible]		[illegible]	[illegible]
125	26	[illegible]	[illegible]		[illegible]	[illegible]
100	25	16,426	-72.[illegible]		269	[illegible]
80	22	17,739	-70.[illegible]		271	[illegible]
70	18	18,540	-68.6		274	[illegible]
60	18	19,473	-64.[illegible]		[illegible]	[illegible]
50	18	20,593	-61.[illegible]		272	18.1
40	18	21,998	-57.5		[illegible]	[illegible]
30	17	[illegible]	-54.1		268	16.3
25	16	24,991	-52.5		263	17.9
20	16	26,44[illegible]	-50.[illegible]		260	[illegible]
15	10	28,304	-48.4			
10	8	31,009	-43.2			
7	6	33,440	-38.1			

DAYTON, OHIO 983 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	29	297	3.7	81	241	3.1
1000	29	156				
950	29	576	4.9	71	252	10.1
900	29	1,015	3.0	66	267	17.1
850	29	1,477	1.8	54	273	21.8
800	29	1,965	- .5	58	277	24.1
750	29	2,476	- 2.9	53	279	26.6
700	29	3,023	- 5.5	52	281	28.9
650	29	3,599	- 8.4	46	279	32.4
600	29	4,220	-11.6	41	282	35.5
550	29	4,877	-15.8	41	281	37.7
500	29	5,595	-20.3	38	281	39.8
450	29	6,363	-25.8	40	281	45.3
400	29	7,211	-31.7	42	281	50.7
350	29	8,142	-38.5	43	281	53.0
300	29	9,186	-45.7		283	60.2
250	29	10,379	-53.5		284	68.8
200	29	11,794	-58.7		286	70.5
175	29	12,630	-59.9		285	67.6
150	29	13,593	-60.3		283	62.0
125	29	14,725	-61.3		281	56.3
100	29	16,106	-62.5		278	47.0
80	29	17,482	-62.3		276	37.1
70	29	18,307	-61.9		275	35.2
60	28	19,263	-61.8		270	34.6
50	28	20,391	-61.5		270	33.6
40	28	21,778	-59.9		263	35.0
30	26	23,587	-57.6		255	40.2
25	22	24,757	-55.3		254	48.6
20	21	26,179	-53.5		256	57.9
15	19	28,016	-52.1		255	70.3
10						
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DEL RIO, TEXAS 981 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	314	14.5	83	100	2.9
1000	30	150				
950	30	588	15.9	74	141	6.4
900	30	1,045	16.1	58	183	6.8
850	30	1,530	14.4	48	223	7.0
800	30	2,041	12.5	43	254	7.8
750	30	2,576	9.4	39	262	10.7
700	30	3,148	6.1	38	271	14.2
650	30	3,747	2.3	35	267	16.1
600	30	4,394	- 1.8	32	267	18.5
550	30	5,069	- 5.9	30	265	21.8
500	30	5,822	-10.4	R30	265	26.[illegible]
450	30	6,617	-15.9	R30	265	30.1
400	30	7,504	-22.0	R27	266	34.4
350	30	8,472	-29.5	R30	265	38.5
300	30	9,552	-37.9	R31	262	43.1
250	30	10,782	-47.9		266	45.5
200	30	12,221	-57.7		272	55.2
175	29	13,060	-62.4		272	50.9
150	29	14,003	-66.7		272	48.4
125	27	15,094	-70.2		270	44.5
100	26	16,413	-72.0		272	38.7
80	24	17,734	-69.9		278	29.1
70	24	18,530	-68.5		284	25.8
60	24	19,461	-65.3		287	20.0
50	23	20,580	-62.4		278	18.6
40	23	21,967	-59.4		269	22.3
30	21	23,783	-55.3		265	31.1
25	20	24,958	-53.6		264	31.7
20	19	26,403	-51.4		258	32.2
15	13	28,269	-51.1			
10						
7						
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DENVER, COLO. 837 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	1,611	- .1	68	202	4.9
1000	30	162				
950	30	584				
900	30	1,025				
850	30	1,487				
800	30	1,981	6.7	38	262	6.6
750	30	2,506	4.4	36	285	10.1
700	30	3,067	.1	41	281	13.4
650	30	3,653	- 3.8	43	278	16.[illegible]
600	30	4,284	- 7.8	41	281	22.[illegible]
550	30	4,951	-11.8	39	282	24.7
500	30	5,680	-16.7	4[illegible]	281	29.[illegible]
450	30	6,459	-22.4	43	276	35.[illegible]
400	30	7,318	-28.6	44	272	37.7
350	30	8,26	-35.9	43	272	43.9
300	30	9,313	-44.0	54	270	53.9
250	30	10,513	-52.5		272	64.5
200	29	11,932	-60.2		275	64.3
175	29	12,760	-62.2		272	64.7
150	29	13,712	-62.3		71	58.3
125	29	14,833	-64.0		272	50.1
100	29	16,201	-63.5		274	40.8
80	29	17,571	-63.9		277	34.[illegible]
70	29	18,390	-63.5		276	32.2
60	27	19,341	-62.9		279	27.4
50	27	20,465	-62.4		281	23.9
40	26	21,846	-62.1		274	24.[illegible]
30	23	23,632	-60.9		276	[illegible]
25	20	24,776	-59.8		276	33.2
20	20	26,175	-58.5		270	4[illegible]
15	9	28,061	-56.4			
10	5	30,696	-53.5			
7						
5						

DODGE CITY, KANS. 926 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	792	4.9	79	229	2.3
1000	30	194				
950	30	576				
900	30	1,021	8.6	55	228	4.[illegible]
850	30	1,495	9.1	44	261	8.9
800	30	1,995	7.0	38	267	10.9
750	30	2,523	4.1	33	271	13.6
700	30	3,081	.5	35	272	16.5
650	30	3,669	- 3.2	35	274	20.2
600	30	4,301	- 6.9	36	280	23.1
550	30	4,970	-11.3	38	279	26.[illegible]
500	30	5,701	-16.0	39	280	32.2
450	30	6,480	-21.3	40	278	38.1
400	30	7,347	-27.5	38	278	45.8
350	30	8,293	-34.5	41	275	53.6
300	30	9,352	-42.9	46	276	59.6
250	30	10,557	-51.9		275	[illegible]
200	30	11,973	-60.1		278	73.2
175	28	[illegible]	-62.4		278	71.[illegible]
150	28	13,752	-63.6		278	67.9
125	28	14,865	-65.4		277	57.9
100	28	16,216	-66.4		278	48.4
80	28	17,567	-66.[illegible]		279	39.5
70	28	18,377	-65.1		279	[illegible]
60	28	19,318	-64.4		276	[illegible]
50	28	20,435	-63.4		276	24.[illegible]
40	28	21,808	-62.4		275	[illegible]
30	28	23,592	-61.[illegible]		[illegible]	35.[illegible]
25	24	24,744	-58.5		268	34.5
20	23	26,162	-57.8		267	49.4
15	12	27,965	-54.[illegible]			
10						
7						
5						

EL PASO, TEXAS 885 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	1,193	8.6	51	360	1.[illegible]
1000	30	165				
950	30	595				
900	30	1,050				
850	30	1,529	13.1	36	304	[illegible]
800	30	2,036	1[illegible].4	36	256	[illegible]
750	30	2,569	7.1	4[illegible]	258	[illegible]
700	30	3,135	3.8	36	260	15.[illegible]
650	30	3,727	.4	[illegible]	261	14.[illegible]
600	30	4,372	- 3.5	R28	258	13.9
550	30	5,047	- 7.6	R27	258	[illegible]
500	30	5,791	-12.4	R27	[illegible]	[illegible]
450	30	6,586	-17.7	R30	261	[illegible]
400	30	7,462	-24.[illegible]	[illegible]	263	44.[illegible]
350	30	8,42[illegible]	-31.1	[illegible]	262	[illegible]
300	30	9,497	-39.6	R33	[illegible]	[illegible]
250	30	10,720	-49.1		266	[illegible]
200	30	12,155	-58.1		267	61.[illegible]
175	30	12,988	-62.1		267	[illegible]
150	30	13,932	-65.[illegible]		265	[illegible]
125	[illegible]	15,032	-67.[illegible]		268	49.[illegible]
100	30	16,367	-69.4		269	[illegible]
80	30	17,701	-68.2		273	[illegible]
70	30	18,505	-66.5		278	29.[illegible]
60	29	19,444	-65.1		[illegible]	24.[illegible]
50	29	20,559	-63.4		277	[illegible]
40	[illegible]	[illegible]	-61.1		273	24.[illegible]
30	26	23,745	-57.[illegible]		268	[illegible]
25	[illegible]	24,917	-54.[illegible]		[illegible]	[illegible]
20	1[illegible]	26,369	-52.6		[illegible]	[illegible]
15	17	[illegible]	-51.[illegible]		[illegible]	[illegible]
10	1[illegible]	30,904	-45.[illegible]		[illegible]	[illegible]
7	11	33,329	-4[illegible]		254	[illegible]
5	1	35,634	-39.[illegible]			

ELY, NEV. 809 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	1,908	- 2.0	64	193	7.2
1000	30	186				
950	30	609				
900	30	1,050				
850	30	1,507				
800	30	1,994	2.7	54	194	8.2
750	30	2,519	1.7	52	199	9.7
700	30	3,069	- 2.1	53	225	13.0
650	30	3,651	- 5.7	53	236	17.7
600	30	4,278	- 9.3	46	243	20.4
550	30	4,943	-13.7	45	250	21.4
500	30	5,664	-18.2	42	251	27.6
450	30	6,440	-23.6	38	251	35.2
400	30	7,293	-29.8	38	245	40.4
350	30	8,232	-36.7	38	247	46.0
300	30	9,281	-44.9		249	53.8
250	30	10,477	-53.6		248	64.9
200	29	11,888	-60.9		252	60.8
175	29	12,715	-62.7		252	57.3
150	29	13,665	-62.9		252	53.4
125	29	14,786	-63.4		255	45.1
100	28	16,155	-63.5		261	33.4
80	27	17,526	-63.8		263	27.0
70	27	18,344	-63.7		264	24.7
60	24	19,291	-63.5		270	24.1
50	22	20,418	-63.1		279	20.8
40	19	21,782	-62.9		279	22.5
30	16	23,559	-61.5		276	29.9
25	14	24,691	-61.2		274	33.4
20	12	26,092	-59.7		270	39.8
15	7	27,825	-59.6			
10	7	30,387	-54.7			

* FAIRBANKS, ALASKA 997 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	135	-16.5	87	18	.4
1000	30	109			8[illegible]	2.7
950	30	504	- 9.3	76	109	4.[illegible]
900	30	921	- 7.8	67	142	4.5
850	30	1,366	- 7.7	59	195	2.7
800	30	1,837	- 8.8	58	[illegible]	[illegible]
750	30	2,333	-10.6	58	245	4.9
700	30	2,864	-12.9	57	248	7.0
650	30	3,423	-16.0	56	251	7.[illegible]
600	30	4,024	-19.7	56	252	8.2
550	30	4,661	-23.7	51	263	10.3
500	30	5,355	-28.3	49	26[illegible]	12.2
450	30	6,097	-33.2	47	259	14.6
400	30	6,921	-38.5	43	258	15.2
350	30	7,827	-44.4		26[illegible]	15.2
300	30	8,846	-50.1		273	18.6
250	30	10,025	-54.1		282	18.5
200	30	11,450	-54.9		278	19.6
175	30	12,306	-53.6		27[illegible]	18.3
150	29	13,293	-52.7		279	17.5
125	29	14,47[illegible]	-52.6		287	15.5
100	29	15,913	-52.[illegible]		29[illegible]	17.1
80	29	17,353	-53.2		30[illegible]	19.5
70	29	18,211	-53.8		30[illegible]	[illegible]
60	29	19,199	-54.3		309	22.3
50	28	20,364	-55.[illegible]		31[illegible]	24.[illegible]
40	28	21,786	-55.7		31[illegible]	28.4
30	27	23,621	-56.5		[illegible]	35.7
25	26	24,775	-57.2		[illegible]	36.7
20	22	26,197	-58.0		329	46.4
15	16	27,988	-59.4		33[illegible]	49.[illegible]
10	7	30,573	-59.[illegible]			

FLINT, MICH. 988 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	234	2.9	74	246	4.3
1000	30	137				
950	30	552	1.6	75	261	9.[illegible]
900	30	987	- .5	80	277	15.5
850	30	1,443	- 2.0	71	279	20.8
800	30	1,925	- 3.4	67	281	24.5
750	30	2,433	- 5.1	57	285	26.8
700	30	2,974	- 7.4	55	286	30.5
650	30	3,544	-10.4	56	288	31.5
600	30	4,161	-14.[illegible]	51	287	[illegible]
550	30	4,811	-18.3	50	287	36.1
500	30	5,523	-23.1	47	286	39.8
450	30	6,281	-28.4	44	287	42.9
400	30	7,121	-34.4	41	285	48.6
350	30	8,043	-4[illegible].6	45	285	53.8
300	30	9,077	-47.5		285	57.9
250	30	10,264	-54.0		282	63.5
200	30	11,678	-58.2		284	66.0
175	30	12,518	-58.3		[illegible]	64.3
150	30	13,488	-58.4		281	61.6
125	30	14,632	-58.6		281	55.0
100	30	16,030	-59.1		[illegible]	49.[illegible]
80	30	17,425	-60.1		277	44.[illegible]
70	30	[illegible]	-60.5		274	40.4
60	30	19,216	-61.[illegible]		270	39.[illegible]
50	30	20,349	-60.8		271	39.4
40	30	21,739	-59.[illegible]		[illegible]	[illegible]
30	30	23,540	-58.7		[illegible]	[illegible]
25	30	24,688	-57.5		263	[illegible]
20	26	26,105	-56.[illegible]		[illegible]	[illegible]
15	19	27,935	-54.6		261	71.[illegible]
10	[illegible]	[illegible]	-51.7			

FORT WORTH, TEXAS 997 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	180	12.8	86	194	1.[illegible]
1000	[illegible]	155			352	[illegible]
950	30	592	14.5	[illegible]	229	[illegible]
900	[illegible]	1,046	14.2	[illegible]	251	[illegible]
850	[illegible]	1,527	11.9	50	260	[illegible]
800	[illegible]	2,031	9.0	45	269	[illegible]
750	[illegible]	2,567	6.4	[illegible]	[illegible]	[illegible]
700	30	3,126	3.3	[illegible]	274	[illegible]
650	30	3,723	.1	[illegible]	275	[illegible]
600	30	4,361	- 3.5	33	275	24.[illegible]
550	[illegible]	5,035	- 7.6	[illegible]	275	[illegible]
500	30	5,779	-12.5	[illegible]	274	[illegible]
450	30	6,569	-18.2	34	274	35.5
400	[illegible]	7,445	-24.4	[illegible]	273	[illegible]
350	[illegible]	8,404	-31.6	38	275	47.[illegible]
300	[illegible]	9,476	-39.9	[illegible]	275	[illegible]
250	[illegible]	10,696	-49.6		275	[illegible]
200	30	[illegible]	-58.9		[illegible]	64.[illegible]
175	[illegible]	12,955	-62.3		276	63.3
150	[illegible]	13,899	-65.8		275	57.7
125	30	14,998	-68.6		277	54.9
100	[illegible]	16,330	-69.5		279	45.1
80	29	17,661	-68.3		[illegible]	34.2
70	29	[illegible]	-67.0		277	29.7
60	[illegible]	19,398	-65.4		278	26.4
50	29	20,514	-62.7		277	[illegible]
40	29	21,897	-60.0		272	[illegible]
30	27	23,706	-56.5		266	[illegible]
25	26	[illegible]	-54.4		[illegible]	44.[illegible]
20	25	26,296	-52.6		261	[illegible]
15	23	28,160	-51.2		[illegible]	[illegible]
10	9	30,782	-48.8			

GLASGOW, MONT. [illegible] MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	[illegible]	696	- 6.1	75	94	[illegible]
1000	[illegible]	151				
950	30	554				
900	[illegible]	983	- 1.[illegible]	[illegible]	259	[illegible]
850	[illegible]	1,440	.1	[illegible]	[illegible]	[illegible]
800	[illegible]	1,925	[illegible]	[illegible]	[illegible]	[illegible]
750	[illegible]	2,435	[illegible]	[illegible]	[illegible]	[illegible]
700	[illegible]	2,980	[illegible]	[illegible]	[illegible]	[illegible]
650	[illegible]	3,554	[illegible]	[illegible]	[illegible]	[illegible]
600	[illegible]	4,169	[illegible]	[illegible]	[illegible]	[illegible]
550	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
500	[illegible]	5,531	[illegible]	[illegible]	[illegible]	[illegible]
450	[illegible]	[illegible]	[illegible]	43	287	[illegible]
400	[illegible]	7,129	[illegible]	[illegible]	288	[illegible]
350	[illegible]	8,047	-41.[illegible]	[illegible]	285	[illegible]
300	[illegible]	[illegible]	[illegible]		285	[illegible]
250	[illegible]	10,249	[illegible]		284	[illegible]
200	[illegible]	11,653	[illegible]		[illegible]	[illegible]
175	[illegible]	12,488	[illegible]		[illegible]	[illegible]
150	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
125	[illegible]	14,594	[illegible]		285	[illegible]
100	[illegible]	15,992	[illegible]		288	[illegible]
80	[illegible]	17,385	[illegible]		[illegible]	[illegible]
70	[illegible]	18,215	[illegible]		292	[illegible]
60	[illegible]	19,170	-61.[illegible]		[illegible]	[illegible]
50	[illegible]	20,294	[illegible]		294	[illegible]
40	[illegible]	21,665	[illegible]		[illegible]	[illegible]
30	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
25	[illegible]	24,553	[illegible]		309	[illegible]
20	1[illegible]	25,92[illegible]	[illegible]		307	[illegible]
15	[illegible]	27,720	[illegible]		315	[illegible]
10		30,126	[illegible]			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb.)	* GRAND JUNCTION, COLO. 854 MB						* GREAT FALLS, MONT. 885 MB						GREEN BAY, WIS. 990 MB						GREENSBORO, N. C. 988 MB						GUAM, MARIANA IS. 1000 MB					
					Wind						Wind						Wind						Wind						Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	30	1,474	4.9	67	118	4.7	30	1,123	.2	67	225	7.8	30	21	- .1	79	268	3.7	30	273	5.8	78	304	1.9	30	111	25.0	90	88	8.0
1000	30	164					30	129					30	128					30	172					30	109			91	6.8
950	30	589					30	548					30	539	- .2	75	269	10.3	30	596	8.7	59	290	6.0	30	558	23.0	84	83	20.4
900	30	1,039					30	989					30	970	- 1.3	69	279	15.2	30	1,042	6.8	58	284	11.3	30	1,031	20.3	75	87	22.5
850	30	1,510			122	5.1	30	1,445	2.1	51	234	17.3	30	1,425	- 1.8	60	281	17.9	30	1,510	5.3	53	287	14.4	30	1,523	17.7	70	89	20.4
800	30	2,007	5.3	52	156	8.2	30	1,933	.7	54	257	18.3	30	1,906	- 3.1	52	280	21.4	30	2,004	3.1	51	285	17.3	30	2,040	15.1	69	86	18.6
750	30	2,528	2.2	54	210	8.4	30	2,445	- 2.3	54	269	21.4	30	2,411	- 5.2	52	282	25.3	30	2,526	.7	47	281	20.8	30	2,583	12.9	50	85	20.2
700	30	3,086	- 1.7	61	241	11.7	30	2,993	- 5.7	54	270	25.8	30	2,955	- 8.0	51	284	29.4	30	3,078	- 2.1	44	275	23.7	30	3,163	10.2	40	84	20.8
650	30	3,670	- 5.5	61	249	16.3	29	3,568	- 9.3	51	274	29.3	30	3,526	-10.5	48	285	32.4	30	3,663	- 5.0	42	278	27.0	30	3,774	7.1	37	82	19.2
600	30	4,295	- 9.2	57	255	20.6	29	4,184	-13.3	47	272	28.0	30	4,141	-14.1	45	287	35.5	30	4,290	- 8.2	39	281	31.3	30	4,429	3.3	35	84	20.2
550	30	4,960	-12.7	55	259	26.8	29	4,837	-17.8	50	275	28.7	30	4,791	-18.0	43	286	39.5	30	4,956	-12.2	41	280	36.7	30	5,129	- .7	27	80	21.8
500	30	5,686	-17.3	53	260	30.5	29	5,548	-22.5	46	274	30.1	30	5,502	-22.6	42	290	41.4	30	5,684	-17.1	44	280	40.6	30	5,884	- 5.4	27	81	23.3
450	30	6,461	-22.7	48	259	34.4	29	6,307	-28.1	46	271	32.1	30	6,260	-28.0	40	291	43.9	30	6,462	-22.5	44	282	44.5	30	6,700	-10.4	26	78	26.0
400	30	7,322	-29.0	48	258	42.6	29	7,148	-34.4	47	269	36.7	30	7,102	-34.4	39	291	49.1	30	7,324	-28.4	40	283	49.0	30	7,601	-15.8	23	72	26.2
350	30	8,263	-36.1	48	263	45.8	29	8,068	-41.7	45	266	42.2	30	8,023	-41.5	R36	291	55.2	30	8,268	-35.5	36	283	54.2	30	8,594	-22.8	24	66	23.3
300	30	9,315	-43.7	57	265	50.5	29	9,095	-49.4		266	44.9	30	9,052	-48.6		289	64.1	30	9,324	-43.5		283	62.9	30	9,705	-31.2	23	67	20.8
250	30	10,515	-52.5		268	57.3	29	10,270	-56.3		266	45.8	30	10,234	-55.2		286	66.2	30	10,526	-52.5		284	67.8	30	10,969	-41.4		69	17.7
200	28	11,928	-60.5		265	58.9	29	11,675	-59.5		269	47.0	30	11,643	-59.1		284	65.7	30	11,944	-59.6		290	69.5	29	12,443	-53.6		63	15.9
175	28	12,754	-62.3		264	62.0	29	12,510	-59.8		270	44.5	30	12,480	-58.8		284	67.2	30	12,776	-61.1		288	66.2	29	13,288	-60.5		66	16.1
150	28	13,703	-62.7		265	55.4	29	13,474	-59.4		271	45.6	29	13,448	-58.4		284	65.1	30	13,732	-61.8		287	64.1	29	14,230	-68.1		70	15.9
125	27	14,824	-63.3		265	46.8	29	14,616	-58.9		277	39.6	29	14,594	-59.2		285	57.1	30	14,857	-63.3		285	58.1	29	15,303	-75.8		70	16.9
100	27	16,193	-64.6		264	38.3	29	16,013	-59.6		278	35.7	28	15,995	-60.1		283	55.6	30	16,224	-64.5		282	48.4	29	16,572	-81.7		78	18.5
80	27	17,549	-65.5		270	31.5	28	17,406	-60.6		282	32.6	27	17,386	-60.2		284	48.4	29	17,585	-64.3		278	38.9	28	17,827	-78.9		87	19.4
70	26	18,363	-65.0		275	29.1	27	18,231	-61.3		284	32.4	27	18,216	-60.9		283	42.5	29	18,403	-63.1		275	35.4	28	18,593	-74.3		89	18.8
60	26	19,307	-63.3		275	27.4	26	19,189	-61.4		290	30.7	27	19,173	-61.5		277	41.8	29	19,354	-61.8		271	30.7	27	19,509	-68.0		87	21.0
50	26	20,428	-63.4		276	24.3	24	20,307	-62.6		295	31.7	26	20,304	-61.9		276	41.6	29	20,486	-60.2		268	31.7	27	20,618	-63.2		90	25.8
40	23	21,802	-62.9		277	24.5	20	21,683	-63.0		294	31.7	26	21,684	-61.6		277	41.6	29	21,885	-57.9		265	33.4	27	22,001	-59.6		92	34.8
30	22	23,579	-61.3		278	30.5	19	23,454	-63.3		299	33.0	23	23,473	-61.2		270	46.6	29	23,712	-54.7		259	41.6	26	23,822	-54.8		91	39.4
25	19	24,717	-60.6		281	30.7	18	24,570	-63.4		304	30.5	21	24,602	-60.3		269	50.5	28	24,888	-52.5		260	47.6	24	24,994	-52.5		90	37.5
20	14	26,127	-59.3				16	25,954	-63.6		304	32.6	20	26,010	-58.5		267	54.8	27	26,328	-51.3		257	54.8	23	26,445	-49.1		87	34.7
15	7	28,016	-55.9				13	27,751	-61.6		312	37.1	20	27,828	-56.6		265	63.1	20	28,241	-48.8		256	61.4	18	28,342	-47.4		87	27.4
10							8	30,243	-59.3				13	30,424	-52.8		262	79.4	8	30,932	-47.6				6	31,014	-43.9			

	HILO, HAWAII 1014 MB						HUNTINGTON, W. VA. 990 MB						* INTERNAT. FALLS, MINN. 971 MB						JACKSON, MISS. 1008 MB						* JACKSONVILLE, FLA. 1020 MB					
SURFACE	30	11	21.0	89	249	4.9	30	246	4.8	82	210	2.7	30	360	- 5.6	72	269	2.1	30	94	12.5	88	112	1.7	30	5	13.4	89	351	4.1
1000	30	132	22.1	91	237	3.3	30	166					30	127					30	162	13.9	77	114	3.7	30	173	15.7	74	13	5.1
950	30	579	19.1	85	115	5.4	30	587	6.8	61	250	8.7	30	530	- 5.4	78	266	2.9	30	595	14.1	63	191	3.7	30	609	14.3	66	355	2.9
900	30	1,041	15.9	87	99	6.2	30	1,030	4.7	61	268	13.8	30	954	- 5.6	77	289	8.5	30	1,051	12.6	56	249	6.4	30	1,063	12.3	58	276	3.1
850	30	1,526	13.3	88	112	5.1	30	1,495	2.7	60	271	17.3	30	1,403	- 5.7	68	300	12.2	30	1,529	10.1	58	272	10.1	30	1,541	10.2	51	278	5.2
800	30	2,035	11.1	80	123	5.2	30	1,984	.7	54	279	21.4	30	1,878	- 6.9	64	294	16.7	30	2,031	7.5	51	279	13.2	30	2,044	8.2	41	271	9.3
750	30	2,580	9.3	54	131	5.4	30	2,498	- 2.2	52	279	24.3	30	2,376	- 8.0	60	296	19.0	30	2,558	4.8	46	279	16.5	30	2,576	5.7	37	280	13.6
700	30	3,145	7.7	43	136	4.9	30	3,046	- 4.5	49	277	27.8	30	2,915	-10.2	62	296	24.9	30	3,119	2.1	41	279	19.0	30	3,136	3.1	36	283	16.3
650	30	3,754	4.5	42	156	2.7	30	3,626	- 7.3	42	277	30.9	30	3,478	-12.8	63	297	26.9	30	3,709	- .4	37	279	21.8	30	3,729	- .1	33	279	19.8
600	30	4,402	.8	41	230	2.5	30	4,248	-10.6	36	282	32.8	30	4,090	-16.0	62	296	31.7	30	4,350	- 4.1	36	279	24.9	30	4,369	- 3.4	32	283	24.1
550	29	5,094	- 3.2	38	279	5.4	30	4,908	-14.1	31	293	36.9	30	4,734	-20.1	58	294	35.2	30	5,024	- 7.9	41	282	29.3	30	5,042	- 7.7	35	286	27.8
500	29	5,845	- 7.9	42	269	8.5	30	5,631	-18.5	R29	282	40.2	30	5,441	-25.0	54	292	37.5	30	5,766	-12.7	39	282	34.0	30	5,786	-12.5	35	285	32.6
450	29	6,655	-13.2	41	277	15.2	30	6,402	-23.9	R28	281	45.8	30	6,190	-30.4	51	289	39.2	30	6,551	-18.2	39	284	40.2	30	6,577	-17.9	35	285	40.0
400	29	7,545	-19.3	42	281	21.2	30	7,259	-29.9	R31	281	51.3	30	7,028	-36.3	49	292	42.9	30	7,431	-24.6	43	292	47.6	30	7,453	-24.2	36	285	43.3
350	29	8,525	-25.9	43	283	26.8	30	8,197	-36.9	R34	281	58.7	30	7,941	-43.4	45	293	47.4	30	8,390	-31.6	41	281	52.8	30	8,412	-31.6	34	283	49.1
300	29	9,624	-33.8	36	282	35.5	30	9,247	-44.6		282	65.3	30	8,961	-50.8		290	52.6	30	9,461	-40.0	39	283	59.2	30	9,483	-39.7	35	286	56.7
250	29	10,877	-43.4		282	47.0	30	10,445	-52.7		284	71.7	30	10,131	-56.9		288	58.9	30	10,681	-49.6		282	67.0	30	10,704	-49.1		288	66.0
200	29	12,341	-55.0		284	50.9	30	11,864	-58.6		283	73.0	30	11,531	-59.1		287	58.5	29	12,104	-59.0		281	72.7	30	12,138	-57.7		289	74.8
175	29	13,182	-61.2		287	48.8	30	12,700	-59.7		283	69.2	30	12,370	-58.3		287	54.8	29	12,935	-62.1		281	71.3	30	12,973	-61.4		288	72.1
150	29	14,124	-67.7		284	44.9	30	13,663	-60.4		280	66.0	30	13,339	-58.5		287	51.5	29	13,879	-65.4		280	67.2	30	13,921	-64.8		285	67.8
125	28	15,200	-74.0		287	39.6	30	14,796	-61.7		280	59.4	30	14,484	-58.8		287	48.2	29	14,983	-67.7		277	58.1	30	15,025	-68.0		282	61.2
100	25	16,484	-77.5		297	23.7	30	16,174	-62.6		278	48.6	29	15,882	-59.8		285	48.2	28	16,321	-69.5		278	48.4	30	16,358	-69.5		282	45.8
80	25	17,772	-73.9		311	6.6	30	17,549	-62.5		275	40.4	28	17,276	-60.5		286	44.5	27	17,652	-68.2		279	38.9	30	17,691	-68.0		282	32.1
70	24	18,556	-70.7		320	2.1	30	18,374	-61.2		273	37.1	28	18,106	-61.4		286	47.0	27	18,455	-66.8		278	32.1	30	18,495	-66.3		281	25.6
60	24	19,482	-65.3		98	2.3	29	19,334	-60.6		268	34.6	28	19,059	-62.5		286	45.8	27	19,393	-64.4		278	27.0	30	19,436	-63.1		276	21.2
50	24	20,601	-62.2		99	8.4	29	20,471	-59.9		267	32.1	26	20,186	-63.3		287	46.0	27	20,515	-61.5		270	24.5	30	20,565	-59.7		268	21.6
40	24	21,989	-59.1		94	12.2	29	21,969	-58.4		265	33.0	25	21,558	-63.9		285	45.1	27	21,911	-57.7		266	29.3	30	21,973	-55.8		266	22.5
30	23	23,810	-55.0		91	15.5	29	23,689	-55.7		260	43.1	25	23,320	-64.2		281	47.4	26	23,748	-53.4		260	35.5	30	23,817	-53.0		263	21.4
25	23	24,980	-53.1		87	13.2	29	24,855	-53.9		258	49.5	23	24,442	-64.2		280	47.8	26	24,925	-51.9		259	41.0	30	24,996	-51.5		261	17.3
20	21	26,425	-51.7		86	5.8	29	26,293	-52.2		255	55.8	15	25,854	-62.9		278	49.1	26	26,377	-49.9		257	45.5	29	26,448	-49.0		255	16.7
15	16	28,275	-50.9		258	6.2	29	28,164	-50.1		254	65.7	12	27,674	-60.8		275	48.2	24	28,257	-48.4		255	49.1	26	28,347	-47.1		247	21.0
10	6	30,930	-43.3				26	30,825	-47.6		256	88.4	10	30,218	-58.0				16	30,943	-44.0				23	31,051	-43.3		254	39.8
7							6	33,175	-43.3																17	33,511	-37.9		263	46.6

	JOHN F. KENNEDY INT. ARPT.NY 1017 MB						JOHNSTON IS., PACIFIC AREA 1012 MB						KEY WEST, FLORIDA 1017 MB						KING SALMON, ALASKA 1007 MB						+ KOROR, CAROLINE IS. 1008 MB					
SURFACE	30	5	5.7	65	294	5.1	30	3	26.0	77	91	9.7	30	3	22.4	79	42	5.4	30	15	- 6.0	91	61	1.2	30	30	28.4	79	39	3.1
1000	30	145	5.1	62	288	6.8	30	110	25.0	79	85	11.1	30	146	21.4	80	52	7.6	30	70			227	.4	30	96	27.5	76	45	3.5
950	30	563	3.2	66	281	12.8	30	559	21.1	86	78	12.6	30	590	18.2	80	76	8.7	30	479	- 2.9	76	311	4.5	30	547	23.4	73	58	4.7
900	30	1,000	1.6	61	283	16.7	30	1,028	18.1	83	83	11.5	30	1,052	15.7	68	85	7.6	30	904	- 3.3	69	278	4.7	30	1,020	20.8	68	63	5.6
850	30	1,459	- .1	60	283	20.4	30	1,517	15.4	79	94	8.7	30	1,536	13.4	59	77	4.5	30	1,356	- 4.2	63	277	7.6	30	1,513	18.1	63	61	5.4
800	30	1,944	- 1.6	53	282	25.3	30	2,033	13.2	69	114	6.2	30	2,044	11.3	44	58	3.1	30	1,833	- 6.0	58	274	9.3	30	2,031	15.5	58	71	5.2
750	30	2,462	- 3.4	46	281	28.2	30	2,569	11.1	50	123	5.2	30	2,587	9.4	33	2	3.1	30	2,336	- 8.3	57	277	8.9	30	2,575	12.6	55	81	5.8
700	30	2,999	- 6.2	45	276	29.9	30	3,146	8.5	42	179	4.5	30	3,152	7.1	27	328	6.0	30	2,869	-11.3	54	270	10.5	30	3,153	9.8	46	79	6.4
650	30	3,580	- 9.2	44	273	32.1	30	3,752	5.3	40	201	5.2	30	3,759	4.0	25	311	9.9	30	3,432	-14.7	53	264	11.8	30	3,765	6.5	44	78	6.8
600	30	4,191	-12.7	43	272	34.2	30	4,406	1.8	30	234	7.8	30	4,406	.6	21	294	14.2	30	4,035	-18.4	49	258	11.8	30	4,419	2.7	41	76	7.8
550	30	4,847	-17.0	40	274	36.7	30	5,101	- 2.2	25	234	9.3	30	5,094	- 3.6	19	295	19.8	30	4,677	-22.6	44	269	11.7	30	5,116	- 1.3	36	84	8.0
500	30	5,559	-21.7	38	273	40.0	30	5,855	- 6.7	25	233	13.2	30	5,846	- 8.6	19	294	21.8	30	5,372	-27.2	46	266	11.8	30	5,873	- 5.4	30	83	11.7
450	30	6,328	-27.1	39	275	42.5	30	6,668	-12.0	29	242	14.8	30	6,651	-14.1	18	291	24.5	30	6,124	-32.3	46	275	9.3	30	6,687	-10.2	28	88	11.3
400	30	7,165	-33.3	42	276	47.0	30	7,563	-17.9	37	251	19.6	30	7,540	-20.5	19	292	29.9	30	6,945	-37.8	46	268	12.0	30	7,591	-15.7	26	86	14.2
350	30	8,090	-40.1	42	275	52.6	30	8,550	-24.1	31	251	24.5	30	8,514	-27.9	19	291	32.6	30	7,855	-43.1	48	277	15.3	30	8,585	-22.7	24	94	13.6
300	30	9,126	-47.3		273	57.1	30	9,657	-32.1	24	252	32.1	29	9,603	-36.6	21	292	41.6	30	8,884	-47.5		275	15.2	30	9,697	-31.1	22	93	16.5
250	30	10,313	-53.9		276	62.7	30	10,918	-42.0		253	38.9	29	10,840	-46.1		286	47.6	30	10,077	-51.7		278	18.8	30	10,962	-41.4		86	19.2
200	30	11,728	-58.1		277	64.5	29	12,387	-54.0		251	38.9	29	12,287	-57.2		286	49.1	29	11,507	-53.6		272	15.0	29	12,437	-53.4		82	25.4
175	30	12,569	-57.9		276	60.2	29	13,232	-60.5		251	37.3	28	13,120	-62.9		282	51.5	29	12,367	-52.7		276	15.0	29	13,282	-60.5		79	28.4
150	30	13,539	-59.4		276	55.2	29	14,175	-67.6		249	33.6	28	14,058	-67.8		280	46.0	29	13,363	-52.1		277	15.2	29	14,226	-67.7		79	29.7
125	29	14,686	-59.5		274	51.3	29	15,253	-75.0		256	27.4	28	15,143	-72.0		279	40.2	28	14,540	-51.7		273	15.0	29	15,302	-74.9		85	26.4
100	29	16,079	-60.1		273	44.9	29	16,531	-79.5		263	12.6	27	16,450	-73.9		280	30.1	27	15,984	-51.1		278	14.0	29	16,577	-80.0		89	16.9
80	29	17,471	-60.2		[illegible]	41.4	28	17,801	-76.3		64	1.0	27	17,758	-71.3		283	17.3	27	17,433	-51.6		283	13.0	29	17,838	-79.1		85	14.2
70	29	18,304	-59.8		268	40.7	28	18,579	-71.2		85	5.8	27	18,552	-68.0		290	13.4	27	18,299	-52.0		290	13.6	29	18,605	-74.2		84	16.1
60	29	19,272	-59.6		267	36.9	27	19,505	-66.5		87	9.3	27	19,489	-63.3		264	7.8	27	19,296	-52.4		296	12.6	29	19,516	-68.7		92	24.7
50	29	20,410	-58.9		265	35.5	27	20,617	-62.3		94	13.0	27	20,619	-60.1		230	6.4	27	20,472	-53.0		305	13.8	29	20,620	-63.7		90	39.4
40	28	21,821	-57.5		262	36.7	26	22,004	-59.5		80	20.2	26	22,019	-57.5		205	3.1	27	21,910	-52.9		314	15.3	29	22,004	-59.5		90	50.3
30	27	23,656	-55.1		259	46.0	25	23,822	-55.3		84	27.0	26	23,851	-53.9		83	1.6	25	23,765	-52.9		324	16.1	28	23,824	-54.9		90	54.8
25	27	24,824	-53.9		259	53.2	25	24,991	-53.5		85	27.6	26	25,028	-51.5		73	5.8	24	24,936	-53.2		333	17.1	25	25,001	-51.6		90	57.3
20	22	26,273	-52.7		261	56.7	23	26,434	-50.9		84	22.0	25	26,486	-48.9		96	7.6	22	26,370	-53.9		341	20.9	20	26,467	-47.8		94	55.9
15	17	28,098	-49.9		261	72.3	21	28,314	-48.7		96	10.5	24	28,392	-45.4		136	9.3	15	28,236	-53.2		338	28.7	15	28,386	-43.8		97	28.4
10	5	30,846	-46.6				8	30,990	-42.9				22	31,119	-39.7		220	6.6	5	30,976	-52.3				7	31,147	-39.0			
7													18	33,597	-32.8		258	16.5												

See reference note at end of table

RAWINSONDE DATA

Average monthly values

KOTZEBUE, ALASKA
1007 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	5	- 8.4	81	124	12.4
1000	30	58			124	15.5
950	30	457	- 6.8	83	146	10.5
900	30	878	- 7.4	77	172	8.5
850	30	1,323	- 8.1	70	187	8.5
800	29	1,792	-10.2	67	193	8.9
750	29	2,286	-12.8	65	199	8.7
700	29	2,811	-15.3	65	207	11.8
650	29	3,364	-18.3	64	213	14.4
600	29	3,961	-21.7	63	212	15.9
550	29	4,593	-25.7	59	211	17.7
500	29	5,281	-30.1	59	216	19.6
450	29	6,018	-35.2	54	215	20.8
400	29	6,833	-40.9	54	215	24.5
350	29	7,730	-46.2		218	27.6
300	29	8,745	-50.4		221	30.7
250	29	9,927	-52.9		220	34.2
200	29	11,362	-53.2		228	25.3
175	29	12,225	-52.3		227	23.5
150	29	13,225	-51.3		236	18.3
125	28	14,409	-51.3		239	18.8
100	27	15,856	-51.1		252	18.6
80	27	17,306	-51.7		260	19.6
70	26	18,164	-52.1		266	19.4
60	26	19,161	-52.8		270	20.4
50	26	20,337	-53.1		279	20.8
40	25	21,773	-53.8		282	23.1
30	24	23,615	-54.6		291	28.4
25	22	24,784	-54.9		290	32.4
20	15	26,238	-54.3		294	34.4
15						
10						
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KWAJALEIN, MARSHALL IS.
1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	4	27.0	78	63	9.1
1000	30	90	26.6	78	67	10.5
950	30	544	23.6	80	73	13.0
900	30	1,013	20.5	81	75	12.6
850	30	1,507	18.1	80	82	11.5
800	30	2,025	15.6	77	84	10.5
750	30	2,574	13.0	73	84	10.7
700	30	3,151	9.7	72	83	10.9
650	30	3,763	6.1	70	88	10.3
600	30	4,415	2.7	65	87	10.1
550	30	5,116	- 1.0	60	86	9.9
500	30	5,871	- 5.3	54	91	7.6
450	30	6,691	-10.6	50	104	4.7
400	30	7,588	-16.1	44	125	1.4
350	30	8,582	-22.4	48	142	3.5
300	30	9,695	-30.9	44	173	4.7
250	30	10,962	-41.2	37	192	8.2
200	30	12,437	-53.6	31	192	11.5
175	30	13,282	-60.8	32	195	9.5
150	30	14,222	-68.5	29	169	7.4
125	29	15,294	-75.6		145	5.2
100	23	16,567	-80.4		93	5.8
80	21	17,833	-78.4		79	7.2
70	21	18,601	-74.2		88	12.0
60	21	19,510	-69.2		85	22.9
50	19	20,614	-64.7		88	36.1
40	18	21,990	-61.0		90	45.5
30	18	23,802	-54.7		88	51.7
25	17	24,976	-51.9		88	50.3
20	14	26,434	-47.3		91	44.5
15	14	28,355	-42.6		83	12.2
10	14	31,126	-38.0		261	25.4
7	9	33,577	-35.2			
5	5	35,923	-34.3			

LAKE CHARLES, LA.
1018 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	5	16.2	90	54	1.9
1000	30	154	18.1	78	108	3.7
950	30	594	16.5	70	186	5.2
900	30	1,053	14.5	60	223	5.6
850	30	1,535	12.2	53	253	7.0
800	30	2,041	9.7	46	271	7.8
750	30	2,575	7.0	44	280	12.2
700	30	3,139	4.3	39	280	16.7
650	30	3,738	1.4	36	278	20.6
600	30	4,380	- 2.1	35	280	21.2
550	30	5,061	- 6.0	R35	278	26.2
500	30	5,808	-10.9	34	275	29.7
450	30	6,606	-16.4	R29	274	34.4
400	30	7,487	-22.7	31	277	37.9
350	30	8,452	-30.0	R30	277	45.5
300	30	9,532	-38.4	R29	276	52.6
250	30	10,760	-48.1		277	54.6
200	29	12,194	-58.2		278	58.9
175	29	13,026	-62.6		275	60.4
150	29	13,968	-65.9		276	57.9
125	29	15,067	-68.9		275	48.0
100	29	16,396	-70.4		277	40.0
80	29	17,725	-69.2		278	29.1
70	29	18,524	-67.7		278	25.3
60	29	19,460	-64.8		281	22.5
50	28	20,580	-61.7		273	17.5
40	27	21,976	-58.0		265	22.3
30	27	23,808	-54.2		262	28.0
25	27	24,982	-52.2		262	29.5
20	27	26,432	-50.8		258	32.2
15	25	28,309	-48.9		253	37.3
10	13	31,026	-43.6			

LANDER, WYO.
928 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	1,696	- .5	61	233	2.[illegible]
1000	30	154				
950	30	573				
900	30	1,016				
850	30	1,480				
800	30	1,969	3.7	40	254	2.9
750	30	2,487	1.5	38	271	7.6
700	30	3,044	- 2.1	39	274	15.2
650	30	3,624	- 6.3	40	274	21.[illegible]
600	30	4,251	-10.0	39	276	24.5
550	30	4,908	-14.6	38	272	27.4
500	30	5,633	-19.8	40	267	32.6
450	30	6,397	-25.2	38	268	38.1
400	30	7,252	-31.4	37	267	43.9
350	30	8,184	-38.5	34	267	54.2
300	30	9,226	-46.5		265	64.1
250	30	10,414	-54.5		267	68.0
200	30	11,82[illegible]	-60.4		270	69.3
175	29	12,652	-61.0		269	61.6
150	29	13,610	-60.7		270	55.8
125	29	14,744	-61.1		271	48.6
100	29	16,126	-61.9		272	38.9
80	29	17,504	-62.9		276	31.5
70	29	18,325	-63.0		279	30.9
60	28	19,272	-62.7		283	30.1
50	28	20,394	-63.1		285	27.6
40	26	21,763	-63.2		286	27.4
30	25	23,534	-62.6		290	28.7
25	23	24,664	-62.2		292	28.2
20	20	26,058	-61.0		287	32.[illegible]
15	11	27,852	-60.4			

LAS VEGAS, NEV.
[illegible] MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	660	[illegible]	52	255	4.[illegible]
1000	30	139				
950	30	573				
900	30	1,022	12.7	39	210	1.7
850	30	1,499	10.2	4[illegible]	219	[illegible]
800	30	2,001	7.0	39	[illegible]	7.2
750	30	2,525	3.7	37	[illegible]	[illegible]
700	30	3,086	.4	38	228	[illegible]
650	30	3,674	- 3.2	38	[illegible]	17.7
600	30	4,306	- 6.8	36	239	21.4
550	30	4,975	-10.8	[illegible]	[illegible]	[illegible]
500	30	5,707	-15.2	35	[illegible]	30.3
450	30	6,487	-20.7	37	246	35.5
400	30	7,357	-26.8	41	247	39.6
350	30	8,307	-33.7	38	250	46.2
300	30	9,369	-4[illegible]	42	250	51.5
250	30	10,578	-51.1		251	55.8
200	30	11,999	-59.3		254	57.[illegible]
175	30	12,83[illegible]	-61.6		254	58.3
150	30	13,783	-62.6		25[illegible]	52.9
125	30	14,9[illegible]	-64.4		[illegible]	46.6
100	29	16,263	-64.6		260	39.2
80	27	17,629	-63.8		267	31.[illegible]
70	27	18,449	-63.1		273	28.[illegible]
60	27	19,397	-62.[illegible]		[illegible]	[illegible]
50	26	20,524	-62.2		278	20.6
40	24	21,904	-61.4		[illegible]	[illegible]
30	21	23,697	-59.3		273	[illegible]
25	19	24,846	-58.4		[illegible]	32.4
20	17	26,249	-57.0		275	[illegible]
15	11	28,084	-54.9		272	49.0

* LIHUE, HAWAII
1012 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	36	22.8	85	71	9.9
1000	30	138	22.7	80	74	11.5
950	30	583	19.3	85	81	14.2
900	30	1,047	16.0	85	83	12.0
850	30	1,531	13.0	86	84	10.1
800	30	2,040	11.5	65	88	8.2
750	30	2,578	10.1	47	94	4.3
700	30	3,150	7.4	44	166	1.2
650	30	3,749	4.0	46	246	2.7
600	30	4,403	.3	42	250	3.7
550	30	5,088	- 4.1	42	250	5.8
500	30	5,842	- 8.5	42	260	11.3
450	29	6,648	-13.8	40	264	16.7
400	29	7,538	-19.7	43	263	22.1
350	29	8,517	-26.4	41	265	29.5
300	29	9,613	-34.6	37	267	36.9
250	29	10,862	-43.9		271	45.6
200	29	12,322	-55.3		274	52.6
175	29	13,162	-61.1		276	53.0
150	29	14,105	-67.3		275	49.0
125	29	15,187	-73.3		276	39.8
100	28	16,484	-76.4		281	25.1
80	24	17,774	-73.6		305	8.7
70	24	18,560	-70.2		349	3.5
60	24	19,486	-65.3		18	1.6
50	24	20,606	-61.7		187	1.2
40	24	21,996	-59.3		88	2.3
30	22	23,814	-55.5		66	3.5
25	22	24,981	-53.8		185	.2
20	21	26,423	-53.1		255	3.9
15	18	28,298	-51.3		252	11.7
10	17	30,963	-46.1		265	25.8
7	7	33,380	-39.0			

LITTLE ROCK, ARK.
1010 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	79	10.0	84	264	.6
1000	30	159	11.2	69	138	.4
950	30	587	12.0	60	228	4.5
900	30	1,042	10.8	57	265	10.7
850	30	1,518	9.3	54	273	11.3
800	30	2,018	6.6	51	282	13.8
750	30	2,542	3.7	45	286	16.3
700	30	3,103	.7	42	287	18.6
650	30	3,692	- 2.2	39	284	24.9
600	30	4,328	- 5.6	35	280	28.0
550	30	5,000	- 9.4	35	282	34.0
500	30	5,736	-14.4	39	283	38.7
450	30	6,515	-20.1	39	283	44.5
400	30	7,390	-26.2	39	284	47.8
350	30	8,343	-32.9	35	282	53.2
300	30	9,409	-41.1	R37	281	60.6
250	30	10,623	-50.4		281	65.7
200	30	12,049	-59.3		284	69.0
175	30	12,879	-61.9		283	65.9
150	27	13,824	-64.5		283	65.1
125	27	14,933	-66.2		283	51.9
100	25	16,276	-67.5		283	45.1
80	24	17,617	-67.2		285	37.9
70	24	18,424	-66.2		285	30.7
60	23	19,363	-63.9		274	29.5
50	23	20,486	-62.0		273	23.7
40	22	21,880	-59.7		272	30.7
30	21	23,694	-56.7		268	38.5
25	21	24,855	-55.0		265	42.9
20	21	26,287	-52.6		262	40.4
15	17	28,159	-50.1			

MCGRATH, ALASKA
999 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	103	-13.5	71	168	.8
1000	30	94			89	1.7
950	30	492	- 8.9	81	153	3.1
900	30	911	- 6.3	73	177	5.1
850	30	1,359	- 5.7	65	185	5.1
800	30	1,833	- 7.2	61	212	5.4
750	30	2,331	- 9.4	56	225	5.6
700	30	2,865	-11.8	54	225	8.5
650	30	3,426	-14.7	54	227	11.1
600	30	4,032	-18.3	55	232	12.9
550	30	4,670	-22.3	51	240	15.0
500	30	5,371	-27.2	51	238	16.7
450	30	6,115	-32.6	49	238	17.3
400	30	6,943	-38.4	47	234	16.9
350	30	7,850	-43.9	50	241	17.1
300	30	8,874	-48.6		251	19.6
250	30	10,064	-52.0		242	20.4
200	30	11,501	-53.8		251	19.4
175	30	12,361	-52.8		249	20.6
150	30	13,358	-51.7		255	18.1
125	30	14,544	-50.8		255	16.5
100	29	15,997	-51.0		267	16.1
80	29	17,445	-51.4		275	14.8
70	29	18,311	-51.9		283	15.2
60	29	19,308	-52.5		293	16.9
50	29	20,484	-52.9		299	17.5
40	29	21,920	-53.4		306	21.0
30	28	23,769	-53.8		312	26.0
25	27	24,937	-54.4		316	28.6
20	27	26,363	-55.[illegible]		319	31.9
15	21	28,189	-56.4		319	39.2

MAJURO, MARSHALL IS.
+ 101[illegible] MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	3	28.5	80	76	3.5
1000	30	89	27.2	75	77	3.9
950	30	537	22.9	73	87	4.7
900	30	1,011	2[illegible].3	69	111	3.7
850	30	1,504	18.0	64	124	2.5
800	30	2,022	15.5	62	141	3.3
750	30	2,566	12.7	58	139	3.5
700	30	3,145	9.7	54	168	3.5
650	30	3,757	6.2	52	185	4.1
600	30	4,410	2.4	53	167	4.1
550	30	5,106	- 1.2	47	168	4.7
500	30	5,864	- 5.3	42	152	4.7
450	30	6,685	-10.1	37	138	4.5
400	30	7,585	-15.7	34	135	3.5
350	29	8,580	-22.2	28	136	5.1
300	29	9,694	-30.5	25	150	4.3
250	29	10,963	-40.7	26	179	5.2
200	29	12,443	-53.3		183	8.2
175	29	13,288	-60.5		175	10.1
150	29	14,231	-68.1		164	9.5
125	29	15,305	-75.4		145	6.2
100	29	16,577	-80.7		75	4.1
80	29	17,842	-78.0		62	4.7
70	29	18,614	-72.8		88	9.7
60	29	19,527	-68.7		89	22.3
50	28	20,633	-64.6		91	36.0
40	26	22,007	-60.3		9[illegible]	48.6
30	23	23,819	-54.9		91	55.9
25	19	24,997	-52.1		93	55.8
20	12	26,465	-46.2			

MARCUS IS., N. PACIFIC
+ 1017 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	9	26.6	70	85	8.7
1000	30	159	24.6	64	84	10.1
950	30	606	20.3	64	86	11.7
900	30	1,071	17.0	62	92	1[illegible].5
850	30	1,557	14.3	58	[illegible]	[illegible]
800	30	2,068	12.9	45	86	7.8
750	30	2,606	10.6	37	74	5.[illegible]
700	30	3,181	8.[illegible]	32	55	4.[illegible]
650	30	3,786	4.8	26	19	[illegible].4
600	30	4,437	1.7	23	249	[illegible]
550	30	5,129	- 2.1	21	332	8.4
500	30	5,884	- 6.9	21	317	11.1
450	30	6,691	-12.3	21	[illegible]	1[illegible]
400	30	7,588	-18.6	22	[illegible]	15.1
350	30	8,569	-26.[illegible]	2[illegible]	[illegible]	19.2
300	30	9,666	-34.4	23	[illegible]	26.9
250	30	1[illegible],916	-43.7		[illegible]	[illegible]
200	30	12,382	-53.6		315	4[illegible].9
175	29	13,228	-59.4		313	38.0
150	29	14,179	-65.6		[illegible]	32.6
125	29	15,27[illegible]	-71.9		[illegible]	2[illegible].1
100	29	16,566	-77.[illegible]		297	19.[illegible]
80	29	17,852	-74.7		30[illegible]	7.[illegible]
70	29	18,634	-71.1		7[illegible]	2.1
60	29	19,555	-66.4		[illegible]	4.7
50	29	20,673	-61.7		71	4.[illegible]
40	29	22,070	-57.2		[illegible]	6.[illegible]
30	27	23,900	-53.6		107	1.4
25	[illegible]	25,071	-51.7		[illegible]	[illegible]
20	2[illegible]	26,523	-49.4		[illegible]	[illegible]
15	18	28,405	-47.1		[illegible]95	7.6
10	8	31,120	-4[illegible]			

* MEDFORD, OREG.
967 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	401	5.3	90	149	.9
1000	30	127				
950	30	552	6.8	81	163	1.4
900	30	993	6.5	70	162	6.8
850	30	1,461	4.2	71	191	10.5
800	30	1,952	1.0	73	213	17.1
750	30	2,469	- 1.8	67	223	20.2
700	30	3,015	- 5.0	62	227	23.5
650	30	3,593	- 8.2	58	230	25.1
600	30	4,212	-11.8	57	232	27.2
550	30	4,870	-16.1	55	233	28.9
500	30	5,585	-21.2	52	234	31.9
450	30	6,348	-26.9	56	235	33.8
400	30	7,193	-33.2	54	234	37.5
350	30	8,118	-40.0	51	235	41.4
300	30	9,155	-47.3		239	43.9
250	30	10,341	-54.4		246	45.1
200	30	11,754	-58.7		248	45.5
175	30	12,592	-58.6		249	41.6
150	30	13,562	-58.2		254	37.1
125	29	14,713	-59.0		253	32.6
100	29	16,110	-60.0		258	28.9
80	28	17,498	-60.0		267	20.6
70	28	18,331	-60.6		269	20.8
60	28	19,288	-60.9		279	19.0
50	28	20,420	-61.2		282	17.7
40	24	21,801	-61.1		294	17.3
30	22	23,592	-61.3		315	16.3
25	21	24,722	-60.8		318	20.2
20	19	26,115	-59.9		314	22.0
15	16	27,912	-58.5		301	26.4
10	6	30,368	-55.5			
7						
5						

MERIDA, MEXICO
1016 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	11	18.1	98	73	5.4
1000	30	150	22.2	92	77	8.2
950	30	597	20.4	79	86	9.9
900	30	1,063	17.8	72	79	7.8
850	30	1,551	15.1	63	66	5.2
800	30	2,063	13.5	44	60	6.0
750	30	2,604	11.8	33	56	5.6
700	30	3,181	9.3	28	34	5.2
650	30	3,786	6.1	26	21	5.2
600	30	4,443	2.1	23	354	5.1
550	30	5,132	- 2.4	21	346	4.1
500	30	5,890	- 6.9	19	329	5.2
450	30	6,697	-12.7	20	292	6.9
400	29	7,591	-19.0	24	286	12.0
350	29	8,570	-26.2	29	275	15.9
300	29	9,666	-34.5	29	267	21.2
250	28	10,916	-44.3		262	24.5
200	28	12,372	-55.6		266	32.6
175	28	13,211	-61.6		265	35.9
150	28	14,151	-67.7		266	35.2
125	28	15,232	-73.0		269	31.1
100	28	16,527	-76.0		279	19.8
80	26	17,820	-73.3		292	10.9
70	26	18,607	-69.7		304	6.[illegible]
60	25	19,539	-64.0		339	1.0
50	25	20,664	-60.7		114	2.7
40	25	22,067	-56.8		92	8.4
30	24	23,910	-52.7		89	14.2
25	23	25,096	-50.5		81	14.0
20	19	26,556	-47.9		83	16.7
15	9	28,453	-45.7			

* MIAMI, FLA.
1017 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	4	20.5	86	2[illegible]	3.5
1000	30	148	21.4	79	49	5.6
950	30	593	18.7	77	67	8.[illegible]
900	30	1,055	15.[illegible]	76	91	6.4
850	30	1,538	12.8	67	87	4.5
800	30	2,045	10.6	52	36	1.9
750	30	2,582	8.4	45	319	4.1
700	30	3,149	5.7	37	304	7.6
650	30	3,748	3.0	27	297	10.1
600	30	4,396	- .5	26	293	14.[illegible]
550	30	5,081	- 4.7	27	289	[illegible].4
500	30	5,93[illegible]	- 9.6	29	289	22.7
450	30	6,631	-15.1	28	285	26.4
400	30	7,516	-21.5	28	290	[illegible].4
350	30	8,487	-28.9	29	289	37.0
300	30	9,570	-37.6	29	29[illegible]	41.4
250	30	10,803	-47.0		289	49.9
200	29	12,246	-57.4		284	56.9
175	28	13,082	-62.6		282	57.9
150	28	14,022	-67.4		282	[illegible].4
125	28	15,107	-71.9		[illegible]79	42.9
100	28	16,414	-73.9		279	36.[illegible]
80	27	17,724	-70.9		285	22.9
70	27	18,520	-67.6		286	16.5
60	27	19,457	-63.5		271	11.3
50	27	20,588	-59.8		254	[illegible].7
40	26	21,990	-57.3		255	7.[illegible]
30	25	23,819	-54.3		261	1.2
25	25	24,993	-52.0		[illegible]	1.6
20	25	26,448	-48.[illegible]		[illegible]85	[illegible]
15	24	28,252	-45.[illegible]		152	7.[illegible]
10	19	31,065	-41.4		[illegible]	8.[illegible]
7	1[illegible]	33,567	-[illegible]3.0			

* MIDLAND, TEXAS
918 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	874	8.1	74	[illegible]	1.4
1000	3[illegible]	155				
950	30	587				
900	[illegible]	1,036	13.[illegible]	[illegible]	[illegible]	4.[illegible]
850	30	1,518	[illegible]	41	[illegible]	10.1
800	30	2,027	11.[illegible]	[illegible]	[illegible]	11.7
750	30	2,560	7.[illegible]	[illegible]	265	14.[illegible]
700	30	3,128	4.4	[illegible]	[illegible]	17.[illegible]
650	[illegible]	3,724	1.0	[illegible]	268	[illegible]
600	[illegible]	4,367	- 2.7	[illegible]	[illegible]	[illegible]
550	30	5,044	- 6.8	[illegible]	267	[illegible]
500	30	5,789	-12.0	[illegible]	269	[illegible]
450	[illegible]	6,581	-17.6	[illegible]	268	34.[illegible]
400	30	7,459	-23.8	[illegible]	[illegible]	[illegible]
350	30	8,421	-31.[illegible]	[illegible]	266	[illegible]
300	3[illegible]	9,495	-39.4	[illegible]	264	[illegible]
250	[illegible]	[illegible]	-49.1		[illegible]	[illegible]
200	[illegible]	12,148	-58.6		265	[illegible]
175	[illegible]	12,980	-62.2		[illegible]	[illegible]
150	[illegible]	[illegible]	-65.[illegible]		264	[illegible]
125	[illegible]	15,023	[illegible]		270	[illegible]
100	29	16,354	[illegible]		268	[illegible]
80	28	17,684	[illegible]		273	[illegible]
70	27	18,483	[illegible]		276	[illegible]
60	[illegible]	19,419	[illegible]		277	[illegible]
50	[illegible]	20,534	-63.2		[illegible]	[illegible]
40	25	21,914	-60.9		272	[illegible]
30	[illegible]	23,731	-56.9		[illegible]	[illegible]
25	[illegible]	24,890	-55.4		[illegible]	[illegible]
20	[illegible]	26,319	[illegible]		264	[illegible]
15	[illegible]	28,193	-50.7		257	[illegible]
10	[illegible]	30,867	-48.7		255	[illegible]

MONTGOMERY, ALA.
1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	[illegible]	61	[illegible]	[illegible]	[illegible]	[illegible]
1000	[illegible]	168	12.[illegible]	76	76	.1
950	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
900	[illegible]	1,055	[illegible]	[illegible]	[illegible]	[illegible]
850	[illegible]	1,532	[illegible]	[illegible]	[illegible]	[illegible]
800	[illegible]	2,033	7.4	45	[illegible]	[illegible]
750	[illegible]	2,563	[illegible]	[illegible]	[illegible]	[illegible]
700	[illegible]	3,122	[illegible]	[illegible]	[illegible]	[illegible]
650	[illegible]	3,716	[illegible]	[illegible]	[illegible]	[illegible]
600	[illegible]	4,351	[illegible]	[illegible]	[illegible]	[illegible]
550	[illegible]	5,027	[illegible]	[illegible]	[illegible]	[illegible]
500	[illegible]	5,768	[illegible]	[illegible]	[illegible]	[illegible]
450	[illegible]	6,559	[illegible]	[illegible]	[illegible]	[illegible]
400	[illegible]	7,432	[illegible]	[illegible]	[illegible]	[illegible]
350	[illegible]	8,390	[illegible]	[illegible]	[illegible]	[illegible]
300	[illegible]	9,466	[illegible]	[illegible]	[illegible]	[illegible]
250	[illegible]	10,686	[illegible]		[illegible]	[illegible]
200	[illegible]	12,116	[illegible]		[illegible]	[illegible]
175	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
150	[illegible]	13,896	[illegible]		[illegible]	[illegible]
125	[illegible]	15,006	[illegible]		[illegible]	[illegible]
100	[illegible]	16,348	[illegible]		[illegible]	[illegible]
80	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
70	[illegible]	18,496	[illegible]		[illegible]	[illegible]
60	[illegible]	19,438	-63.[illegible]		[illegible]	[illegible]
50	[illegible]	20,566	-60.6		[illegible]	[illegible]
40	[illegible]	21,963	-57.2		[illegible]	[illegible]
30	[illegible]	23,798	-52.7		[illegible]	[illegible]
25	[illegible]	[illegible]	-50.7		[illegible]	[illegible]
20	[illegible]	26,437	-49.8		[illegible]	[illegible]
15	[illegible]	28,336	-47.1		[illegible]	[illegible]
10	[illegible]	31,040	-42.[illegible]		[illegible]	[illegible]
7	[illegible]	33,462	[illegible]		[illegible]	[illegible]
5	[illegible]	35,776	[illegible]			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

NOVEMBER 1965

* NANTUCKET, MASS.
101[illegible] MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	27	14	4.6	[illegible]	297	4.3
1000	27	1[illegible]8	5.0	75	274	6.9
950	27	[illegible]	.4	[illegible]	[illegible]	[illegible]
900	27	[illegible]	.4	[illegible]	[illegible]	16.5
850	27	1,449	- .9	61	273	[illegible]
800	27	1,932	- [illegible]	56	269	23.7
750	27	[illegible]	- [illegible]	49	269	[illegible]
700	27	[illegible]	- [illegible]	46	271	28.2
650	27	3,55[illegible]	[illegible]	44	271	31.9
600	27	4,172	-13.5	41	271	36.7
550	27	4,824	-17.3	34	268	38.3
500	27	5,548	-21.1	34	268	41.
450	27	6,290	-27.7	36	269	45.6
400	27	7,141	-[illegible]	37	268	45.8
350	27	8,[illegible]65	-4[illegible]	[illegible]	269	50.5
300	27	9,1[illegible]1	-47.0		269	54.0
250	27	10,291	-53.5		270	57.0
200	27	11,71[illegible]	-58.1		269	54.
175	27	12,552	-57.7		266	52.4
150	27	13,526	-58.0		266	51.1
125	26	14,669	-5[illegible]		266	48.0
100	25	16,075	-59.3		265	44.1
80	25	17,470	-59.6		263	39.6
70	25	18,[illegible]	[illegible]		263	39.5
60	25	19,270	-58.9		261	36.1
50	25	20,415	-58.3		257	35.
40	25	21,829	-57.6		256	37.1
30	25	23,643	-55.7		254	42.3
25	23	24,804	-53.5		252	50.9
20	22	26,251	-52.2		252	58.3
15	21	28,114	-51.1		255	69.2
10	15	30,761	-46.4		256	92.3
7						

* NASHVILLE, TENN.
999 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	29	177	7.3	93	35	1.
1000	29	173			101	1.9
950	29	594	8.1	63	223	4.7
900	29	1,042	6.8	60	265	8.2
850	29	1,511	5.7	59	282	11.5
800	29	2,006	3.2	53	282	15.9
750	29	2,527	.5	49	272	17.9
700	29	3,078	- 2.2	44	277	19.2
650	29	3,664	- 4.6	43	279	25.3
600	29	4,291	- 7.7	43	278	28.6
550	29	4,960	-11.6	46	280	34.2
500	29	5,687	-16.4	44	279	38.7
450	29	6,466	-22.	42	280	42.2
400	29	7,328	-28.3	38	280	48.6
350	29	8,272	-35.3	38	280	54.6
300	29	9,327	-43.6		282	58.7
250	29	10,529	-52.7		285	65.1
200	29	11,945	-59.5		283	68.8
175	29	12,776	-61.5		283	72.5
150	29	13,728	-63.1		284	67.6
125	29	14,845	-64.4		281	55.8
100	29	16,205	-65.7		277	48.0
80	28	17,568	-64.5		277	38.0
70	28	18,385	-63.3		273	31.9
60	28	19,332	-62.[illegible]		271	29.1
50	28	20,460	-61.4		270	28.7
40	28	21,853	-58.6		267	31.3
30	28	23,674	-55.6		261	37.3
25	28	24,841	-53.5		258	46.4
20	27	26,286	-51.5		257	52.1
15	27	28,166	-48.9		254	65.3
10	22	30,82[illegible]	-46.2		255	77.7
7	8	33,221	-42.4			

NOME, ALASKA
1006 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	29	7	- 4.9	85	120	4.9
1000	29	54			132	9.3
950	29	454	- 5.6	83	185	7.6
900	29	881	- 6.8	79	199	8.7
850	29	1,326	- 7.9	71	215	9.9
800	29	1,796	- 9.7	58	222	12.0
750	29	2,288	-12.1	53	219	13.6
700	29	2,818	-14.7	54	217	14.6
650	29	3,367	-17.9	53	208	14.8
600	29	3,970	-21.2	51	205	17.7
550	29	4,600	-25.5	48	208	21.2
500	29	5,292	-29.8	48	209	22.7
450	29	6,027	-35.0	47	215	23.1
400	29	6,848	-40.6	49	221	22.1
350	29	7,746	-46.0		226	25.8
300	29	8,763	-49.8		231	25.4
250	29	9,948	-52.2		228	28.9
200	29	11,391	-52.4		236	23.1
175	29	12,258	-50.8		234	22.3
150	29	13,262	-50.2		238	18.8
125	28	14,451	-49.7		239	17.9
100	28	15,909	-49.3		244	17.7
80	28	17,369	-50.6		255	17.1
70	28	18,238	-51.3		255	17.5
60	26	19,236	-51.4		263	18.6
50	26	20,419	-51.9		272	19.2
40	25	21,858	-52.0		278	20.0
30	25	23,720	-52.7		282	24.9
25	24	24,896	-53.3		288	29.1
20	23	26,328	-53.4		291	35.2
15	21	28,175	-53.9		289	42.5
10	13	30,725	-55.9			
7						

* NORTH PLATTE, NEBR.
917 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	848	- 1.4	84	342	2.1
1000	30	154				
950	30	568				
900	30	1,001	2.5	72	295	3.5
850	30	1,468	6.0	51	289	12.2
800	30	1,963	4.5	45	290	15.2
750	30	2,486	1.8	44	290	19.2
700	30	3,039	- 2.0	45	293	21.6
650	30	3,621	- 5.9	45	290	21.6
600	30	4,247	- 9.8	41	288	24.9
550	30	4,909	-13.9	38	288	30.1
500	30	5,630	-18.7	35	288	34.8
450	30	6,404	-24.1	35	289	40.0
400	30	7,255	-30.3	38	286	46.4
350	30	8,191	-37.5	43	284	52.3
300	30	9,236	-45.4		283	60.8
250	30	10,429	-53.7		285	68.8
200	30	11,840	-60.0		282	72.5
175	30	12,672	-61.1		279	68.2
150	30	13,627	-61.8		278	64.1
125	30	14,751	-63.0		279	55.2
100	30	16,122	-63.6		283	45.5
80	30	17,494	-63.5		278	37.7
70	30	18,312	-63.7		283	34.2
60	28	19,262	-63.0		285	31.7
50	28	20,384	-62.9		281	29.1
40	28	21,759	-62.5		280	31.1
30	28	23,537	-61.6		280	32.1
25	28	24,669	-60.9		275	36.1
20	26	26,051	-59.6		273	42.7
15	21	27,860	-57.7		270	50.1
10	13	30,484	-53.4		262	59.8
7	5	32,794	-49.9			

* OAKLAND, CALIF.
1015 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	6	12.6	85	141	3.5
1000	30	132	11.9	81	146	4.1
950	30	560	10.1	73	195	3.1
900	30	1,009	8.4	68	210	5.6
850	30	1,480	6.2	60	219	8.7
800	30	1,976	4.0	49	223	10.9
750	30	2,494	1.0	49	225	13.2
700	30	3,050	- 2.2	51	225	15.9
650	30	3,630	- 5.3	44	228	17.5
600	30	4,261	- 9.0	42	230	20.6
550	30	4,924	-13.5	39	233	24.1
500	30	5,649	-18.5	39	236	26.2
450	30	6,425	-24.3	41	242	29.5
400	30	7,276	-30.2	43	245	35.2
350	30	8,213	-36.8	37	245	42.2
300	30	9,263	-44.6		249	46.6
250	30	10,460	-53.1		249	55.0
200	30	11,877	-59.2		251	56.5
175	30	12,711	-60.0		254	53.0
150	30	13,672	-60.5		257	46.8
125	30	14,807	-61.0		256	37.9
100	30	16,189	-61.8		259	33.4
80	30	17,568	-62.2		264	26.0
70	29	18,392	-62.2		267	24.3
60	29	19,343	-62.2		274	20.4
50	29	20,470	-61.9		275	19.3
40	28	21,849	-61.4		285	19.2
30	26	23,636	-60.6		284	20.8
25	26	24,773	-59.4		284	24.3
20	23	26,187	-58.3		286	29.1
15	20	28,015	-56.7		282	34.4
10	15	30,605	-52.5		276	48.0
7	7	32,908	-50.7			

OKLAHOMA CITY, OKLA.
971 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	392	10.0	78	171	1.2
1000	30	145				
950	30	57[illegible]	11.8	66	187	3.9
900	30	1,027	11.8	55	236	8.4
850	30	1,504	9.8	[illegible]	25[illegible]	11.[illegible]
800	30	2,[illegible]06	7.2	46	261	13.4
750	30	2,531	4.3	40	270	15.2
700	30	3,093	1.2	36	272	17.7
650	30	3,681	- 1.8	32	271	21.8
600	30	4,320	- 5.3	30	271	27.2
550	30	4,991	- 9.4	35	276	31.7
500	30	5,728	-14.3	35	276	35.7
450	30	6,5[illegible]3	-19.9	33	273	41.8
400	30	7,382	-26.3	35	276	48.4
350	30	8,335	-32.9	34	279	55.4
300	30	9,4[illegible]1	-41.2	41	278	62.0
250	30	10,615	-50.6		276	68.6
200	30	12,037	-59.7		277	73.8
175	30	12,866	-62.5		279	73.4
150	30	13,812	-64.2		276	67.4
125	30	14,921	-66.8		276	61.[illegible]
100	29	16,263	-68.1		275	50.0
80	27	17,606	-66.6		278	36.7
70	27	18,415	-65.2		278	31.3
60	27	19,366	-64.4		274	30.1
50	27	20,475	-62.6		274	28.7
40	25	21,859	-60.8		270	31.3
30	22	23,670	-57.7		266	37.1
25	18	24,851	-55.1		263	45.1
20	16	26,271	-53.3		259	54.4
15	9	28,165	-50.6			
10						
7						
5						
4						
3						

OMAHA, NEBR.
969 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	403	1.5	82	275	2.5
1000	30	146				
950	30	563	3.0	73	261	6.8
900	30	1,001	4.8	61	273	14.0
850	30	1,467	4.4	51	280	16.3
800	30	1,960	3.2	41	285	18.8
750	30	2,478	.5	42	287	21.2
700	30	3,031	- 2.9	44	286	24.7
650	30	3,608	- 6.6	37	287	27.8
600	30	4,236	-10.3	35	285	29.3
550	30	4,894	-14.4	35	284	34.0
500	30	5,618	-19.2	35	285	36.9
450	30	6,387	-24.8	35	282	41.2
400	30	7,240	-30.9	42	281	47.6
350	30	8,173	-37.9	45	283	54.4
300	30	9,218	-45.5		284	61.2
250	30	10,412	-53.4		285	70.7
200	30	11,827	-59.1		284	76.2
175	29	12,666	-60.6		282	71.0
150	29	13,625	-60.9		281	68.9
125	28	14,756	-62.2		282	60.7
100	28	16,132	-62.7		282	49.1
80	28	17,505	-63.2		281	41.2
70	28	18,326	-62.9		283	38.3
60	27	19,273	-62.7		282	33.8
50	27	20,398	-62.7		279	30.9
40	26	21,774	-62.7		279	32.8
30	24	23,560	-61.2		278	38.5
25	23	24,697	-59.9		272	42.0
20	21	26,100	-58.4		268	45.1
15	10	27,995	-55.9			
10						
7						
5						
4						
3						

* PEORIA, ILL.
994 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	200	1.9	86	247	2.1
1000	30	151				
950	30	566	4.3	72	259	11.7
900	30	1,007	3.5	67	267	15.9
850	30	1,471	2.2	64	271	18.9
800	30	1,960	.5	54	272	21.6
750	30	2,473	- 1.3	50	276	24.3
700	30	3,024	- 4.3	48	278	26.8
650	30	3,599	- 7.8	48	277	29.5
600	30	4,223	-11.5	46	280	32.1
550	30	4,878	-15.6	43	284	34.6
500	30	5,597	-20.2	43	285	40.0
450	30	6,364	-25.4	42	286	44.9
400	30	7,214	-31.5	43	283	49.9
350	30	8,145	-38.5	41	283	55.6
300	30	9,188	-46.0		284	64.1
250	30	10,379	-54.1		285	70.3
200	30	11,792	-58.9		285	75.4
175	30	12,626	-60.1		283	73.0
150	30	13,587	-60.7		284	70.1
125	30	14,719	-61.8		282	61.0
100	30	16,098	-62.3		282	50.9
80	30	17,475	-62.7		279	39.6
70	30	18,297	-62.8		278	38.7
60	30	19,249	-62.2		276	36.7
50	30	20,376	-61.6		276	35.0
40	30	21,761	-60.9		272	36.5
30	30	23,556	-59.3		265	44.5
25	30	24,702	-57.9		265	50.3
20	30	26,115	-56.0		261	58.1
15	30	27,956	-53.3		259	70.5
10	25	30,585	-49.6		255	92.5
7	13	32,932	-45.3		256	105.5
5						
4						
3						

* PITTSBURGH, PA.
975 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	353	3.7	78	235	5.4
1000	30	150				
950	30	570	4.1	72	253	9.9
900	30	1,007	1.9	74	271	16.5
850	30	1,466	- .4	76	278	20.0
800	30	1,950	- 2.1	66	279	24.3
750	30	2,462	- 3.9	60	282	28.4
700	30	3,003	- 6.4	55	282	31.3
650	30	3,578	- 9.3	47	278	34.0
600	30	4,195	-12.7	49	278	35.4
550	30	4,851	-16.6	48	280	37.7
500	30	5,564	-21.5	48	281	41.4
450	30	6,327	-26.9	42	283	44.1
400	30	7,173	-32.7	44	284	49.7
350	30	8,100	-39.3	48	280	53.8
300	30	9,140	-46.6		281	61.8
250	30	10,329	-53.9		282	64.1
200	30	11,744	-58.4		281	65.3
175	30	12,582	-58.8		281	63.3
150	30	13,548	-59.8		282	60.4
125	30	14,685	-60.4		280	57.1
100	30	16,072	-60.9		278	51.7
80	29	17,458	-60.1		276	41.4
70	29	18,291	-60.3		272	36.3
60	28	19,255	-61.2		270	35.9
50	27	20,386	-61.0		270	39.2
40	27	21,776	-59.0		266	41.2
30	27	23,591	-56.5		259	43.9
25	25	24,740	-56.3		255	48.8
20	24	26,168	-54.3		258	55.4
15	21	28,009	-51.9		254	73.6
10	21	30,647	-49.9		256	86.8
7	18	32,982	-45.8		257	108.8
5	10	35,131	-39.0			
4	7	36,697	-34.0			
3	6	48,737	-32.5			

PONAPE, CAROLINE IS.
+ 1005 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	39	28.0	80	40	5.2
1000	30	84	27.4	78	43	6.2
950	30	530	23.2	75	54	8.5
900	30	1,008	20.4	70	54	8.5
850	30	1,500	17.9	66	51	6.8
800	30	2,018	15.6	59	41	4.5
750	30	2,563	13.1	54	90	1.9
700	30	3,142	9.9	52	78	3.5
650	30	3,751	6.5	48	67	5.6
600	30	4,407	2.7	48	79	5.1
550	30	5,104	- 1.0	47	83	4.9
500	30	5,862	- 5.2	42	82	4.7
450	30	6,681	- 9.8	33	71	3.9
400	30	7,585	-15.2	28	69	2.9
350	30	8,581	-22.1	25	129	3.3
300	30	9,696	-30.3	22	137	6.4
250	30	10,967	-40.6	22	114	8.4
200	30	12,447	-53.0		112	13.2
175	30	13,294	-59.9		86	13.0
150	30	14,240	-67.2		63	11.1
125	30	15,320	-74.8		57	8.0
100	29	16,596	-80.3		72	8.9
80	29	17,860	-77.6		83	9.3
70	29	18,630	-73.5		89	12.6
60	29	19,541	-68.8		92	24.1
50	28	20,644	-64.5		90	38.1
40	27	22,019	-60.2		91	50.3
30	24	23,836	-54.4		91	55.2
25	19	25,000	-51.0		93	55.9
20	13	26,471	-47.5		92	52.8
15	8	28,386	-42.2			
10						
7						
5						
4						
3						

PORTLAND, ME.
1014 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	[illegible]	.3	[illegible]	285	3.1
1000	30	127	1.1	64	273	6.6
950	30	538	.0	63	267	11.5
900	30	971	- 1.9	64	274	12.1
850	30	1,424	- 3.6	61	282	16.1
800	30	1,902	- 5.2	[illegible]	[illegible]	[illegible]
750	30	2,4[illegible]	- 6.7	53	277	26.[illegible]
700	30	2,945	- 8.8	48	273	27.8
650	30	3,510	-11.7	45	271	[illegible]
600	30	4,126	-15.2	4[illegible]	269	37.1
550	30	4,771	-19.4	40	269	40.4
500	30	5,482	-23.9	39	267	42.5
450	30	6,231	-29.1	38	270	43.3
400	30	7,077	-34.9	37	271	50.1
350	30	7,997	-41.0	35	271	54.[illegible]
300	30	9,030	-47.6		272	57.9
250	30	10,219	-53.4		268	60.8
200	30	11,639	-57.5		265	55.9
175	30	12,484	-56.6		263	54.8
150	30	13,462	-56.5		262	51.5
125	30	14,616	-57.5		262	48.2
100	[illegible]	16,023	-57.9		26[illegible]	44.[illegible]
80	29	17,425	-58.5		26[illegible]	40.4
70	29	18,[illegible]	-59.1		260	39.2
60	29	19,233	-58.8		258	38.1
50	[illegible]	20,377	-58.9		256	41.4
40	28	21,780	-58.5		255	43.1
30	27	23,594	-56.8		253	50.[illegible]
25	26	24,761	-55.7		253	55.8
20	[illegible]4	26,194	-54.6		253	60.
15	[illegible]	28,049	-52.1		255	66.4
10	9	30,668	-49.5			

RAPID CITY, S. DAK.
903 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	966	- .1	72	323	3.7
1000	30	141				
950	30	553				
900	30	993			319	4.9
850	30	1,457	4.4	51	299	9.1
800	30	1,949	2.9	46	301	15.0
750	30	2,465	.2	43	302	19.6
700	30	3,019	- 3.5	44	297	20.4
650	30	3,591	- 7.4	44	289	24.3
600	30	4,218	-11.6	40	283	28.2
550	30	4,873	-15.7	R32	282	31.5
500	30	5,592	-20.4	R28	284	35.3
450	30	6,356	-26.1	31	284	39.3
400	30	7,205	-32.4	32	283	44.1
350	30	8,133	-39.7	R28	[illegible]	49.5
300	30	9,169	-47.7		282	58.3
250	30	10,352	-55.0		280	67.6
200	30	11,758	-60.2		278	66.4
175	30	12,589	-60.7		277	60.6
150	30	13,547	-60.6		277	59.2
125	30	14,692	-60.4		279	53.4
100	30	16,[illegible]7	-61.2		280	44.5
80	29	17,446	-61.9		280	41.4
70	29	18,270	-62.3		281	37.1
60	29	19,221	-62.8		282	34.6
50	28	20,346	-63.1		285	32.2
40	25	21,711	-63.7		286	30.9
30	21	23,484	-63.2		285	36.9
25	18	24,609	-63.4		282	36.5
20	12	25,976	-62.1		296	37.5
15	6	27,787	-60.[illegible]			
10						

ST. CLOUD, MINN.
977 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	316	- 3.2	80	285	2.1
1000	30	132				
950	30	542	- 2.3	74	282	5.2
900	30	969	- 1.7	62	292	10.7
850	30	1,425	- 1.7	53	289	14.2
800	30	1,907	- 2.5	48	287	18.8
750	30	2,415	- 4.3	47	290	22.0
700	30	2,959	- 6.8	45	292	25.8
650	30	3,531	- 9.7	42	293	27.6
600	30	4,149	-13.5	42	292	29.9
550	30	4,801	-18.0	42	290	32.4
500	30	5,512	-22.8	41	290	35.2
450	30	6,271	-28.1	39	293	38.7
400	30	7,112	-34.5	37	291	39.4
350	30	8,031	-41.6	R28	289	42.7
300	30	9,060	-49.1		297	49.0
250	30	10,238	-55.6		287	53.4
200	30	11,646	-59.3		289	57.5
175	30	12,481	-59.5		288	60.0
150	30	13,447	-59.3		287	56.5
125	30	14,588	-59.6		287	52.8
100	29	15,982	-60.1		283	47.2
80	28	17,370	-61.0		[illegible]	44.1
70	27	18,200	-61.3		290	41.8
60	27	19,154	-62.0		287	41.4
50	26	20,275	-62.9		288	38.5
40	25	21,650	-62.9		284	37.5
30	21	23,425	-63.2		285	38.1
25	17	24,567	-62.0		278	41.2
20	14	25,972	-60.2		271	43.3
15	8	27,763	-58.9			
10						

ST. PAUL IS., ALASKA
1006 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	10	1.3	90	216	9.3
1000	30	59			217	12.4
950	30	470	- 1.1	85	235	17.1
900	30	900	- 3.7	74	240	19.2
850	30	1,350	- 5.7	66	241	19.2
800	30	1,824	- 8.0	58	239	20.8
750	30	2,322	-10.6	52	239	23.1
700	30	2,851	-13.3	53	240	26.2
650	30	3,410	-16.4	53	238	27.8
600	30	4,011	-19.4	53	238	29.1
550	30	4,648	-22.9	50	236	31.7
500	30	5,346	-27.3	47	237	34.6
450	30	6,089	-32.3	44	244	35.0
400	30	6,920	-37.7	42	242	35.9
350	30	7,829	-43.4	43	242	37.5
300	30	8,856	-48.1		245	41.6
250	30	10,046	-52.2		243	38.7
200	30	11,483	-53.1		238	37.9
175	30	12,345	-51.9		240	33.8
150	30	13,347	-50.8		239	31.1
125	30	14,535	-50.4		240	26.4
100	30	15,990	-50.6		246	22.5
80	30	17,444	-50.9		245	18.9
70	30	18,312	-51.1		244	18.3
60	30	19,314	-51.5		249	15.3
50	30	20,497	-51.5		258	13.6
40	29	21,945	-51.7		266	9.5
30	27	23,816	-51.4		273	12.2
25	25	24,997	-51.4		290	8.9
20	23	26,446	-51.5		304	10.3
15	20	28,323	-51.2		306	12.6
10	8	30,983	-52.2			

SALEM, OREG.
1006 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	61	7.5	90	175	5.4
1000	30	106			179	9.1
950	30	526	7.5	78	193	15.3
900	30	975	6.1	73	207	19.
850	30	1,441	3.5	71	213	21.6
800	30	1,931	.4	74	217	22.9
750	30	2,441	- 2.9	72	220	25.1
700	30	2,990	- 6.3	65	223	25.4
650	30	3,560	- 9.8	55	225	27.2
600	30	4,180	-13.3	45	230	27.0
550	30	4,830	-17.6	45	233	29.2
500	30	5,545	-22.2	45	230	29.7
450	30	6,304	-27.7	45	229	31.9
400	30	7,148	-33.8	44	229	35.2
350	30	8,069	-40.9	40	227	38.7
300	30	9,101	-48.2		232	40.0
250	30	10,282	-54.9		240	41.0
200	30	11,694	-57.6		249	36.0
175	30	12,536	-57.4		252	35.4
150	30	13,510	-57.6		255	30.9
125	30	14,660	-57.8		259	28.6
100	30	16,064	-58.3		266	24.7
80	30	17,466	-59.1		272	21.6
70	30	18,301	-59.7		277	19.4
60	30	19,263	-59.9		282	18.3
50	28	20,402	-60.7		296	16.3
40	25	21,791	-61.1		301	17.5
30	23	23,580	-61.2		310	18.5
25	20	24,722	-60.8		316	21.4
20	15	26,112	-60.3		313	22.3
15	5	27,980	-58.3			
10						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SALT LAKE CITY, UTAH
872 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	1,288	4.9	68	156	5.2
1000	30	157				
950	30	580				
900	30	1,027				
850	30	1,498	7.1	53	169	9.1
800	30	1,996	5.2	49	193	11.7
750	30	2,515	1.8	50	225	12.0
700	30	3,073	- 2.0	52	243	15.9
650	30	3,649	- 6.1	56	250	18.6
600	30	4,279	-10.3	55	253	20.9
550	30	4,937	-14.3	49	254	25.1
500	30	5,661	-19.2	48	255	29.5
450	30	6,429	-24.4	44	257	34.2
400	30	7,285	-30.5	42	256	41.2
350	30	8,221	-37.2	42	257	46.2
300	30	9,269	-44.9		257	54.6
250	30	10,465	-53.1		259	63.9
200	30	11,877	-60.4		265	65.1
175	30	12,706	-61.3		265	60.6
150	30	13,662	-61.3		265	53.6
125	30	14,791	-61.9		267	43.9
100	30	16,168	-62.9		267	35.9
80	29	17,540	-62.7		272	30.7
70	28	18,365	-62.7		271	27.0
60	28	19,315	-62.7		278	24.1
50	20	20,443	-62.7		283	23.3
40	16	21,832	-61.4		285	19.9
30	15	23,619	-61.3		277	21.0
25	12	24,771	-59.3		275	23.5
20	10	26,167	-58.4			
15	7	27,990	-57.1			
10						
7						
5						

SAN ANTONIO, TEXAS
990 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	243	14.4	89	1	2.1
1000	30	154				
950	30	591	15.5	77	154	3.3
900	30	1,049	14.3	67	207	6.6
850	30	1,532	14.1	49	239	8.7
800	30	2,041	11.7	42	251	9.3
750	30	2,580	8.6	45	266	11.7
700	29	3,145	5.3	44	270	14.8
650	29	3,745	1.8	40	267	19.2
600	29	4,388	- 2.1	36	271	21.2
550	29	5,071	- 6.2	30	267	24.5
500	29	5,814	-10.8	R31	267	28.7
450	29	6,612	-16.1	R31	266	34.2
400	29	7,494	-22.6	R30	269	37.7
350	28	8,462	-29.7	R30	266	42.2
300	28	9,542	-38.2	R32	265	50.5
250	28	10,771	-48.0		266	55.9
200	28	12,208	-58.1		267	59.8
175	28	13,040	-62.5		271	58.5
150	27	13,976	-66.8		270	55.2
125	27	15,070	-69.9		269	46.4
100	27	16,389	-72.4		273	39.0
80	25	17,704	-70.2		274	28.9
70	25	18,500	-68.3		280	24.3
60	25	19,431	-66.2		293	21.6
50	25	20,543	-63.1		277	19.4
40	25	21,928	-59.2		274	22.3
30	24	23,746	-55.3		266	30.5
25	23	24,912	-53.1		263	34.0
20	21	26,362	-51.6		260	31.9
15	15	28,233	-50.3			
10						
7						
5						

SAN DIEGO, CALIF.
1001 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	124	12.6	91	108	1.4
1000	30	135			55	1.6
950	30	569	13.2	68	198	1.6
900	30	1,024	12.7	54	239	3.1
850	30	[illegible]	11.1	42	239	5.2
800	30	2,006	8.9	39	[illegible]	[illegible]
750	30	2,534	5.9	37	241	13.6
700	30	3,100	2.7	36	240	16.9
650	30	3,691	- .7	35	242	[illegible]
600	30	4,332	- 4.2	35	243	23.7
550	30	5,003	- 8.6	35	239	27.9
500	30	5,746	-13.6	39	243	30.9
450	30	6,531	-19.1	40	245	34.6
400	30	7,406	-25.4	41	246	40.4
350	30	8,362	-32.3	40	247	48.2
300	30	9,432	-40.5	47	249	48.9
250	30	10,650	-49.7		252	52.6
200	30	12,081	-58.6		254	56.5
175	30	12,915	-61.4		254	57.5
150	30	13,866	-63.4		255	53.4
125	30	14,981	-65.6		256	45.6
100	30	16,333	-66.8		258	35.5
80	29	17,687	-64.7		262	33.4
70	28	18,505	-63.2		266	25.3
60	28	19,454	-62.5		270	24.1
50	28	20,579	-62.2		271	21.8
40	27	21,964	-60.8		273	26.0
30	26	23,763	-58.5		281	28.0
25	25	24,914	-56.2		276	30.3
20	23	26,345	-54.4		269	38.9
15	18	28,220	-53.0		266	51.5
10	15	30,840	-50.1		261	65.5
7	13	33,180	-47.7		259	82.8
5	10	35,430	-44.0			

* SAN JUAN, P. R.
1013 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	[illegible]	[illegible]	24.2	84	[illegible]	[illegible]
1000	30	[illegible]	24.2	[illegible]	[illegible]	[illegible]
950	30	[illegible]	21.4	77	92	10.9
900	30	[illegible]	18.3	75	86	10.7
850	30	1,526	15.5	72	77	[illegible]
800	30	2,039	12.9	61	84	6.4
750	[illegible]	2,577	10.9	48	[illegible]	[illegible]
700	30	3,153	7.9	43	68	1.9
650	30	3,755	4.5	43	265	1.4
600	[illegible]	4,409	.5	44	294	4.1
550	30	5,098	- 2.8	[illegible]	[illegible]	[illegible]
500	30	5,854	- 7.4	27	[illegible]	[illegible]
450	30	6,657	-13.0	[illegible]	291	[illegible]
400	30	7,555	-18.9	27	284	[illegible]
350	30	8,536	-26.1	26	279	20.4
300	30	9,633	-34.2	25	281	27.4
250	30	[illegible]	-43.6		283	[illegible]
200	30	12,348	-54.8		276	[illegible]
175	29	13,188	-61.2		275	46.8
150	29	[illegible]	-68.0		273	44.5
125	29	15,209	-73.8		278	38.9
100	29	16,499	-76.3		279	26.8
80	29	17,792	-73.2		283	11.5
70	29	18,581	-68.7		276	4.3
60	29	19,515	-64.2		83	3.5
50	29	20,636	-62.0		79	13.0
40	28	[illegible]	-58.8		86	[illegible]
30	28	23,856	-53.2		87	25.4
25	28	25,039	-50.3		93	27.2
20	25	26,506	-48.3		98	23.5
15	23	28,416	-45.8		87	19.0
10	14	31,158	-40.7		85	17.9
7	5	33,655	-32.1			
5						

SAN NICOLAS, CALIF.
[illegible] MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	26	174	[illegible]	92	306	5.6
1000	26	139				
950	[illegible]	571	[illegible]	[illegible]	[illegible]	6.0
900	26	1,029	[illegible]	[illegible]	264	5.4
850	26	1,506	10.5	[illegible]	256	5.9
800	26	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
750	26	[illegible]	5.4	[illegible]	254	8.5
700	26	[illegible]	[illegible]	[illegible]	250	11.3
650	26	[illegible]	- 1.6	41	249	15.0
600	26	[illegible]	- 5.4	[illegible]	247	[illegible]
550	26	[illegible]	- 9.7	[illegible]	[illegible]	24.5
500	26	[illegible]	-15.0	41	245	29.3
450	26	[illegible]	-20.1	44	[illegible]	31.5
400	26	[illegible]	-26.4	[illegible]	248	34.8
350	26	[illegible]	-33.6	[illegible]	251	[illegible]
300	26	[illegible]	-41.6	[illegible]	251	49.0
250	26	[illegible]	-50.7	[illegible]	250	53.8
200	26	[illegible]	-59.3	[illegible]	[illegible]	55.2
175	26	[illegible]	-61.5	[illegible]	261	55.0
150	26	[illegible]	-63.2	33	[illegible]	53.0
125	26	[illegible]	-64.7		258	44.7
100	26	16,294	[illegible]		257	[illegible]
80	26	17,651	[illegible]		258	28.6
70	[illegible]	18,466	[illegible]		264	28.7
60	22	19,414	-63.2		269	24.7
50	22	20,536	-62.4		267	23.9
40	22	21,917	-61.6		[illegible]	23.1
30	22	23,711	-58.7		277	25.8
25	21	24,859	-57.9		274	29.5
20	21	26,272	-56.0		270	34.2
15	20	28,102	-54.4		266	46.8
10	19	[illegible]	-50.7		266	53.4
7	14	33,082	-45.3		263	67.8
5	6	[illegible]	-44.4			

* SAULT STE. MARIE, MICH.
987 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	221	- .7	86	306	1.7
1000	30	114				
950	30	521	- 2.1	86	265	5.2
900	30	952	- 3.6	85	274	10.1
850	30	1,402	- 5.0	77	279	15.3
800	30	1,878	- 6.4	71	281	19.8
750	30	2,379	- 8.2	67	282	22.7
700	30	2,915	-10.3	64	286	26.4
650	30	3,481	-13.2	62	286	29.7
600	30	4,089	-16.2	58	287	34.0
550	30	4,737	-19.9	57	288	37.9
500	30	5,440	-24.4	54	288	41.8
450	30	6,191	-30.0	52	288	45.5
400	30	7,026	-36.2	47	288	48.4
350	30	7,938	-43.3	52	287	52.3
300	30	8,958	-50.5		286	57.5
250	30	10,132	-55.5		285	62.2
200	30	11,543	-57.6		283	58.5
175	30	12,387	-57.3		282	56.7
150	30	13,360	-57.6		283	54.4
125	30	14,509	-57.9		283	48.6
100	30	15,912	-59.0		279	48.2
80	29	17,306	-59.8		278	42.9
70	29	18,138	-60.6		275	42.5
60	29	19,096	-61.7		275	44.3
50	29	20,223	-62.1		275	44.1
40	28	21,607	-62.2		271	43.7
30	27	23,394	-61.3		267	49.1
25	27	24,526	-60.9		265	50.9
20	26	25,927	-59.4		261	55.8
15	26	27,735	-57.7		259	65.9
10	16	30,259	-53.8		254	81.6
7						

SHEMYA, ALASKA
999 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	29	38	2.2	81	222	17.9
1000	29	28			263	15.5
950	29	436	- 1.1	76	255	19.8
900	29	869	- 4.4	82	254	24.5
850	29	1,317	- 7.5	82	248	24.5
800	29	1,786	-10.0	70	249	22.9
750	29	2,276	-12.6	60	250	24.3
700	29	2,806	-15.7	58	249	28.4
650	29	3,354	-19.3	60	249	30.5
600	29	3,951	-23.1	50	253	35.7
550	29	4,576	-27.2	51	250	38.7
500	29	5,264	-31.1	45	252	43.7
450	29	6,000	-35.6	47	255	46.8
400	29	6,817	-40.3	53	267	50.5
350	29	7,719	-44.4	51	262	56.1
300	29	8,744	-47.7		260	52.3
250	29	9,940	-50.3		259	53.8
200	29	11,396	-50.3		253	48.6
175	29	12,269	-49.5		255	46.8
150	29	13,278	-49.5		258	35.2
125	29	14,473	-49.3		253	32.1
100	28	15,930	-49.5		249	28.2
80	27	17,387	-50.0		242	21.8
70	27	18,258	-50.7		228	21.8
60	27	19,261	-50.8		230	20.8
50	27	20,447	-51.3		214	13.6
40	25	21,395	-51.2		209	8.0
30	25	23,765	-51.0		218	8.9
25	24	24,949	[illegible]		204	6.2
20	22	26,397	-50.9		207	8.5
15	20	28,267	-50.7		176	2.7
10	9	30,924	-50.8			
7						

* SHREVEPORT, LA.
1009 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	79	13.8	87	155	2.5
1000	30	155	14.0	81	135	3.3
950	30	593	14.1	69	197	6.4
900	30	1,046	12.8	59	240	9.3
850	30	1,525	10.8	49	256	10.3
800	30	2,027	7.6	47	266	10.9
750	30	2,558	5.1	42	271	13.4
700	30	3,117	2.4	39	273	17.3
650	30	3,712	- .3	34	279	20.4
600	30	4,350	- 3.7	32	278	24.7
550	30	5,028	- 7.9	29	277	28.7
500	30	5,767	-12.8	32	277	34.2
450	30	6,561	-18.3	31	276	39.8
400	30	7,433	-24.5	34	277	46.7
350	30	8,391	-31.6	36	276	51.1
300	30	9,462	-40.1	37	277	58.1
250	30	10,680	-49.4		276	66.8
200	[illegible]	12,107	-59.0		277	69.3
175	[illegible]	12,937	-62.6		279	69.7
150	30	13,879	-66.1		277	65.3
125	28	14,975	-68.2		277	59.2
100	28	16,307	-69.8		277	49.7
80	28	17,638	-68.7		279	38.7
70	28	18,439	-67.5		279	31.3
60	27	19,372	-64.9		278	28.0
50	26	20,490	-63.0		274	26.1
40	26	21,871	-59.7		269	30.7
30	26	23,686	-55.4		263	36.9
25	26	24,853	-53.4		262	42.3
20	25	26,301	-51.8		259	47.4
15	23	28,165	-50.4		256	54.2
10	17	30,954	-45.7		255	61.6
7	10	33,223	-39.8			

SPOKANE, WASH.
930 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	722	2.5	86	159	2.5
1000	30	128				
950	30	546				
900	30	985	3.8	74	192	9.1
850	30	1,450	3.1	67	216	15.3
800	30	1,939	.4	61	230	18.5
750	30	2,447	- 2.7	61	237	19.9
700	30	2,999	- 6.0	59	240	21.4
650	30	3,567	- 9.6	56	244	22.5
600	30	4,191	-13.2	54	245	24.7
550	30	4,941	-17.4	52	249	26.2
500	30	5,555	-22.4	50	250	29.0
450	30	6,312	-27.9	50	251	31.1
400	30	7,157	-34.2	48	254	33.4
350	30	8,077	-41.4	44	259	38.3
300	30	9,106	-49.0		260	41.2
250	30	10,282	-55.9		263	43.7
200	29	11,689	-58.6		259	41.8
175	29	12,530	-57.8		261	37.7
150	29	13,504	-57.2		264	33.6
125	29	14,656	-57.5		265	31.7
100	29	16,065	-58.1		273	29.1
80	29	17,466	-58.9		280	26.4
70	29	18,302	-59.3		286	24.3
60	29	19,264	-60.1		292	24.1
50	28	20,397	-60.7		302	22.9
40	27	21,780	-61.2		304	22.5
30	24	[illegible]	-61.5		304	24.1
25	24	24,698	-61.7		312	26.9
20	18	26,108	-61.3		315	25.6
15	13	27,893	-60.6		322	32.4

SWAN ISLAND, W. I.
1012 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	27	10	25.9	83	48	8.2
1000	27	113	25.1	82	50	10.7
950	27	571	21.9	84	57	14.0
900	27	1,032	18.7	80	56	11.8
850	27	1,522	16.0	75	53	9.9
800	27	2,036	13.3	68	57	7.0
750	27	2,587	10.9	61	59	7.8
700	27	3,151	8.9	48	56	8.2
650	27	3,768	6.3	34	61	7.8
600	27	4,415	2.4	29	74	8.2
550	27	5,111	- 1.7	26	64	7.8
500	27	5,866	- 6.2	30	56	7.2
450	27	6,682	-11.7	28	32	8.0
400	27	7,575	-17.9	28	15	7.6
350	27	8,559	[illegible]	24	328	[illegible]
300	27	9,661	-33.4	24	294	11.7
250	27	10,914	-43.3		272	21.2
200	27	12,377	-55.3		263	26.0
175	27	13,216	-61.9		268	28.9
150	27	14,154	[illegible]		269	26.2
125	27	15,231	-73.8		[illegible]	23.5
100	26	16,522	-75.9		286	16.3
80	26	[illegible]	-74.6		305	[illegible]
70	25	18,589	[illegible]		[illegible]	2.1
60	25	19,512	-65.1		65	2.9
50	25	[illegible]	[illegible]		90	11.5
40	24	22,019	-59.1		92	20.4
30	24	23,841	-54.4		[illegible]	25.6
25	22	25,016	[illegible]		87	27.0
20	20	26,479	-47.9		90	29.5
15	17	[illegible]	[illegible]		99	[illegible]
10	6	[illegible]	[illegible]			

TAMPA, FLA.
1018 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	8	15.9	91	48	4.7
1000	30	161	17.7	78	61	8.2
950	30	602	16.2	67	71	4.9
900	30	1,058	13.9	65	140	.6
850	30	1,538	11.8	53	248	3.1
800	30	2,044	9.4	46	279	5.2
750	30	2,585	6.9	41	281	7.6
700	30	3,141	4.4	35	291	10.9
650	30	3,745	1.4	33	282	[illegible]
600	30	4,383	- 1.7	R30	287	19.9
550	30	5,065	- 5.9	R25	284	23.7
500	30	5,812	-10.8	R26	283	27.6
450	30	6,615	-16.1	R27	282	31.3
400	30	7,492	-22.3	R25	284	39.8
350	30	8,460	-29.4	R24	285	45.6
300	30	9,542	-37.6	R26	286	53.2
250	30	10,774	-47.4		287	57.9
200	30	12,216	-57.2		283	63.7
175	30	13,052	-61.8		282	63.5
150	30	13,995	-66.1		280	59.1
125	30	15,091	-70.0		279	51.5
100	30	16,412	-71.3		278	42.3
80	29	17,731	-70.0		280	26.4
70	29	18,529	-67.6		279	21.0
60	29	19,467	-63.6		272	18.5
50	29	20,599	-59.3		258	16.5
40	28	22,011	-55.7		252	13.4
30	26	23,853	-53.4		254	9.9
25	26	25,032	-51.3		251	4.9
20	25	26,497	[illegible]		212	6.4
15	17	28,426	-44.6		195	7.4
10	10	31,181	-42.5			
7	8	33,608	-38.6			
5	5	35,902	-32.4			

* TATOOSH IS., WASH
1006 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	27	31	9.6	82	94	10.7
1000	27	80			118	9.5
950	27	501	6.9	77	153	11.8
900	27	947	4.0	80	150	13.4
850	27	1,409	1.0	79	198	14.6
800	27	1,894	- 1.9	76	197	14.6
750	27	2,405	- 4.8	72	201	16.3
700	27	2,945	- 7.8	69	206	18.1
650	27	3,513	-11.1	64	210	19.0
600	27	4,129	-15.2	61	212	20.4
550	27	4,779	-19.4	55	215	21.0
500	27	5,483	-24.3	54	218	24.5
450	27	6,235	-29.7	54	224	27.9
400	27	7,073	-35.9	53	229	29.1
350	27	7,987	-42.8	55	233	32.8
300	27	9,011	-49.9		236	37.1
250	26	10,180	-55.7		244	35.0
200	25	11,591	-56.9		250	26.4
175	25	12,437	-56.7		250	25.1
150	23	13,415	-56.8		252	22.0
125	22	14,570	-56.6		262	20.2
100	22	15,984	-57.2		270	19.8
80	22	17,390	-58.3		285	[illegible]
70	22	18,229	-58.7		293	18.8
60	21	19,194	-59.5		[illegible]	17.7
50	20	20,330	-60.2		304	18.5
40	19	21,718	-61.0		315	[illegible]
30	15	23,514	-61.3		335	[illegible]
25	13	24,635	-62.0		328	24.5
20	10	26,032	-61.4			
15	8	27,957	-60.9			

TOPEKA, KANS.
986 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	269	3.7	81	319	.4
1000	30	151				
950	30	570	7.3	66	245	[illegible]
900	30	1,017	8.0	52	274	11.7
850	30	1,489	6.6	48	[illegible]	15.3
800	30	1,984	[illegible]	47	288	[illegible]
750	30	2,503	1.5	46	[illegible]	[illegible]
700	30	3,060	- 1.6	39	285	20.4
650	30	3,639	- 5.0	40	286	24.9
600	30	4,272	- 8.9	39	282	28.2
550	30	4,935	-12.7	36	281	31.9
500	30	5,663	-17.2	34	279	35.5
450	30	6,439	-22.8	35	283	42.3
400	30	7,298	-29.4	38	284	47.9
350	[illegible]	8,238	[illegible]	[illegible]	[illegible]	[illegible]
300	30	[illegible]	-44.0	41	[illegible]	[illegible]
250	30	10,489	-52.7		282	71.9
200	30	[illegible]	-59.1		282	74.8
175	[illegible]	12,739	-60.8		[illegible]	71.1
150	30	[illegible]	-62.5		281	[illegible]
125	30	14,813	-64.3		281	[illegible]
100	[illegible]	16,175	-64.6		281	[illegible]
80	28	17,545	-64.4		283	[illegible]
70	28	18,362	-63.8		[illegible]	33.2
60	26	19,306	-63.6		281	27.
50	26	20,476	-63.4		277	[illegible]
40	25	21,902	-62.1		279	[illegible]
30	24	[illegible]	-60.0		271	[illegible]
25	23	24,742	-58.5		265	44.7
20	22	[illegible]	-56.4		[illegible]	55.6
15	19	28,012	-53.3		[illegible]	59.9
10	9	30,583	-50.0			
7	5	33,076	-48.5			

TRUK, CAROLINE IS.
+ 1011 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	2	28.3	78	41	5.4
1000	30	96	27.4	76	47	[illegible]
950	[illegible]	547	23.6	75	72	[illegible]
900	30	1,021	20.7	[illegible]	79	7.8
850	[illegible]	1,514	17.9	67	81	5.6
800	30	[illegible]	15.4	[illegible]	80	5.4
750	30	[illegible]	12.8	57	[illegible]	[illegible]
700	30	[illegible]	9.9	53	[illegible]	6.8
650	30	3,765	6.5	50	[illegible]	7.4
600	30	4,421	2.9	[illegible]	83	[illegible]
550	30	5,115	- .4	41	94	[illegible]
500	[illegible]	5,877	- 5.2	40	88	10.1
450	30	6,692	- 9.9	34	73	[illegible]
400	30	7,599	-15.6	32	76	8.7
350	30	8,594	-21.9	29	73	[illegible]
300	[illegible]	[illegible]	-30.3	26	[illegible]	[illegible]
250	30	10,981	-40.7	[illegible]	97	[illegible]
200	30	12,462	-52.8		82	13.4
175	30	[illegible]	-59.8		79	[illegible]
150	30	14,257	-67.0		62	15.2
125	30	15,339	-74.5		[illegible]	15.2
100	30	16,617	-79.7		81	[illegible]
80	[illegible]	[illegible]	-77.2		[illegible]	[illegible]
70	30	18,560	-72.8		95	[illegible]
60	30	19,574	-68.5		95	23.1
50	30	20,679	-63.9		94	35.7
40	[illegible]	[illegible]	-59.6		[illegible]	[illegible]
30	28	[illegible]	-54.2		94	[illegible]
25	26	[illegible]	-51.0		94	[illegible]
20	25	26,524	-47.0		95	[illegible]
15	[illegible]	28,647	-42.7		[illegible]	35.4

* TUCSON, ARIZ.
926 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	789	11.9	[illegible]	135	5.6
1000	[illegible]	136				
950	[illegible]	571				
900	30	1,027	16.0	[illegible]	141	[illegible]
850	30	1,511	14.1	36	[illegible]	6.0
800	30	[illegible]	[illegible]	[illegible]	206	8.9
750	[illegible]	2,551	[illegible]	[illegible]	223	10.5
700	30	3,119	[illegible]	[illegible]	239	13.9
650	30	[illegible]	[illegible]	[illegible]	247	[illegible]
600	[illegible]	[illegible]	[illegible]	[illegible]	250	[illegible]
550	[illegible]	[illegible]	- 7.9	[illegible]	253	[illegible]
500	30	[illegible]	-12.6	[illegible]	[illegible]	[illegible]
450	30	[illegible]	-18.4	42	255	32.1
400	30	7,438	-24.6	[illegible]	253	[illegible]
350	[illegible]	[illegible]	[illegible]	[illegible]	255	40.4
300	[illegible]	9,463	[illegible]	[illegible]	256	[illegible]
250	30	[illegible]	[illegible]		257	52.8
200	30	12,117	-58.8		[illegible]	60.4
175	30	[illegible]	-62.1		259	[illegible]
150	30	[illegible]	[illegible]		258	55.6
125	30	[illegible]	[illegible]		259	49.7
100	[illegible]	16,335	-68.6		261	41.8
80	29	[illegible]	[illegible]		[illegible]	36.7
70	29	[illegible]	[illegible]		267	32.1
60	29	[illegible]	-64.5		[illegible]	28.7
50	29	20,535	[illegible]		273	[illegible]
40	[illegible]	[illegible]	-61.7		274	26.4
30	28	23,712	-58.2		273	[illegible]
25	25	[illegible]	[illegible]		269	36.7
20	25	26,289	-54.6		266	41.4
15	22	28,148	-52.5		263	52.4
10	13	[illegible]	-48.1		261	[illegible]
7	7	33,173	-42.6			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

NOVEMBER 1965

Standard pressure surface (mb)	* WAKE IS., PACIFIC AREA 1015 MB						* WALLOPS IS. VA. NASA 1019 MB						WASHINGTON, D. C. 1009 MB						WINNEMUCCA, NEV. 869 MB						WINSLOW, ARIZ. 853 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	5	25.8	74	59	14.0	29	3	7.0	79	287	3.1	30	84	3.1	70	277	1.9	30	1,310	.2	70	141	3.3	30	1,492	2.4	63	165	3.9
1000	30	136	24.6	72	63	16.1	29	160	8.5	61	306	4.7	30	158			285	2.3	30	164					30	193				
950	30	584	20.4	77	69	18.8	29	583	7.2	56	297	11.3	30	579	5.6	62	271	10.3	30	583					30	608				
900	30	1,050	16.8	79	71	19.3	29	1,027	5.0	58	296	15.7	30	1,018	3.3	66	280	16.9	30	1,026					30	1,052				
850	30	1,536	14.0	71	73	16.7	29	1,492	2.8	57	286	18.5	30	1,481	1.6	69	285	21.8	30	1,485	5.8	55	178	5.1	30	1,520			144	3.7
800	30	2,046	12.3	51	7	15.2	29	1,982	.6	54	292	19.6	30	1,968	.0	61	287	24.7	30	1,981	4.1	51	207	9.5	30	2,019	7.8	45	212	8.0
750	30	2,586	11.0	33	62	13.4	29	2,496	- 1.1	45	279	22.5	30	2,483	- 2.2	55	284	25.6	30	2,502	.7	52	223	12.6	30	2,548	5.1	40	228	14.6
700	30	3,159	8.4	29	55	11.3	29	3,046	- 4.0	45	277	26.0	30	3,029	- 4.5	50	278	27.2	30	3,054	- 3.0	53	231	17.5	30	3,109	1.7	40	237	17.7
650	30	3,768	5.7	21	45	10.1	29	3,627	- 7.1	43	275	29.3	30	3,605	- 7.6	46	274	27.6	30	3,633	- 6.7	49	241	21.0	30	3,699	- 1.7	40	245	21.2
600	30	4,419	2.4	20	36	8.9	29	4,249	-10.5	38	271	33.0	30	4,228	-11.5	49	273	32.1	30	4,258	-10.7	46	241	22.5	30	4,337	- 5.3	37	256	24.5
550	30	5,112	- 1.9	21	29	11.2	29	4,908	-14.7	39	273	35.9	30	4,886	-15.4	44	272	34.0	30	4,916	-14.9	43	246	23.1	30	5,006	- 9.6	39	254	28.0
500	30	5,869	- 6.9	21	18	12.4	29	5,629	-19.4	39	273	39.6	30	5,604	-19.8	45	275	38.9	30	5,637	-19.8	40	248	24.7	30	5,745	-14.2	41	256	33.2
450	30	6,676	-12.9	23	9	15.5	29	6,400	-24.8	39	275	42.7	30	6,371	-25.1	44	277	40.4	30	6,405	-25.1	38	248	27.8	30	6,528	-19.5	42	257	38.5
400	30	7,570	-19.7	25	355	16.3	29	7,251	-31.3	39	277	50.1	30	7,223	-31.1	42	279	47.0	30	7,256	-31.7	R35	251	30.3	30	7,401	-25.8	39	261	42.2
350	30	8,547	-26.9	26	337	18.6	29	8,186	-37.7	39	272	55.	30	8,157	-38.7	44	280	51.7	30	8,187	-38.5	R32	253	36.3	30	8,355	-32.9	39	262	46.8
300	30	9,641	-34.6	26	306	21.4	29	9,231	-45.5		275	60.2	30	9,201	-45.7		281	55.9	30	9,228	-46.4		253	43.9	30	9,421	-41.2	53	263	49.0
250	30	10,892	-43.1		298	23.1	29	10,425	-53.2		277	63.1	30	10,393	-53.9		280	61.0	30	10,417	-54.4		254	48.4	30	10,634	-50.7		262	57.9
200	30	12,359	-54.0		295	26.8	29	11,840	-58.7		274	66.6	30	11,805	-59.0		278	61.0	30	11,824	-60.3		254	50.5	30	12,057	-59.2		264	63.5
175	30	13,234	-59.9		292	27.8	29	12,679	-58.6		276	65.7	30	12,642	-59.4		279	63.3	30	12,654	-61.1		254	48.2	30	12,888	-62.3		263	59.8
150	30	14,152	-66.1		286	25.1	29	13,646	-59.7		275	61.4	30	13,606	-59.7		278	58.9	30	13,611	-61.3		250	45.8	30	13,835	-64.2		262	57.1
125	28	15,235	-72.5		289	19.4	29	14,781	-61.2		274	53.	30	14,743	-60.6		277	51.9	30	14,741	-61.8		254	40.0	30	14,947	-65.7		264	49.1
100	28	16,527	-77.5		305	9.1	29	16,161	-62.1		272	45.8	30	16,128	-62.2		274	45.6	30	16,122	-62.0		260	33.0	30	16,297	-67.0		265	44.5
80	27	17,806	-76.5		45	5.1	28	17,546	-61.8		270	41.2	29	17,507	-61.6		270	39.6	29	17,499	-62.4		265	27.0	30	17,644	-66.1		270	33.8
70	26	18,582	-72.3		97	6.6	28	18,372	-61.4		269	34.4	29	18,333	-61.6		267	38.1	28	18,322	-62.6		270	23.1	29	18,454	-65.1		276	28.6
60	25	19,501	-67.5		84	9.3	28	19,329	-60.2		269	33.8	29	19,289	-60.5		267	35.9	28	19,272	-62.9		273	20.6	29	19,395	-64.3		279	25.4
50	25	20,611	-63.1		89	12.2	27	20,463	-59.0		266	32.1	29	20,426	-59.8		264	31.7	27	20,393	-62.8		280	19.0	28	20,508	-63.4		278	22.9
40	24	21,998	-59.2		81	15.5	27	21,867	-57.1		260	35.5	29	21,823	-58.5		259	35.2	26	21,769	-62.7		282	17.3	26	21,880	-62.0		278	25.6
30	23	23,815	-55.0		82	18.6	25	23,699	-54.2		252	40.2	26	23,641	-56.1		256	45.5	23	23,550	-61.7		290	17.7	26	23,668	-59.6		273	28.6
25	23	24,985	-53.2		84	18.1	25	24,872	-52.5		255	52.8	24	24,802	-54.6		255	49.5	21	24,686	-61.3		290	22.0	25	24,807	-58.3		274	33.4
20	23	26,429	-50.9		87	15.0	25	26,320	-50.9		254	55.2	23	26,239	-52.6		253	55.9	17	26,081	-59.9		286	21.6	22	26,226	-55.8		269	40.6
15	21	28,322	-47.9		81	7.8	20	28,192	-50.0		254	58.9	21	28,110	-50.4		246	66.6	7	27,875	-59.5				12	28,108	-53.5		266	52.3
10	19	31,021	-43.7		263	8.2	17	30,830	-46.2		256	79.3	12	30,864	-48.2		246	75.6												
7	14	33,415	-41.5		267	20.8	10	33,238	-44.6				7	33,218	-47.8															
5	7	35,692	-36.3																											

Standard pressure surface (mb)	YAKUTAT, ALASKA 1006 MB						+ YAP, CAROLINE IS. 1009 MB						YUCCA FLAT, NEV. 882 MB						YUMA, ARIZ. 1000 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	12	- 4.9	92	104	2.9	30	17	28.4	81	64	6.0	30	1,196	2.8	63	209	1.9	19	131	14.1	60	346	.6
1000	30	58			71	1.4	30	95	27.4	78	72	8.0	30	162					19	133			349	1.0
950	30	470	.7	68	109	6.0	30	543	23.6	73	80	13.4	30	582					19	569	18.8	41	5	2.3
900	30	903	- 1.4	68	124	7.4	30	1,020	20.9	67	85	14.8	30	1,026					19	1,034	16.5	38	251	1.9
850	30	1,356	- 3.8	66	121	6.4	30	1,514	18.2	62	85	14.4	30	1,498	8.6	46	191	3.7	19	1,518	13.5	38	229	5.4
800	30	1,833	- 6.3	63	119	4.7	30	2,031	15.5	56	86	13.6	30	1,998	6.0	44	194	10.1	19	2,025	10.8	35	225	8.9
750	30	2,335	- 8.6	57	132	2.9	30	2,576	12.8	48	85	12.4	30	2,520	2.9	43	207	12.6	19	2,556	7.5	31	227	12.2
700	30	2,868	-11.4	57	139	2.7	30	3,154	9.9	45	85	13.0	30	3,079	- .3	39	220	13.4	19	3,123	3.8	32	223	14.4
650	30	3,433	-14.4	58	154	2.3	30	3,763	6.6	42	85	15.3	30	3,663	- 4.0	40	235	16.7	19	3,715	.4	32	233	18.3
600	30	4,037	-18.3	55	46	.6	30	4,420	3.1	37	83	16.7	30	4,295	- 7.8	37	245	20.0	19	4,359	- 4.1	30	244	23.9
550	30	4,680	-22.6	54	360	1.2	30	5,112	- .8	37	84	16.9	30	4,960	-11.7	37	247	24.9	19	5,033	- 7.4	34	243	28.0
500	30	5,375	-27.4	52	290	2.1	30	5,877	- 5.1	34	84	19.4	30	5,691	-16.2	R37	245	31.9	19	5,777	-12.4	32	244	33.0
450	30	6,121	-32.6	47	290	2.1	30	6,694	- 9.9	31	84	20.6	30	6,468	-21.4	37	242	36.3	19	6,562	-18.2	35	241	37.5
400	30	6,946	-38.4	43	291	3.9	30	7,598	-15.5	29	81	20.2	30	7,334	-27.7	40	249	35.5	19	7,442	-25.0	42	244	40.0
350	30	7,852	-44.5	41	312	8.0	30	8,592	-22.5	26	82	21.2	30	8,280	-34.8	40	253	42.9	19	8,398	-32.2	45	246	47.6
300	30	8,872	-49.5		316	10.7	30	9,706	-30.8	24	85	21.4	30	9,339	-42.8	R36	256	50.7	19	9,466	-40.6	48	247	56.3
250	30	10,055	-53.4		336	9.1	30	10,974	-40.8	28	85	22.3	30	10,545	-51.9		253	56.3	19	10,681	-50.2		247	61.8
200	29	11,482	-53.8		327	12.6	30	12,453	-53.0		85	23.5	29	11,963	-59.8		259	51.9	17	12,102	-59.9		252	65.9
175	29	12,340	-53.4		312	12.4	30	13,299	-60.3		82	26.4	29	12,793	-61.8		260	55.2	15	12,929	-62.7		256	67.4
150	28	13,340	-52.9		315	14.2	30	14,243	-67.7		75	27.0	28	13,745	-62.7		266	50.5	14	13,873	-64.0		257	59.6
125	28	14,515	-52.9		311	15.2	30	15,318	-75.5		74	25.2	28	14,864	-63.8		261	45.1	9	14,962	-65.0			
100	28	15,955	-52.9		312	15.2	30	16,589	-80.7		84	19.8	28	16,232	-64.4		264	36.3	5	16,293	-66.0			
80	27	17,398	-53.7		317	17.5	30	17,846	-79.5		89	18.3	27	17,601	-63.3		263	32.6						
70	27	18,254	-54.4		322	17.7	30	18,612	-74.1		98	18.5	26	18,420	-63.2		271	24.5						
60	27	19,240	-55.2		323	19.4	29	19,523	-68.4		88	25.3	25	19,371	-62.3		276	23.9						
50	26	20,399	-55.9		328	22.5	29	20,628	-63.9		84	36.1	25	20,495	-62.3		277	22.5						
40	26	21,817	-56.5		330	26.0	29	22,009	-59.7		84	43.7	23	21,868	-61.7		282	24.3						
30	26	23,638	-57.6		333	32.6	29	23,829	-54.4		87	50.7	19	23,659	-60.2		280	28.9						
25	25	24,789	-58.3		337	36.5	28	25,005	-51.3		87	50.9	17	24,797	-59.3		279	32.1						
20	25	26,190	-59.2		339	40.8	21	26,472	-47.7		87	52.6	14	26,192	-58.4		281	33.4						
15	19	28,008	-59.5		342	47.0	13	28,403	-44.7				9	28,004	-56.7									
10	12	30,515	-60.6																					

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Relative humidity averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.
The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Relative humidity data are not published for standard pressure surfaces for which less than 5 observations are available.

Relative humidity data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from lithium chloride hygristors.
These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature in degrees Celsius, relative humidity in percent, and resultant winds in degrees and knots.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. They were also equipped with carbon hygristors. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.C.T.

R More than half of the observations are from statistical values.

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun. NOVEMBER 1965

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	ALBUQUERQUE, N. MEX.								
	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Nov.									
1-----	0.87	0.99	1.12	1.27	1.37	1.28	1.09	0.93	0.81
2-----	.90	.99	1.14	1.30	1.39	1.30	1.14	1.01	.87
3-----	.90	1.02	----	----	----	1.29	1.10	.94	.79
4-----	.90	1.02	1.16	1.32	1.39	1.31	1.16	1.01	.88
5-----	.91	----	1.16	----	1.38	----	----	----	----
7-----	.73	.86	.98	----	----	1.23	1.09	.93	.78
8-----	.89	1.01	1.14	1.28	1.27	1.26	----	----	----
9-----	----	----	----	----	1.23	1.18	1.03	.85	----
11----	.92	1.07	1.21	1.37	1.42	1.30	1.16	1.01	.88
12----	1.00	1.11	1.23	1.32	1.42	1.27	----	----	----
13----	.92	1.04	1.20	1.34	1.40	1.31	----	----	----
18----	----	1.15	1.28	----	1.45	----	----	----	----
19----	1.03	1.13	1.24	1.40	1.44	1.34	1.23	1.11	1.01
20----	1.03	1.13	----	----	----	----	----	----	----
26----	1.08	1.19	1.30	1.47	1.51	1.47	1.31	1.18	1.08
28----	.85	1.05	1.23	1.43	1.50	1.47	----	1.27	1.20
29----	1.09	1.16	1.24	1.44	1.50	1.35	1.24	1.10	1.00
Averages	0.93	1.06	1.19	1.36	1.40	1.31	1.16	1.03	0.93
	BLUE HILL OBS., MASS.								
	Air mass								
	4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
Nov.									
1-----	0.93	1.01	1.12	1.28	1.32	1.28	1.10	0.96	0.84
2-----	.99	1.07	1.18	1.33	1.35	1.30	1.12	----	----
3-----	.62	.75	.89	1.06	----	----	----	----	----
5-----	.93	1.04	1.15	1.28	----	----	----	----	----
6-----	.72	.78	----	----	----	.98	.74	.58	.48
9-----	.93	1.03	1.15	1.29	1.30	1.27	1.12	1.00	.90
10----	1.00	1.07	1.18	----	----	----	----	----	----
14----	.75	.87	1.01	----	1.34	----	1.17	1.06	.94
19----	.89	.99	1.11	----	1.29	----	1.07	.91	.81
20----	.87	.93	----	----	----	----	----	----	----
25----	.79	.91	1.06	----	1.21	----	1.00	.82	----
26----	.66	.77	1.03	----	1.20	----	----	----	----
28----	.90	.98	1.08	----	1.20	----	1.04	.87	.72
29----	----	----	1.07	----	1.13	----	1.00	.86	.74
30----	.87	.96	1.08	----	1.24	----	1.08	.94	.82
Averages	0.85	0.94	1.09	1.25	1.26	1.15	1.04	0.89	0.78
	OMAHA, NEBR.								
	Air mass								
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Nov.									
1-----	HM0.86	HS0.98	HS1.12	HS1.26	HS1.31	HS1.20	HS1.04	HS0.86	HS0.80
2-----	HM .75	HM .88	HM1.02	HM1.20	HS1.23	----	----	----	----
3-----	----	----	----	----	----	----	----	----	HM .65
4-----	HS1.00	HS1.08	HS1.20	HS1.29	HS1.26	HS1.19	HM1.00	HM .76	HM .68
9-----	HM .74	----	----	----	----	----	----	----	----
21----	----	----	----	----	HS1.26	----	HS1.09	HS .93	----
22----	HS .96	HS1.02	HS1.18	----	HS1.32	----	HS1.28	HS .98	HS .88
27----	HS .90	----	----	----	HS1.24	----	----	----	----
30----	HS .85	HS1.02	HS1.14	----	HS1.30	----	HS1.21	HS1.06	HS .95
Averages	0.87	1.00	1.13	1.28	1.27	1.20	1.12	0.92	0.79

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	MADISON, WIS.								
	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	1.69
Nov.									
4-----	S 0.89	S 1.00	S 1.14	S 1.30	S 1.30	S 1.26	S 1.11	S 0.96	S 0.86
13----	S .96	S 1.07	S 1.19	----	S 1.34	----	----	----	----
17----	----	----	----	----	S 1.33	----	S 1.18	----	----
23----	S .92	S 1.03	S 1.16	----	S 1.29	----	----	----	----
Averages	0.92	1.09	1.16	1.30	1.32	1.26	1.15	0.96	0.86
	TUCSON, ARIZ.								
	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Nov.									
1-----	----	----	----	----	----	----	----	----	0.72
2-----	0.76	----	----	----	----	----	----	0.92	----
4-----	----	----	----	----	----	----	----	----	.76
5-----	.78	----	----	----	----	----	----	----	----
7-----	----	----	0.88	----	----	----	----	----	----
9-----	.73	0.84	----	----	----	----	----	----	----
11----	----	.74	----	----	----	----	----	----	----
28----	.43	.78	----	----	----	----	----	----	----
Averages	0.69	0.78	0.88	----	----	----	----	0.92	0.74
	MAUNA LOA OBS., HAWAII								
	Air mass								
	3.36	2.69	2.01	1.34	*	1.34	2.01	2.69	3.36
Nov.									
1-----	----	----	----	1.48	----	----	----	----	----
2-----	1.16	1.25	1.35	1.47	----	----	----	----	----
4-----	H 1.09	H 1.17	H 1.28	H 1.40	----	----	----	----	----
5-----	----	----	----	(1.41)	----	----	----	----	----
16----	(1.10)	(1.21)	(1.32)	(1.42)	(1.56)	----	----	----	----
17----	----	----	----	(1.40)	----	(1.32)	(1.18)	(1.08)	(1.00)
18----	(1.08)	----	----	----	(1.52)	(1.39)	(1.26)	(1.17)	(1.08)
21----	1.22	1.30	1.39	1.52	1.61	1.49	1.38	1.29	1.22
22----	1.23	1.32	1.41	1.53	1.62	1.52	1.40	1.28	1.21
23----	1.22	1.31	1.41	1.53	1.62	1.47	1.36	1.27	1.19
24----	1.23	----	----	1.52	1.61	----	----	----	----
25----	1.19	1.28	1.37	1.50	1.60	1.48	1.36	1.25	1.20
27----	----	----	----	----	----	(1.42)	(1.29)	(1.19)	----
28----	1.16	1.26	1.38	1.49	1.58	HS1.46	HS1.34	HS1.24	HS1.16
29----	1.16	1.25	1.36	1.48	1.58	1.47	1.35	1.26	1.17
30----	1.19	1.26	1.36	1.48	1.56	(1.43)	----	----	(1.09)
Averages	1.19	1.27	1.37	1.49	1.60	1.48	1.37	1.27	1.19
	GUAM, M. I.								
	Air mass								
	4.92	3.93	2.95	1.97	*	1.97	2.95	3.93	4.92
	No observation due to cloudiness								

HS	Slight haze
HM	Moderate haze
( )	Clouds present
H	Haze
S	Slight haze - indeterminable
*	Values corresponding to true solar noon

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	362	383	---	376	375	305	340	348	331	281	355	337	346	219	249	124	63	311	320	296	174	215	81	154	32	307	249	297	320	205		267
AMES IOWA	308	284	240	302	257	174	152	76	280	57	30	31	171	256	73	251	211	129	157	142	214	233	190	92	57	15	237	233	220	220		176
ANNETTE ALASKA	---	---	---	---	65	41	134	27	107	147	128	126	125	124	14	26	20	38	26	133	54	101	97	99	36	41	6	3	3	14		67
APALACHICOLA FLORIDA	426	444	401	408	256	143	406	404	159	---	366	67	267	144	203	362	321	404	336	172	313	59	297	343	330	353	329	329	184	379		297
ARGONNE NAT. LAB.	294	258	218	274	218	96	82	72	160	155	99	44	213	226	22	145	259	71	162	195	38	120	224	44	81	12	231	151	142	205		150
ASTORIA OREGON	101	156	39	111	83	106	32	144	154	107	50	25	31	60	101	152	187	70	64	73	48	123	91	96	121	30	79	82	88	59		89
ATLANTA GEORGIA	423	391	364	229	265	92	355	345	232	68	76	30	124	257	---	265	366	221	233	315	152	225	329	233	53	129	311	242	315	357		241
BARROW ALASKA	10	14	17	12	3	4	2	2	2	2	0	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		---
BETHEL ALASKA	92	85	75	31	30	37	60	96	6	7	9	24	4	13	10	1	15	29	16	22	23	11	5	28	14	15	47	19	10	8		28
BISMARCK N.DAK.	255	249	263	204	222	129	75	163	124	140	159	123	229	134	183	219	209	179	106	194	193	186	185	39	19	86	184	182	182*	169		166*
BLUE HILL MASS.	307	316	222	248	296	255	41	67	256	255	184	106	31	254	212	56	117	234	249	128	74	25	157	160	224	211	13	219	217	224		179
BOISE IDAHO	293	246	180	393	210	221	198	174	209	224	131	56	170	37	202	210	132	76	144	107	181	167	129	79	97	148	223	228	227	207		177
BOSTON MASSACHUSETTS	282	310	219	232	271	244	23	25	257	233	199	83	20	257	203	49	130	224	---	---	---	---	---	---	204	204	6	209	215	210		180
BROWNSVILLE TEXAS	419	157	200*	324	170	251	311	296	270*	154	340	380	406	385	454	432	336	346	350	350	407	381	390	417	425	410	253	288	185	347		328*
CAPE HATTERAS N.C.	383	376	358	299	280	275	271	202	257	287	120	187	122	319	324	245	230	334	228	289	231	83	298	267	170	207	197	266	289	265		255
CARIBOU MAINE	55	168	82	107	268	109	182	238	120	212	225	167	24	77	213	37	42	36	130	---	79	55	55	176	124	75	44	186	83	131		121
CHARLESTON S.C.	419	431	372	335	220	180	242	262	323	169	304	121	147	314	353	273	335	349	330	313	226	33	367	326	177	284	225	279	248	337		276
CLEVELAND OHIO	272	235	498	297	281	103	90	110	84	201	174	154	81	240	57	174	44	200	296	8	65	43	29	116	64	28	154	147	67	201		151
COLUMBIA MISSOURI	316	294	272	274	100	201	194	157	247	47	164	204	109	95	116	268	225	214	252	221	86	246	229	68	119	142	243	248	210	249		194
DODGE CITY KANSAS	306	263	267	288	291	247	227	47	125	65	202	292	159	239	231	215	134	286	280	251	196	283	123	152	144	157	238	240	237	244		214
E. LANSING MICHIGAN	271	251	220	279	264	69	62	33	173	190	96	80	70	241	39	33	144	184	73	70	111	74	75	159	17	1	94	99	99	86		122
EL CENTRO CALIF. NPF	325	264	321	329	265	305	309	295	299	287	304	237	199	59	164	90	210	273	276	163	181	53	205	177	217	283	208	283	274	243		237
EL PASO TEXAS	300	399	386	437	439	362	380	373	397	367	405	420	411	352	297	349	295	343	383	391	309	264	359	329	344	380	319	248	355	263		355
ELY NEVADA	358	343	330	245	286	286	311	247	298	322	251	97	---	86	288	68	161	104	185	178	305*	252	110	156	232	279	228	298	287	233		235*
EPPLEY NEWPORT R.I.	297	310	161	239	295	263	116	97	278	257	148	120	57	258	210	66	172	185	224	104	149	35	188	178	219	191	36	214	217	222		184
FAIRBANKS ALASKA	75	94	93	96	90	89	51	66	77	73	22	12	11	14	34	11	11	---	8	12	11	51	33	5	5	7	8	24	10	21		38
FORT WORTH TEXAS	386	188	31	61	60	143	251	55	308	312	81	358	246	316	260*	300	349	195	137	163	205	377*	297	302	330	242	327	199	355	329		239*
FRESNO CALIFORNIA	313	315	319	281	245	299	297	314	288	300	282	106	52	65	135	44	157	124	169	122	179	120	69	164	235	222	268	266	243	180		206
GLASGOW MONTANA	227	212	252	135	220	206	77	74	126	137	97	229	231	85	144	177	166	102	115	125	139	148	135	130	86	190	136	182	139	179		153
GRAND JUNCTION COLO.	---	---	---	---	---	---	---	---	---	---	---	---	279	99	102	52	69	156	234	142	276	267	89	275	108	407	242	301	274	205		---
GREAT FALLS MONTANA	123	168	193	175	126	88*	194	177	182	110	91	190*	186	102	48	167	81	91	155	98	65	137	27	94	111	158*	116	148	149	127		129*
GREENSBORO N.C.	383	376	355	260	274	301	312	277	258	83	70	46	226	273	277	248	333	269	282	286	91	180	296	290	79	105	269	212	278	298		243
INDIANAPOLIS INDIANA	349	327	277	310	206	189	154	179	212	214	187	55	284	190	77	142	206	---	---	226	43	100	259	94	95	---	---	259	219	126		191
ITHACA NEW YORK	113	175	232	236	260	154	18	66	84	209	81	99	91	199	115	8	36	115	65	92	27	21	9	104	31	100	107	109	112	79		105
LAKE CHARLES LA.	383	241	294	54	125	129	165	230	79	356	206	148	366	365	352	314	348	299	297	299	254	332	358	204	213	---	334	94	269	---		254
LAKELAND FLORIDA	476	440	374	358	295	234	395	298	421	300	323	312	241	339	336	---	362	419	394	389	384	223	364	393	364	351	364	318	145	365*		344*
LANDER WYOMING	---	---	---	---	---	---	---	---	---	---	317	249	286	125	234	193	131	230	218	243	261	244	238	159	260	269	249	263	257	217		---
LARAMIE WYOMING	313	308	286	279	232	226	265	288	205*	173	198	118	163	120	201	103	93	152	187	156	213	281	144	157	69	291	286	288	267	253		210*
LAS VEGAS NEVADA	370	360	369	351	307	321	353	297	342	302	330	207	146	63	177	48	252	298	306	124	208	122	258	---	---	---	317	323	318	227		263
LITTLE ROCK ARKANSAS	360	321	172	40	196	44	78	183	106	126	270	152	186	72	170	271	323	170	283	181	70	320	195	79	319	228	531	267	321	303		211
LOS ANGELES CALIF.	378	368	361	369	236	277	257	304	259	306	314	207	127	57	57	37	100	253	275	78	139	22	234	113	319	331	326	327	325	274		234
MADISON WISCONSIN	309	288	238	308	247	81	61	74	290	48	83	48	238	275	27	119	263	75	184	158	86	195	245	32	41	13	187	171	178	92		155
MANHATTAN KANSAS	326	287	266	301	187	211	213	43	236	132	37	292	110	367	215	283	100	264	203	178	198	267	163	199	57	44	290	279	316	264		211
MATANUSKA ALASKA	122	98	110	100	123	124	106	82	94	105	33	76	14	10	55	82	59	26	48	69	66	52	24	12	10	11	15	16	22	25		60
MAUNA LOA OB.HAWAII	350	333	281	265	355	452	334	547	495	321	249	233	182	87	220	506	577	581	305	333	604	607	598	587	591	574	494	580	575	564		426
MEDFORD OREGON	218	167	99	260	220	156	65	209	209	57	43	119	41	196	245	172	108	169	185	119	181	123	141	128	107	67	153	127	41	156		143
MIAMI FLORIDA	306	462	444	429	413	396	443	356	437	294	393	448	322	336	370	360	449	394	404	419	358	377	343	409	129	361	426	431	392	324		381
MIDLAND TEXAS	383	365	391	103	404	412	184	234	255	347	367	400	392	376	332	272	291	310	284	372	292	351	298	305	344	308	326	239	---	---		319
NASHVILLE TENNESSEE	389	381	359	85	257	294	296	118	51	105	299	70	276	182	170	72	269	183	307	309	64	190	180	50	195	174	319	264	305	116		211
NEW YORK N.Y.U	279	314	177	265	278	239	130	8	256	203	49	70	43	248	151	36	176	266	191	158	125	11	128	216	177	221	76	163	225	168		168
NORTH OMAHA NEBRASKA	346	330	301	342	289	181	209	204	307	117	39	64	233	284	188	293	206	262	223	159	274	278	159	219	87	43	254	275	255	271		223
OAK RIDGE TENNESSEE	281	273	261	113	161	159	223	73	199	31	238	95	146	178	170	30	226	147	216	223	30	101	198	128	28	92	227	172	215	163		160
OKLAHOMA CITY OKLA.	310	265	249	67	46	135	236	220	117	292	42	281	115	214	186	287	186	---	---	43	63	268	160	227	203	200	255	277	278	275		196
PHOENIX ARIZONA	357	348	336	344	336	269	318	216	317	239	324	296	282	191	176	187	143	251	272	242	134	42	70	48	82	298	191	257	292	156		234
PORTLAND MAINE	249	309	250	236	286	163	66	69	153	253	224	96	16	243	214	---	---	131	214	230	12	53	43	150	215	150	8	200	147	220		164

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

NOVEMBER 1965

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
PROSSER WASHINGTON	187	228	85	245	200	231	151	148	181	68	73	53	96	82	227	211	60	96	115	110	165	65	54	32	152	46	164	144	138	99		130
RAPID CITY S.DAK.	245	244	228	214	225	153	190	101	126	175	130*	223*	222	61	116	203	71	178	198	153	123	189	39	68	67	108	109	133	195	174		155*
RICHLAND 25 NW WASH.	195	183	83	206	167	211	181	102	129	46	134	50	76	109	197	175	74	97	121	92	152	86	57	44	89	52	152	125	176	33		120
RIVERSIDE CALIFORNIA	380	382	317*	410	258	370	267	297	348	284	377	248	149	72	80	51	210	303	295	78	152	16	217	73	251	385	387	384	361	325		258*
SAINT CLOUD MINN.	256	277	260	288	250	155	185	106	235	148	73	22	142	167	47	78	237	167	86	53	132	36	208	16	79	56	176	174	82	190		146
SALT LAKE CITY UTAH	318	324	327	251	301	231	310	267	291	274	116	82	226	94	128	80	60	137	109	223	273	273	141	159	69	249	184	267	265	218		208
SAN ANTONIO TEXAS	318	75	87	120	445	417	111	91	197	241	58	360	410	166	242	77	367	166	325	207	208	367	310	321	226	274	350	267	373	336		250
SANTA MARIA CALIF.	243	342	346	324	268	324	276	321	309	323	307	244	66	138	141	65	200	185	255	67	206	70	80	100	273	295	294	257	283	274		229
SAULT STE MARIE MICH	209	233	223	254	197	229	167	77	92	158	58	11	67	120	28	51	199	185	70	67	120	38	44	64	30	20	50	142	119	168		116
SEATTLE TACOMA WASH.	167	197	43	97	96	101	148	105	139	50	157	82	111	81	77	175	97	66	108	51	38	76	134	24	56	21	88	83	121	82		96
SPOKANE WASHINGTON	194	200	95	179	120	236	186	111	85	85	64	109	---	29	47	104	54	76	122	61	72	58	57	32	91	51	103	92	145	57		101
STATE COLLEGE PENN.	233	200	293	311	327	274	98	42	204	189	84	20	237	280	108	37	82	228	104	190	67	41	83	101	84	47	214	235	212	129		159
STERLING VIRGINA	359	337	329	221	345	292	259	180	336	135	91	74	204	297	226	67	264	---	275	267	54	89	242	183	248	151	227	208	194	247		221
STILLWATER OKLAHOMA	330	269	277	109	53	161	207	233	231	266	59	306	123	246	213	282	245	269	288	70	106	291	72	254	203	221	270	274	269	266		215
SWAN ISLAND W.I.	349	451	370	198	490	511	441	89	462	532	511	501	569	473	511	451	510	244	203	316	396	510	446	456	434	454	---	459	473	406		421
TAMPA FLORIDA	460	471	409	393	350	280	385	392	426	286	362	348	293	359	---	397	378	430	399	392	---	218	395	401	361	370	348	312	139	397		363
WAKE ISLAND,PACIFIC	377	440	411	442	390	443	429	436	225	294	421	418	409	393	374	420	415	414	388	310	345	228	390	313	375	385	101	370	278	106		358

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (midnight to midnight) at Huntley, Mont.

NOVEMBER 1965

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	87	40	64	63	100	61	50	49	85	65	4	50	46	74	54	-20	39	32	30	1	21	73	60	46	34	39	47	38	-1	-1		44

The measurement is made with a Beckman and Whitley net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Huntley Exp. Station. The instrument with which they were measured has not been checked by the Weather Bureau.

TOTAL OZONE DATA

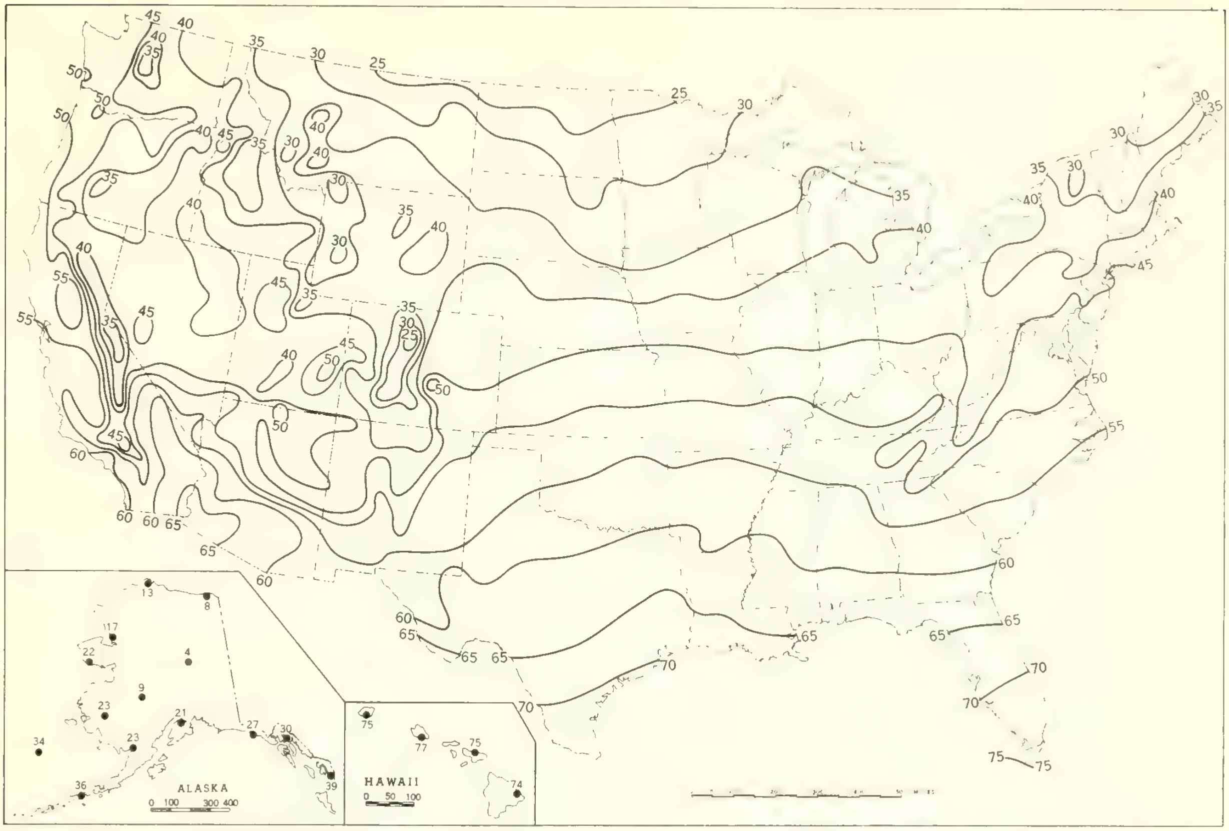
These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code ∧s Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

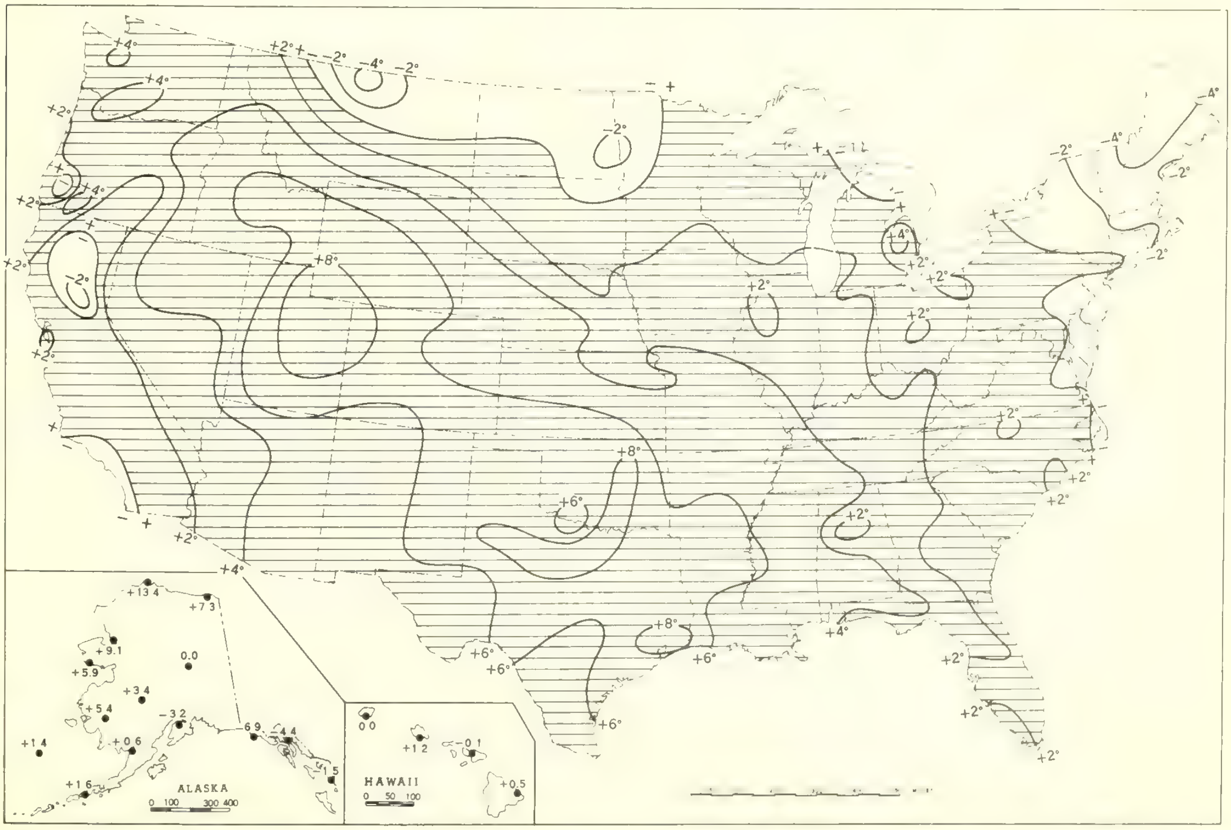
Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3
															Data will be delayed																	

The spectrophotometer measures the total amount of ozone in the atmosphere, i e , the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e g , 350 milli-atmo-cm ozone implies an ozone layer 0 350 centimeter thick The code ∧s designates the type of measurement made

Chart I. A. Average Temperature (°F.) at Surface, November 1965.



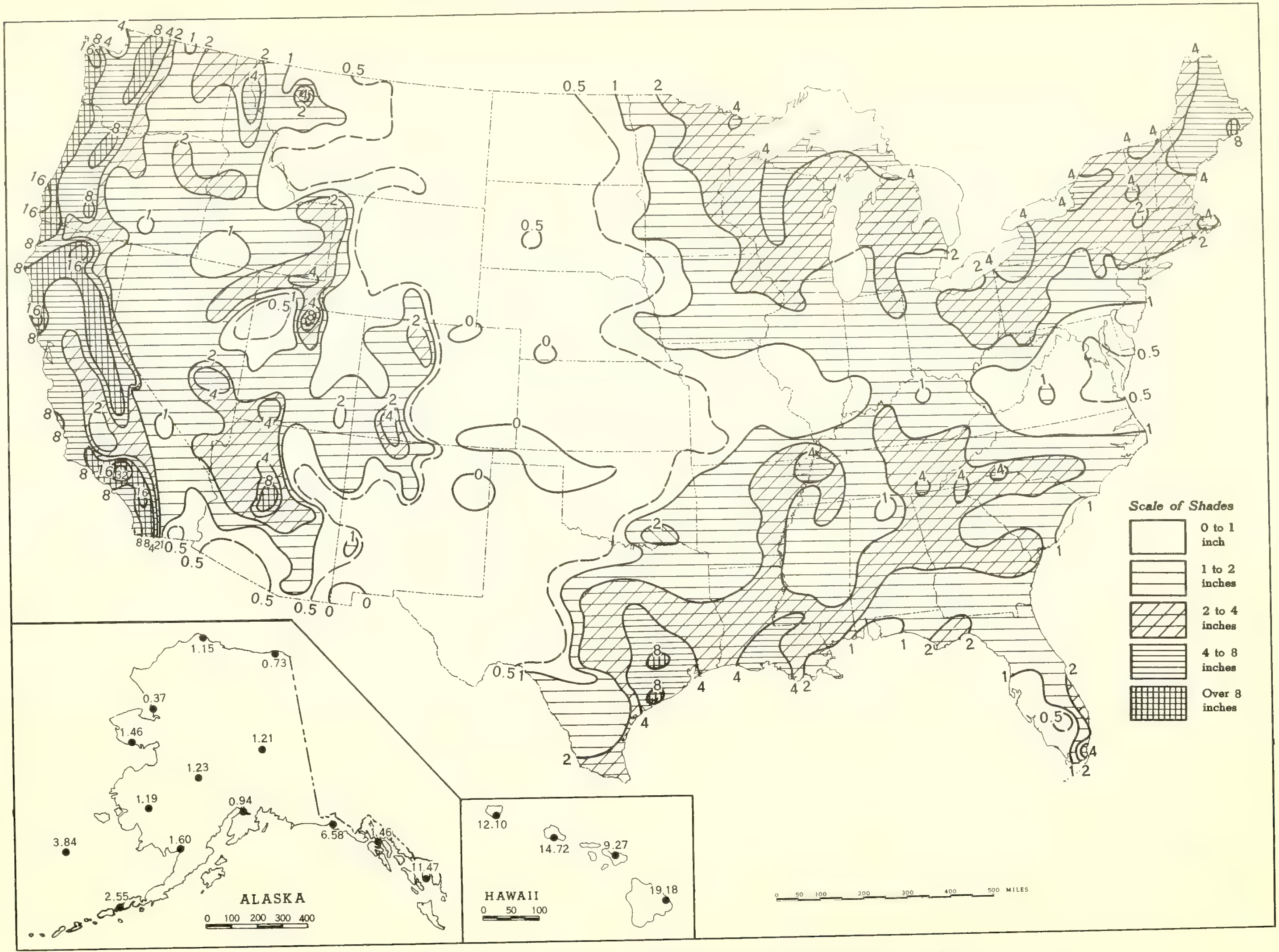
B. Departure of Average Temperature from Normal (°F.) November 1965.



A. Based on reports from over 870 Weather Bureau and cooperative stations. The monthly average is half the sum of the monthly average maximum and monthly average minimum, which are the average of the daily maxima and daily minima, respectively.

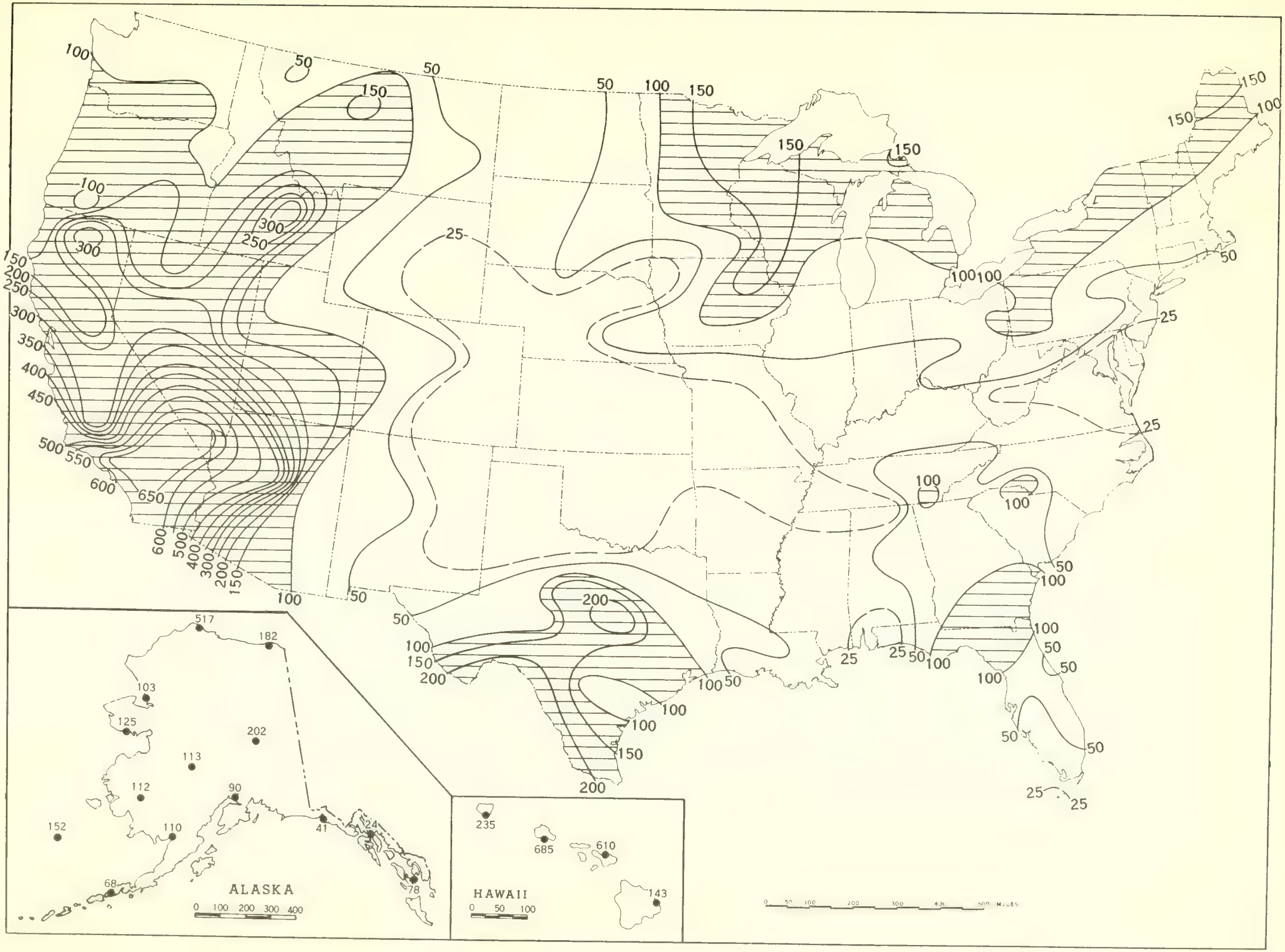
B. Departures from normal are based on the 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart II. Total Precipitation (Inches), November 1965.



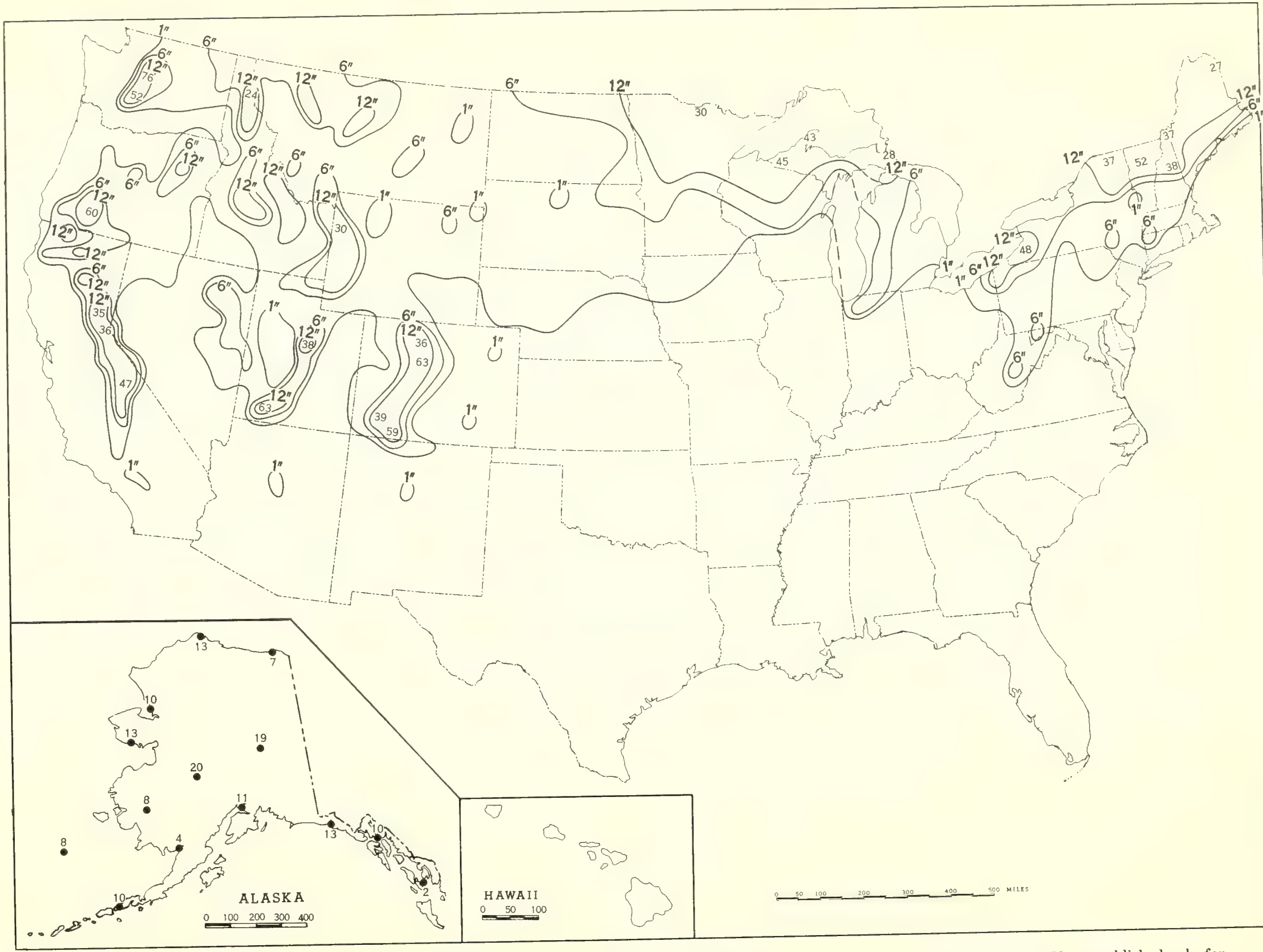
Based on daily precipitation records at about 870 Weather Bureau and cooperative stations.

Chart III. Percentage of Normal Precipitation, November 1965.



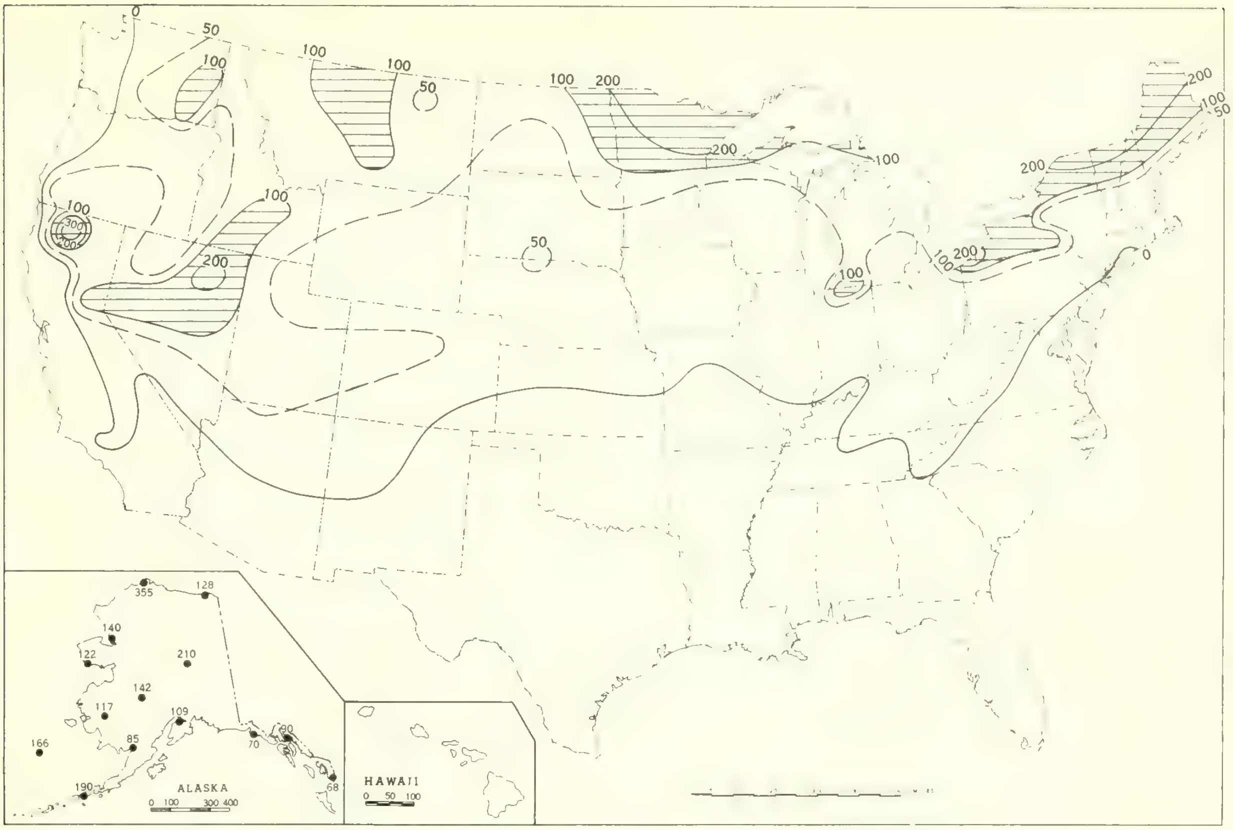
Normal monthly precipitation amounts are computed from 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart IV. Total Snowfall (Inches), November 1965.

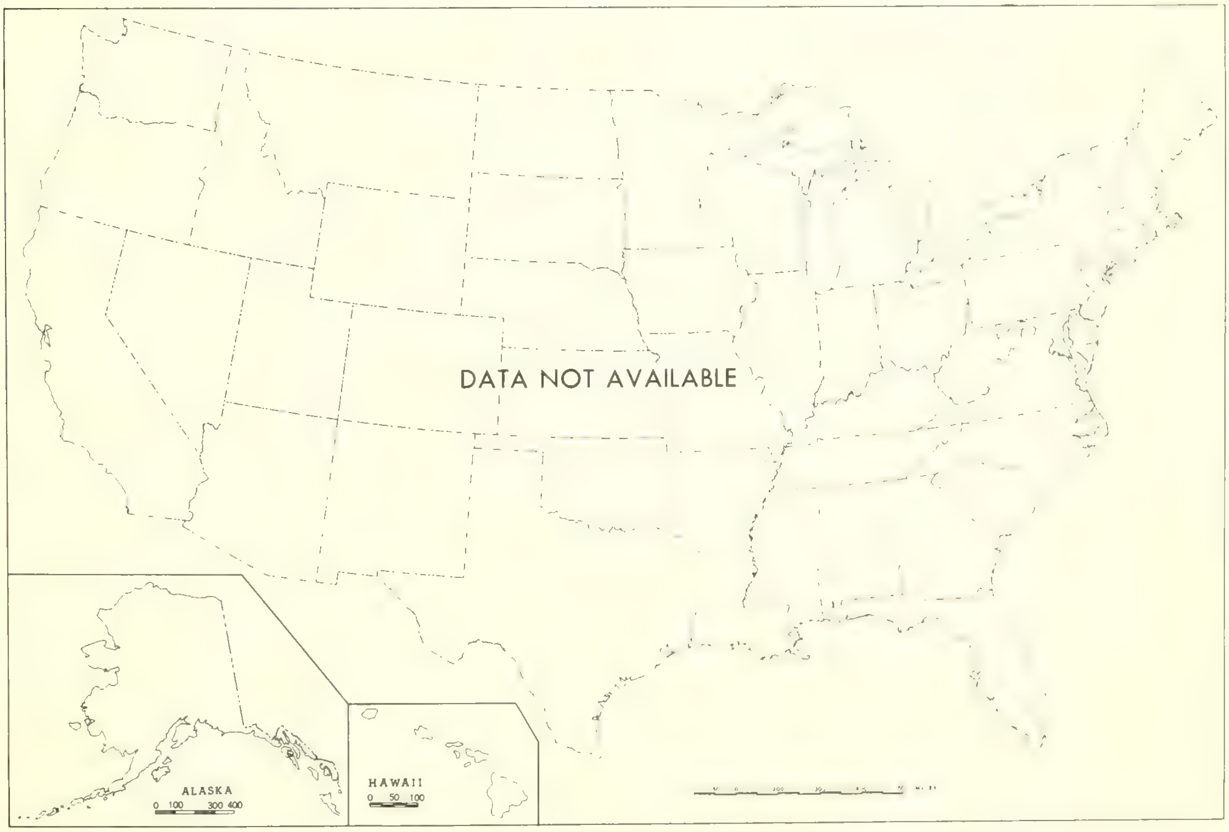


This is the total of unmelted snowfall recorded during the month at Weather Bureau and cooperative stations. This chart and Chart V are published only for the months of November through April although of course there is some snow at higher elevations, particularly in the far West, earlier and later in the year.

Chart V. A. Percentage of Mean Monthly Snowfall, November 1965.

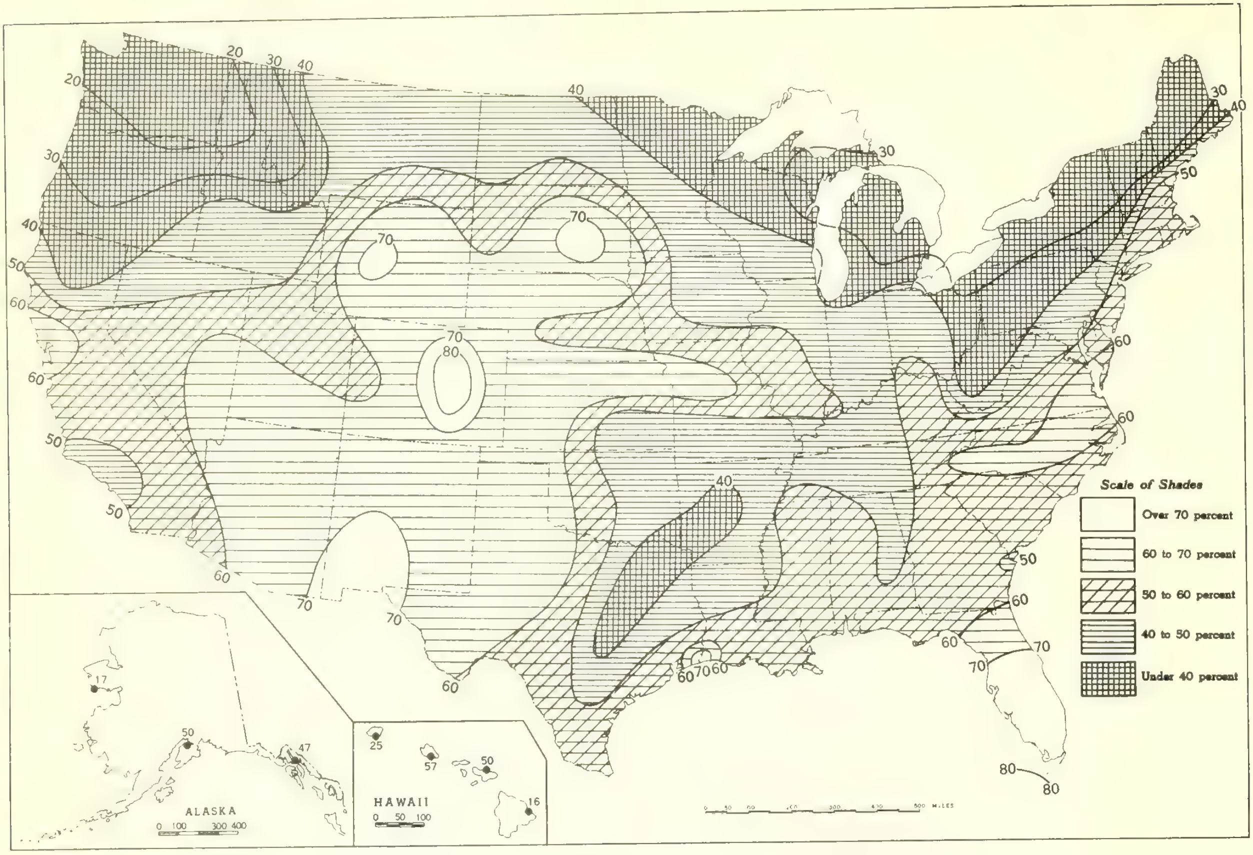


B. Depth of Snow on Ground (Inches), 7:00 a. m. E. S. T., November 1965.

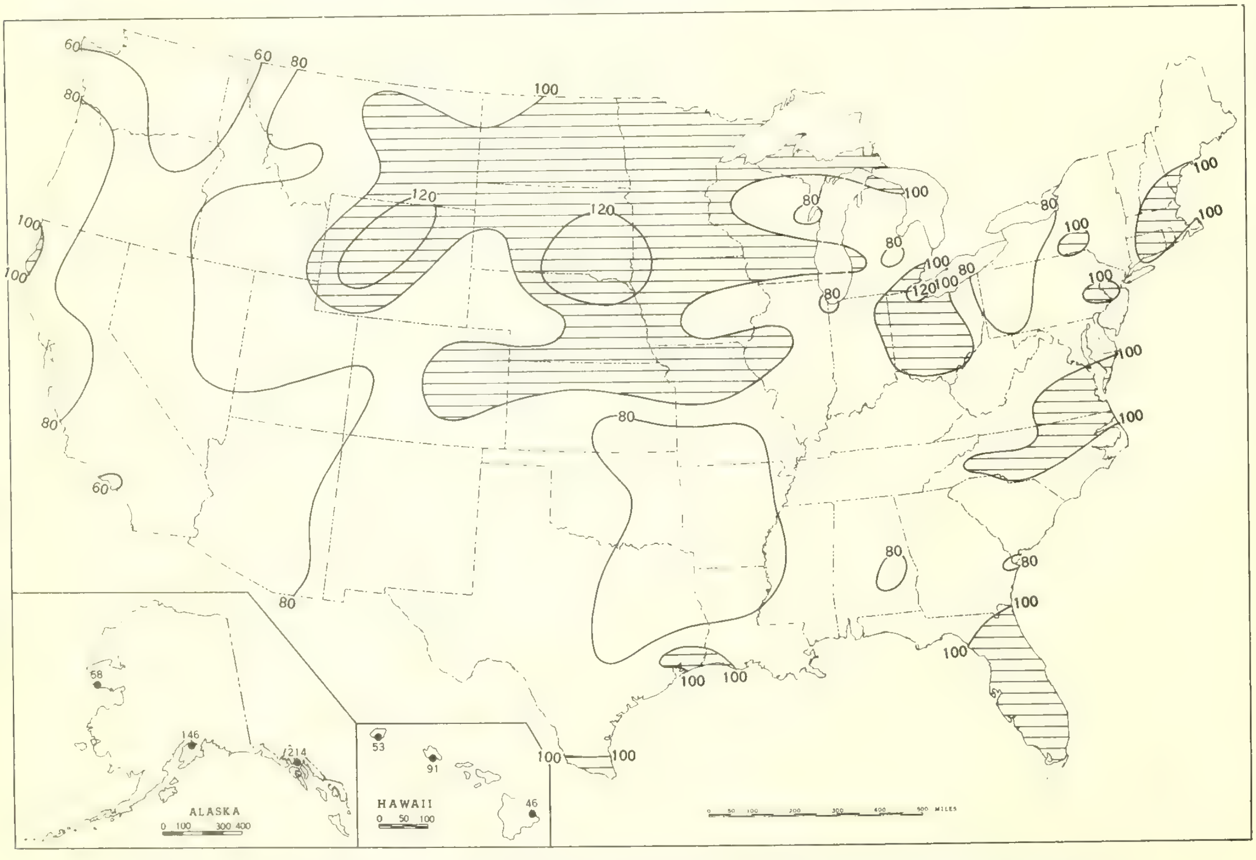


A. Amount of mean monthly snowfall is computed for Weather Bureau stations having at least 10 years of record.
B. Shows depth currently on ground at 7:00 a. m. E.S.T., of the Monday nearest the end of the month.
It is based on reports from Weather Bureau and cooperative stations.

Chart VI. A. Percentage of Possible Sunshine, November 1965.

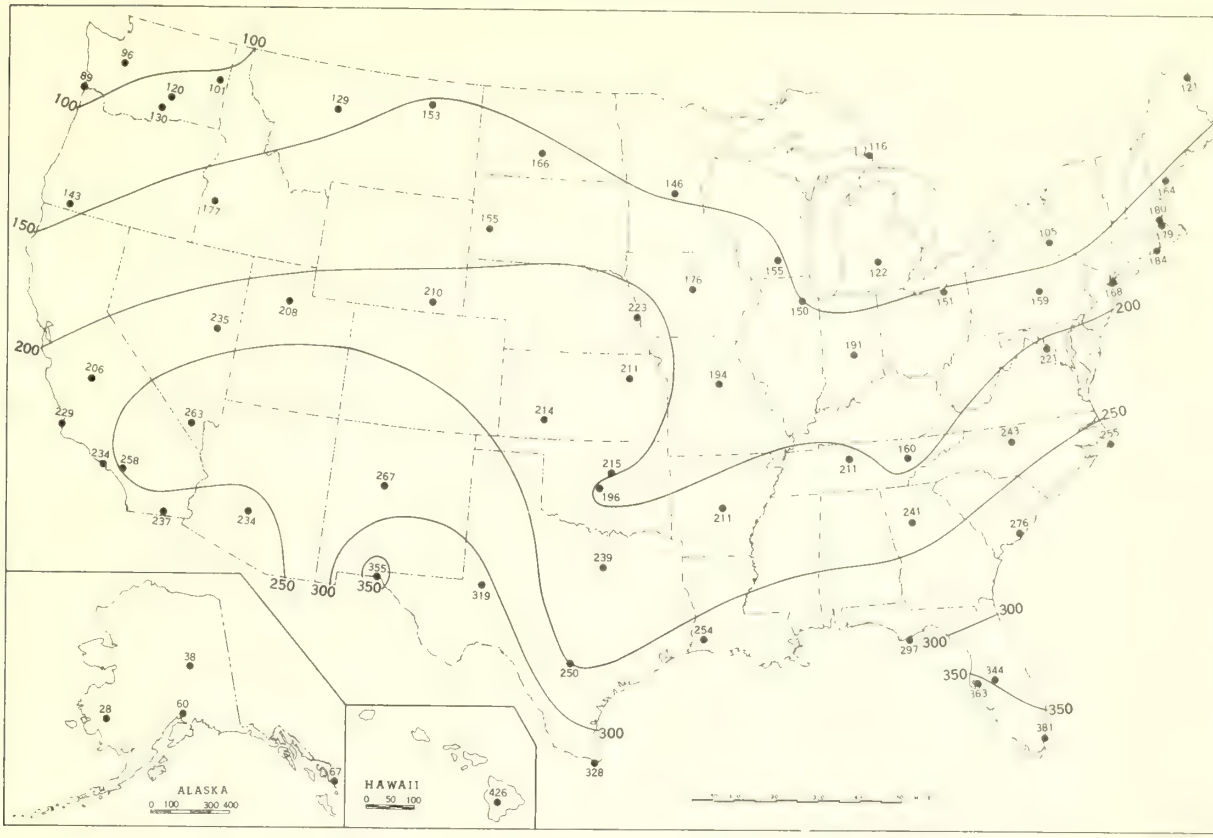


B. Percentage of Mean Monthly Sunshine, November 1965.

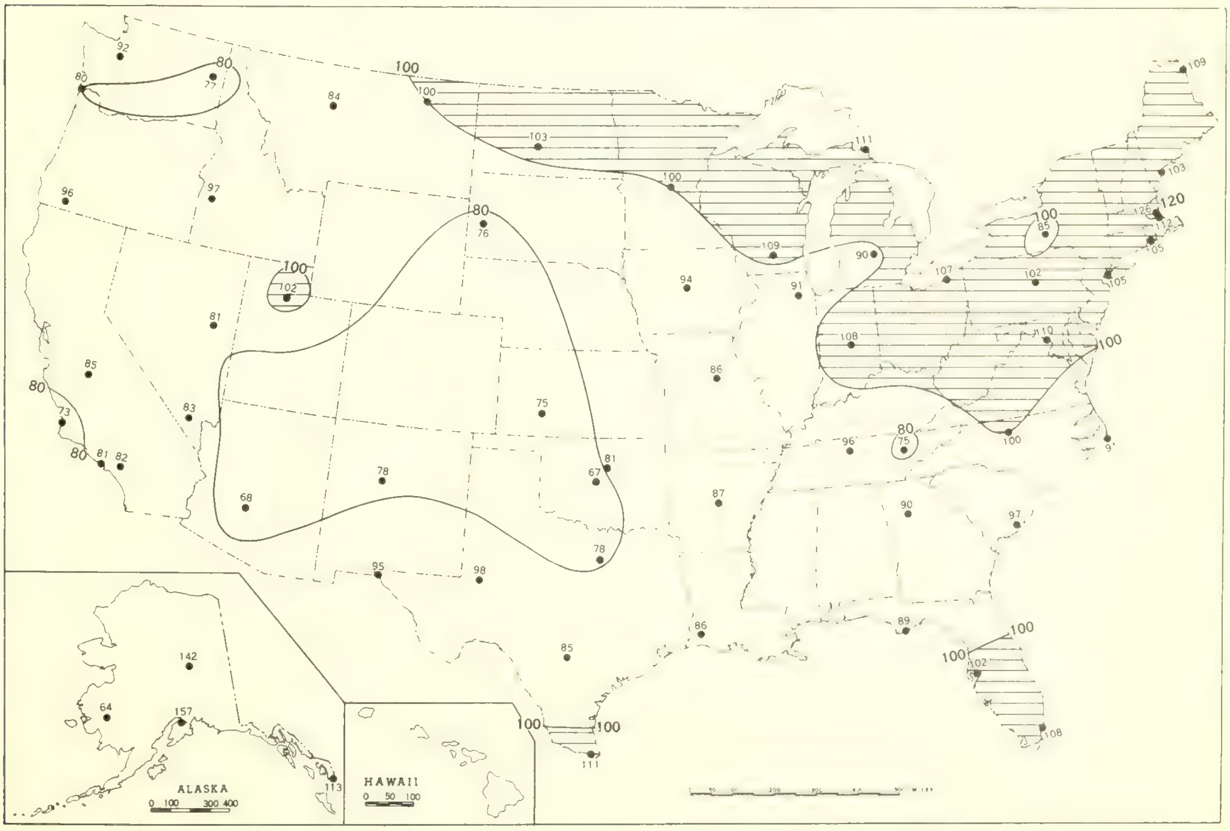


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, November 1965.

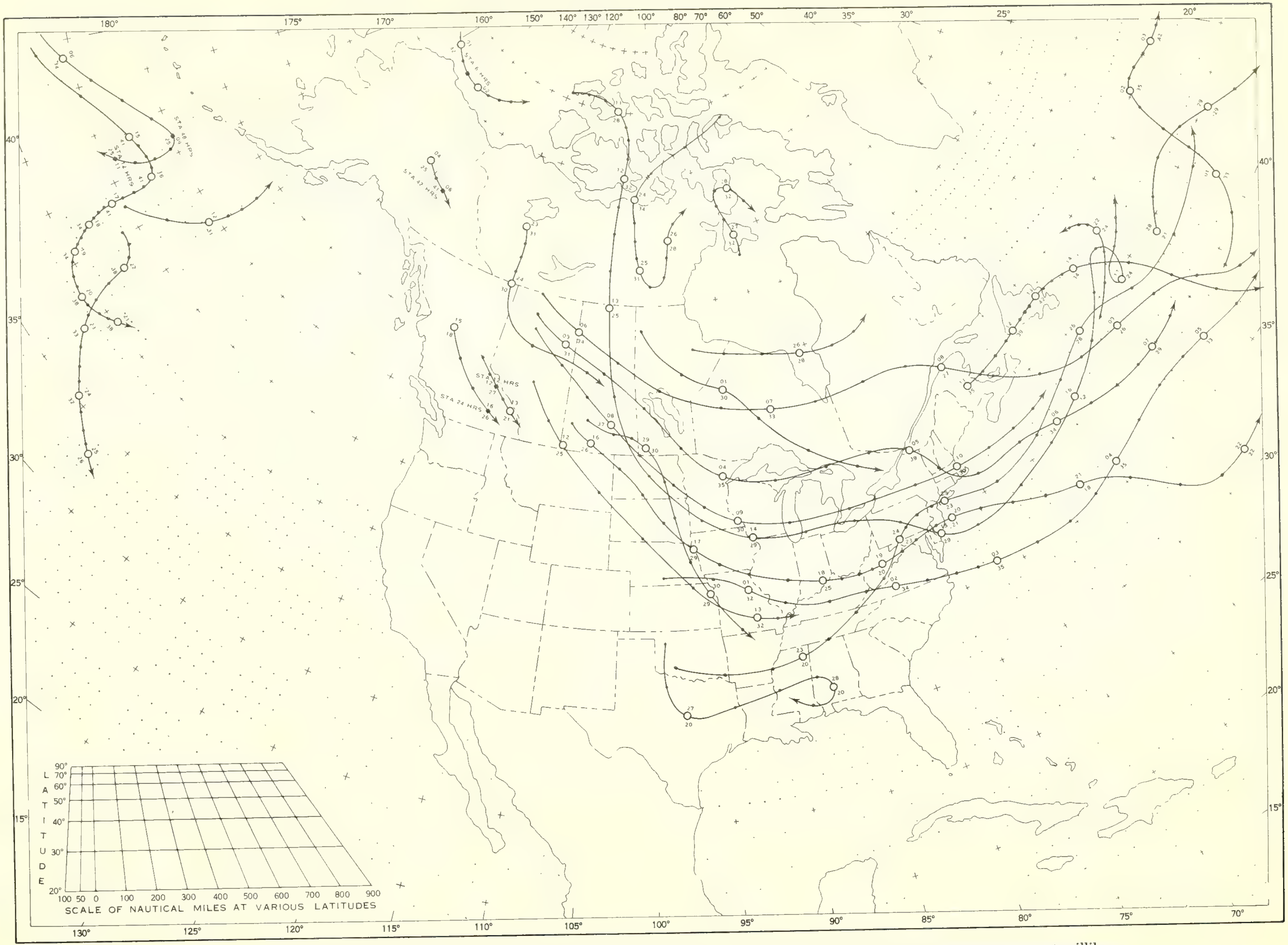


B. Percentage of Mean Daily Solar Radiation, November 1965.



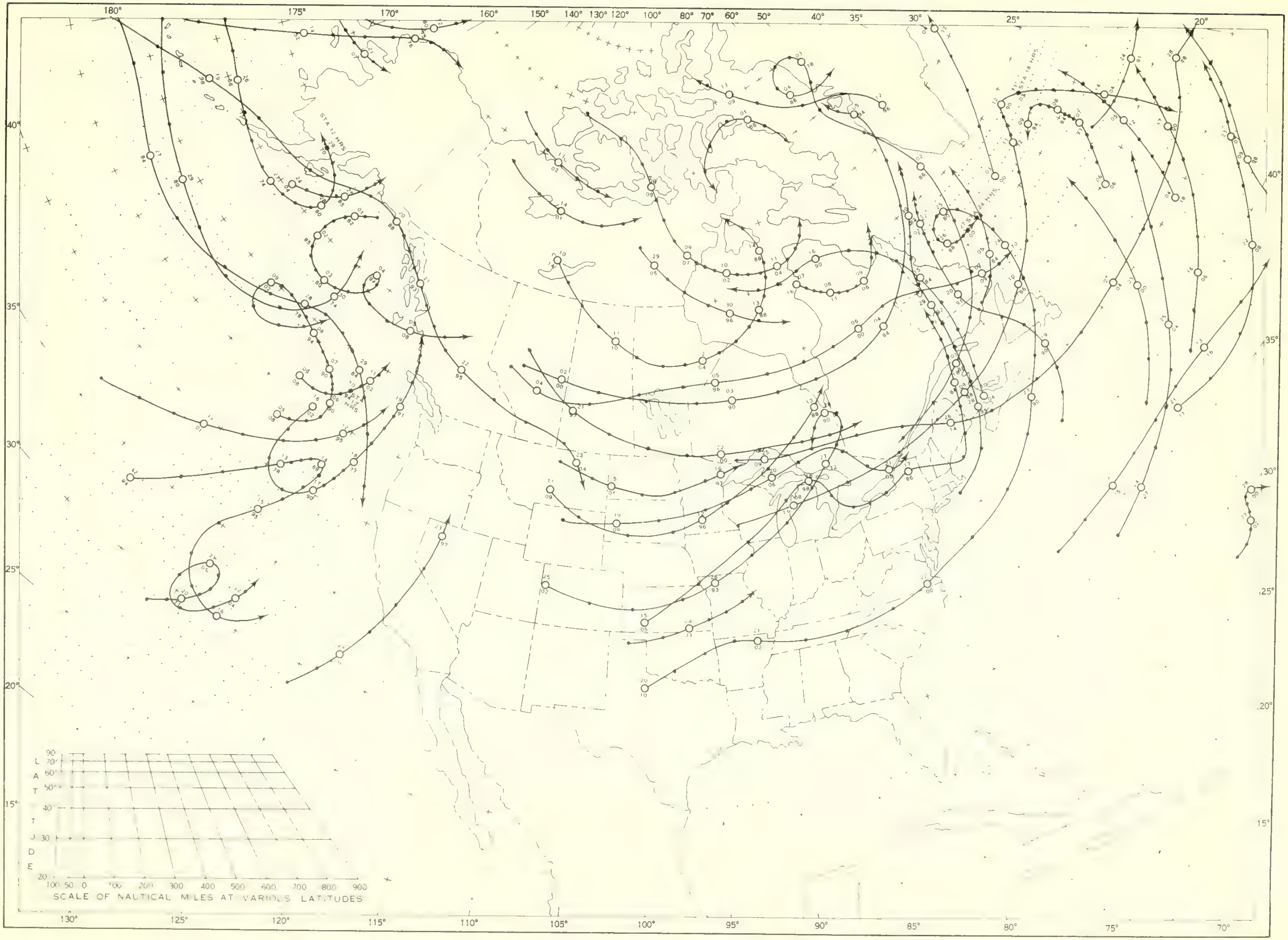
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, November 1965.



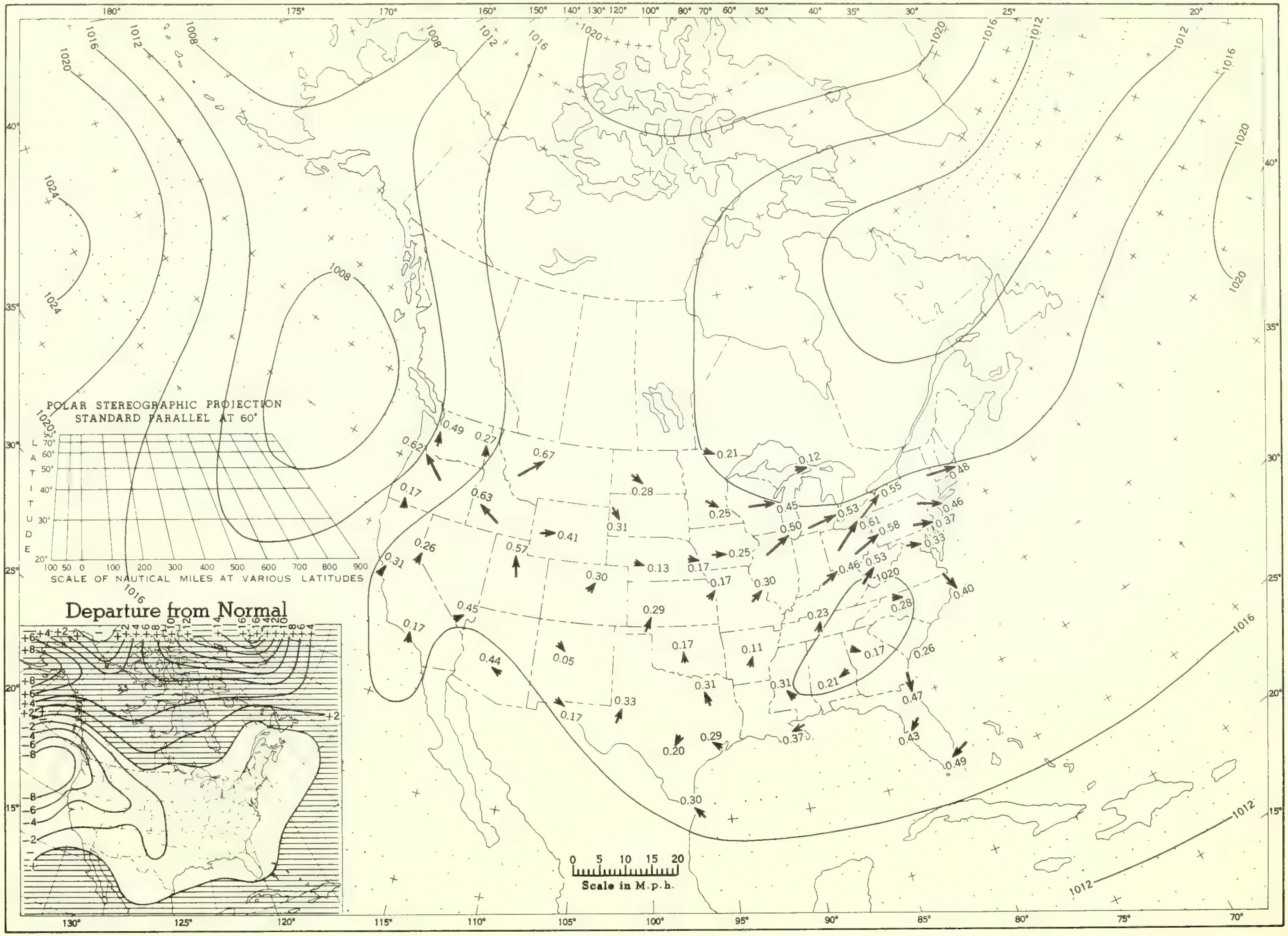
Circle indicates position of center at 7:00 a. m. E. S. T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, November 1965.



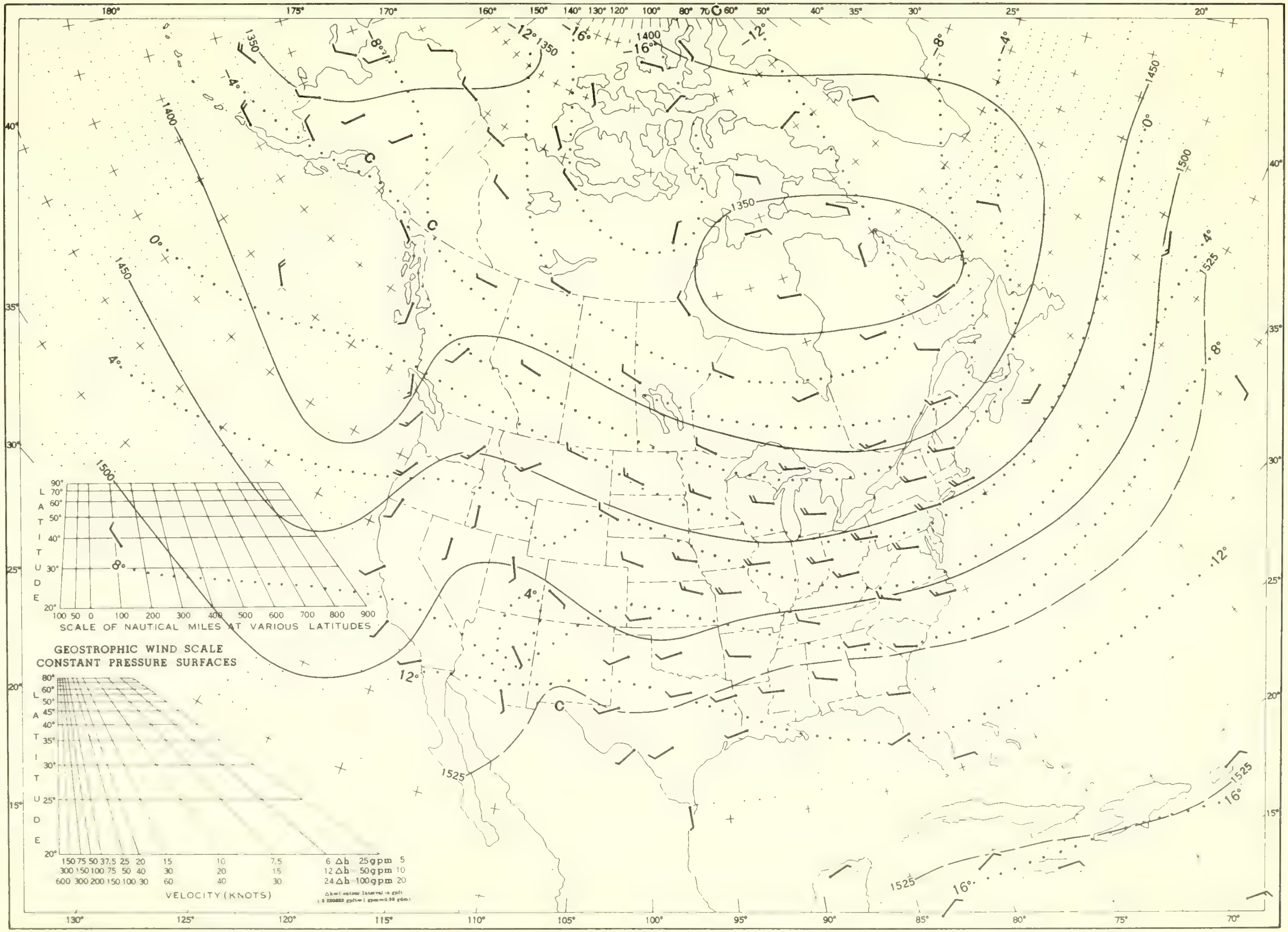
Circle indicates position of center at 7:00 a. m. E. S. T. See Chart VIII for explanation of symbols.

Chart X. Average Sea Level Pressure (mb) and Resultant Surface Wind, November 1965. Inset: Departure of Average Pressure (mb) from Normal, November 1965.



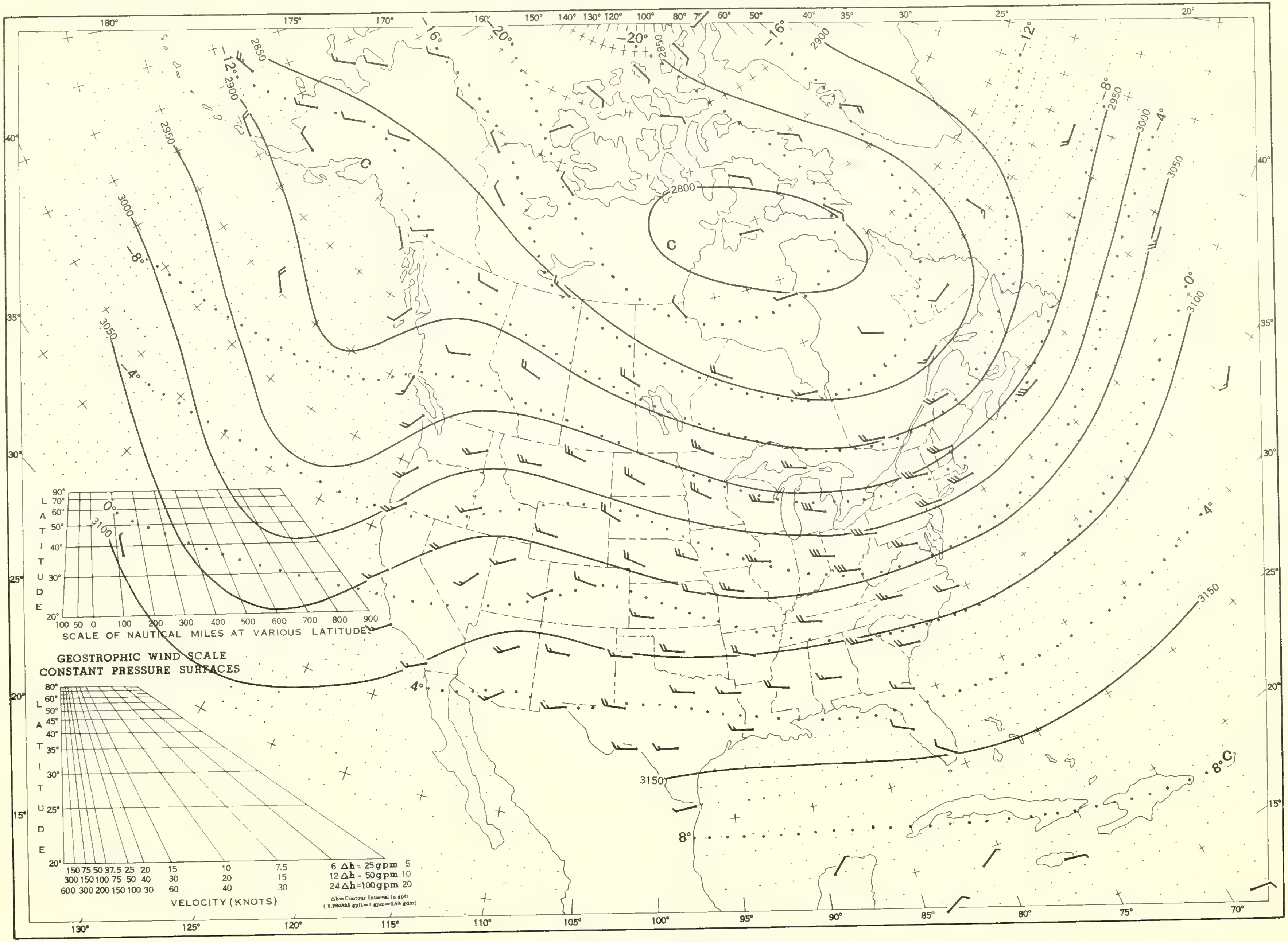
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed ÷ average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb. Surface, 1200 GMT, November 1965. Average Height and Temperature, and Resultant Winds.



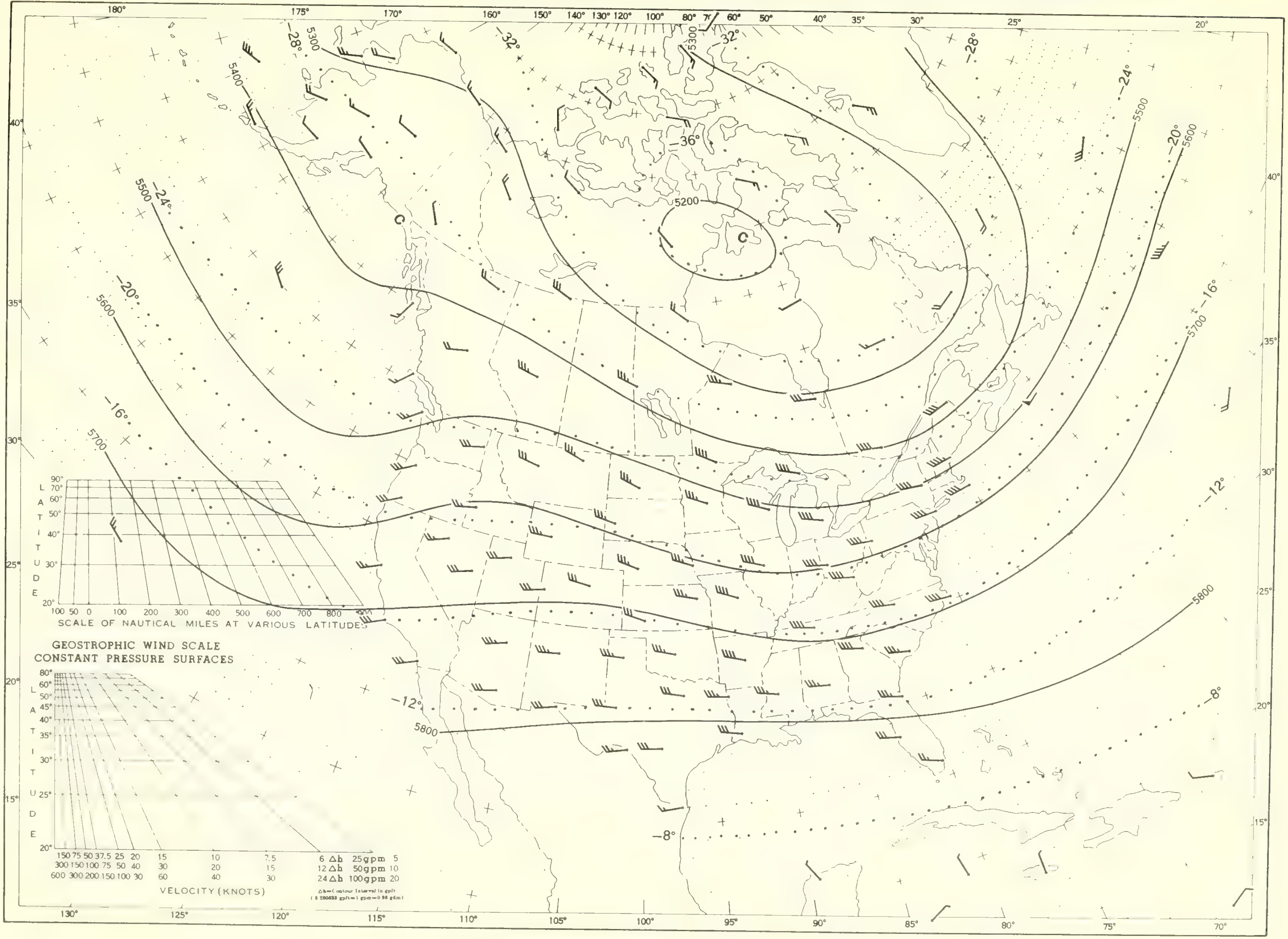
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in knots; flag represents 50 knots, full feather 10 knots, and half feather 5 knots. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, November 1965. Average Height and Temperature, and Resultant Winds.



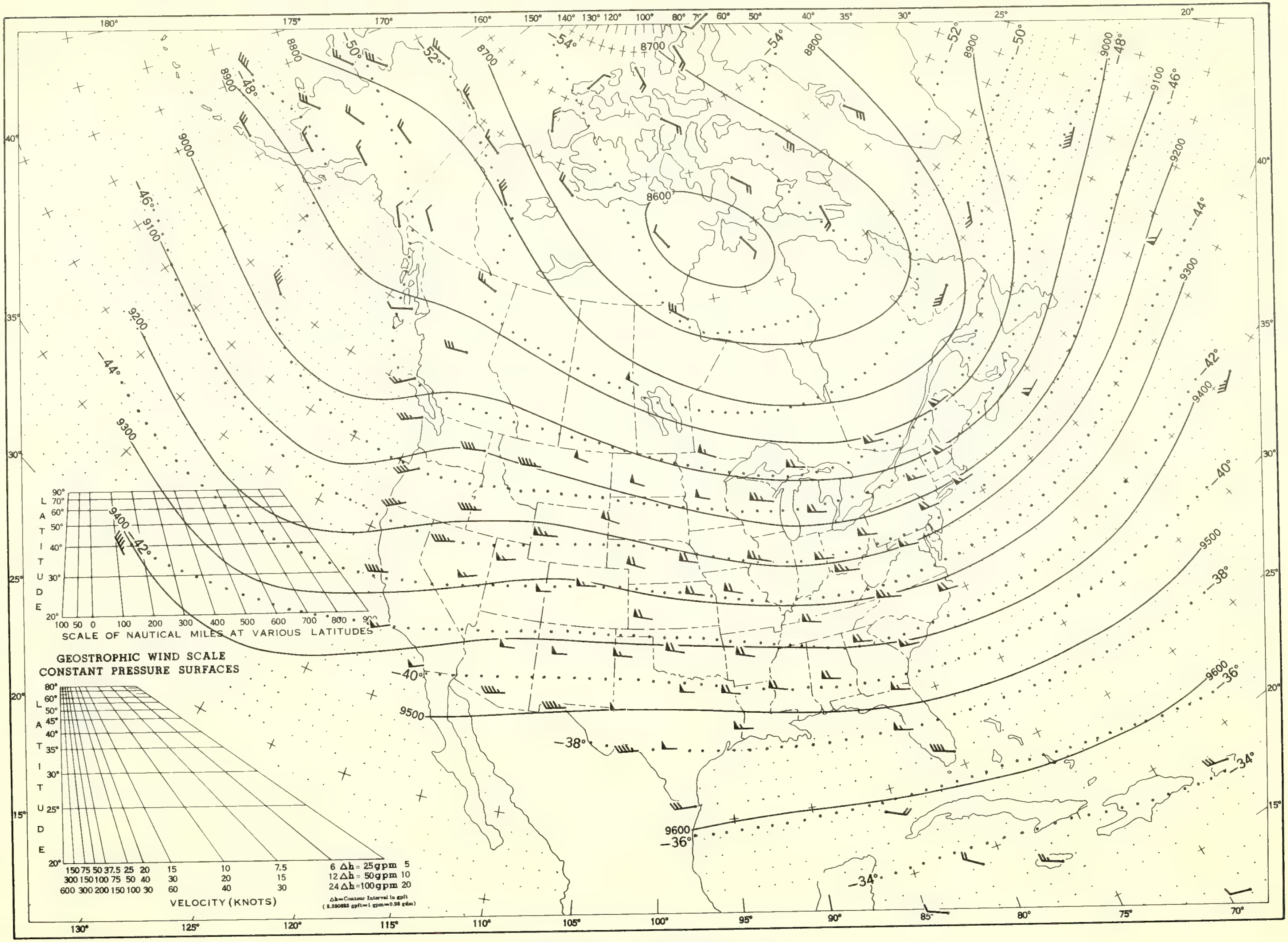
See Chart XI for explanation of map.

Chart XIII. 500-mb. Surface, 1200 GMT, November 1965. Average Height and Temperature, and Resultant Winds.



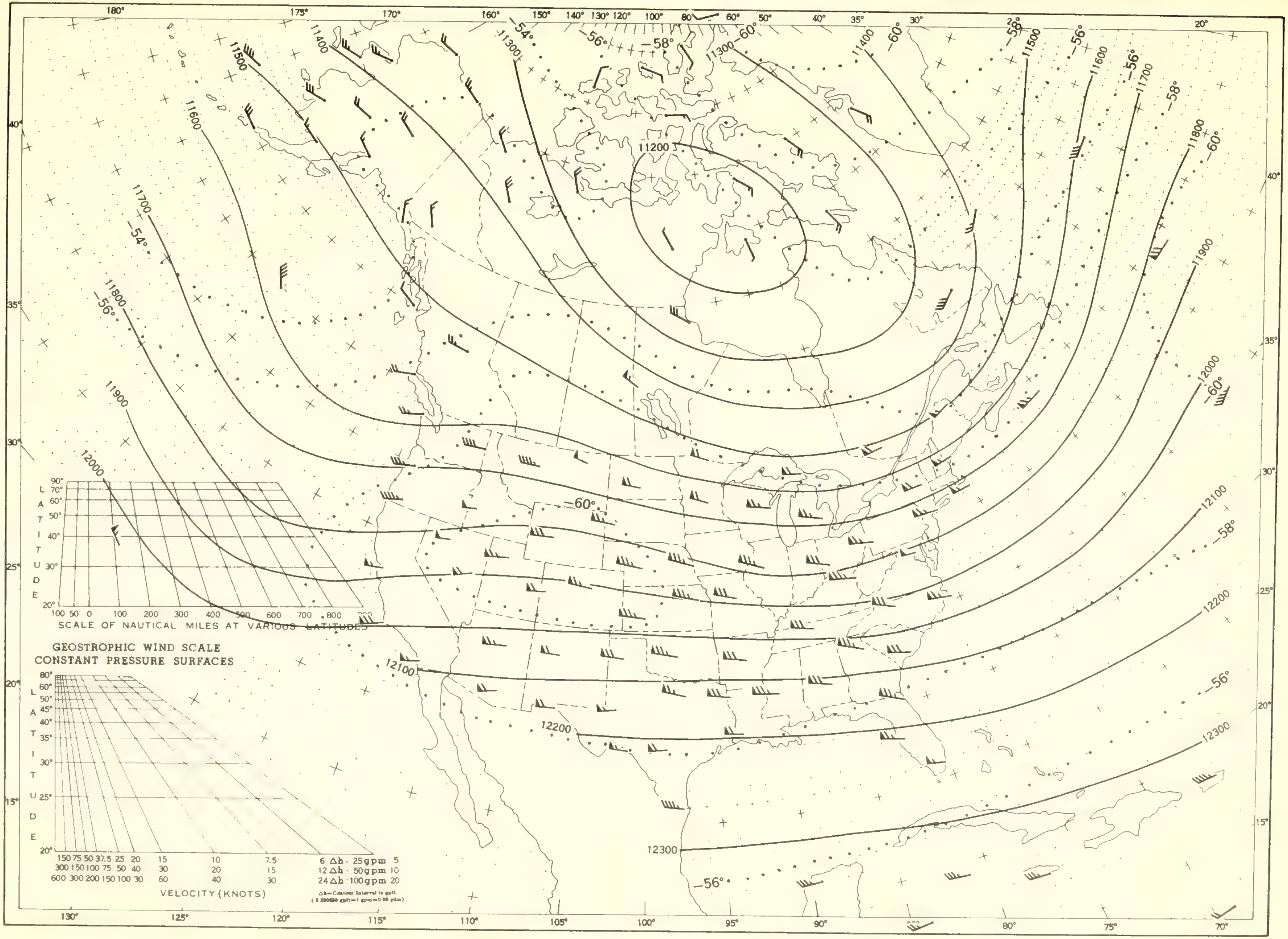
See Chart XI for explanation of map.

Chart XIV. 300-mb. Surface, 1200 GMT, November 1965. Average Height and Temperature, and Resultant Winds.



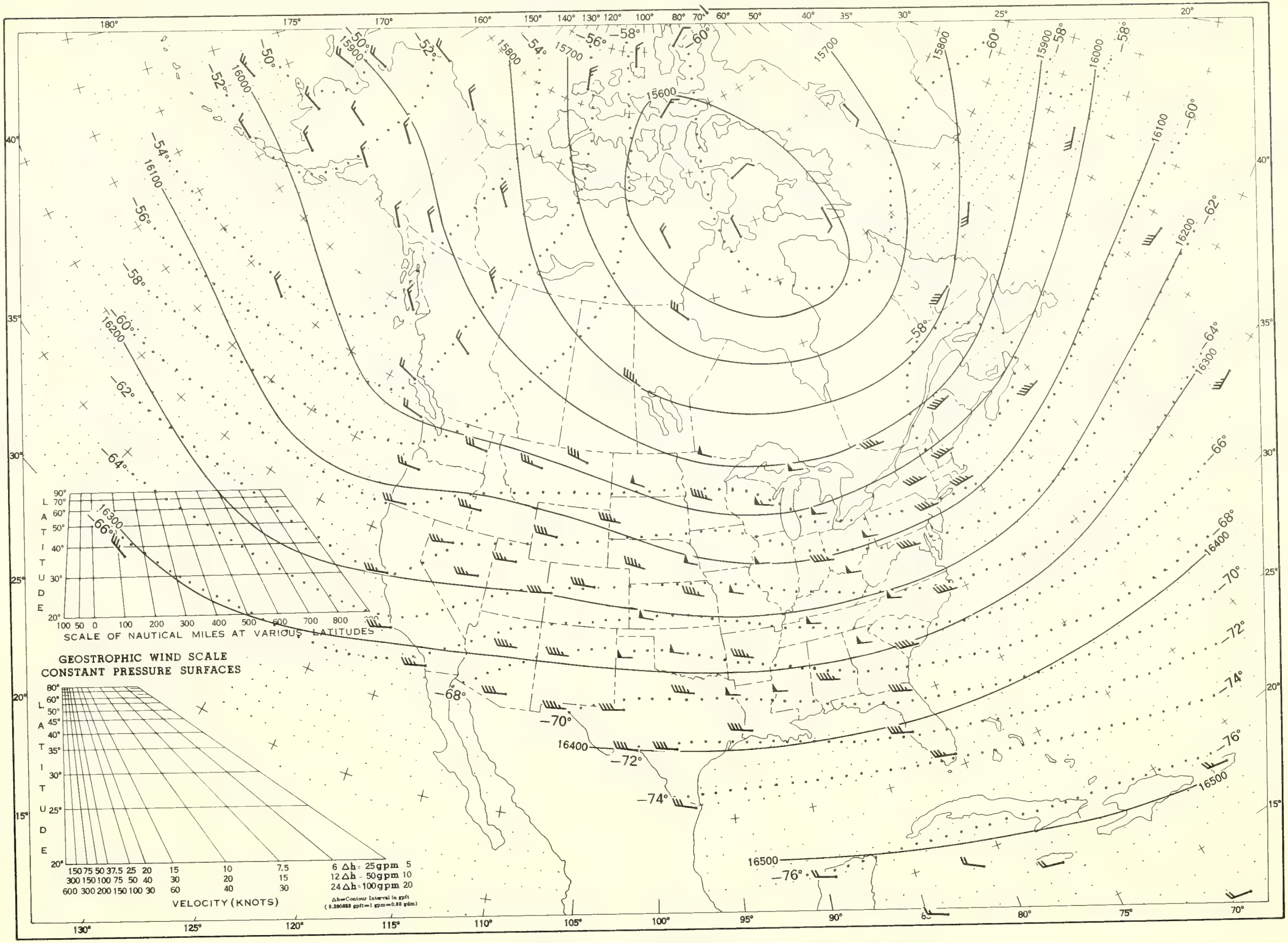
See Chart XI for explanation of map.

Chart XV. 200-mb. Surface, 1200 GMT, November 1965. Average Height and Temperature, and Resultant Winds.



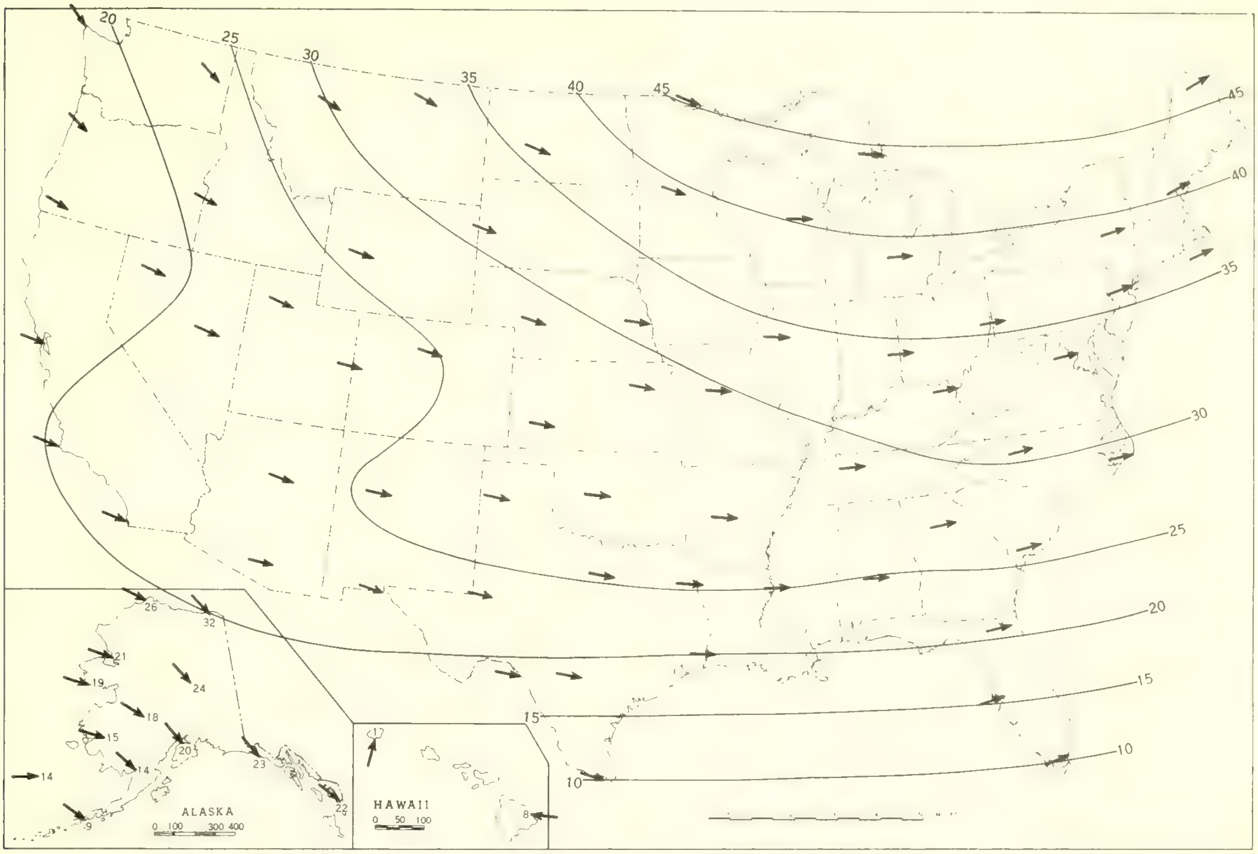
See Chart XI for explanation of map.

Chart XVI. 100-mb. Surface, 1200 GMT, November 1965. Average Height and Temperature, and Resultant Winds.

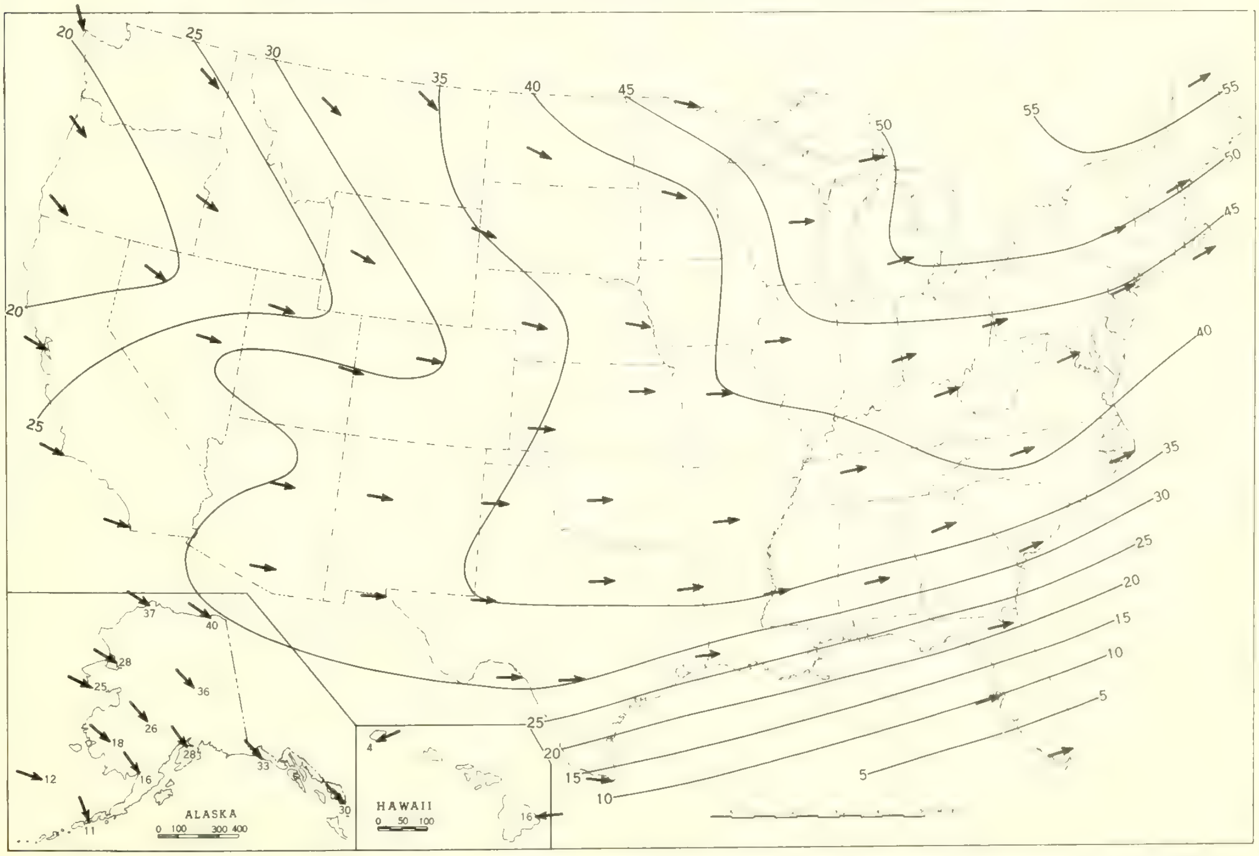


See Chart XI for explanation of map.

Chart XVII. A. 50-mb. Surface, 1200 GMT, November 1965. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, November 1965. Resultant Winds.



Wind speed (isotachs) in knots. Arrows show resultant wind direction. All wind data are based on rawin observations.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

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DECEMBER 1965
Volume 16 No. 12

ASHEVILLE: 1966

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NOTE: Delayed data and corrections will be carried in the June and December issues of this publication.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 16 No. 12

DECEMBER 1965

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. Record precipitation in Far Southwest.
2. Continued drought in Northeast.
3. Unusually mild east of Continental Divide.

TEMPERATURE.--December was relatively cold in Nevada and the Pacific States and warm elsewhere. Temperatures averaged 6° to 10° above normal in much of the upper portions of the Great Plains and Mississippi Valley. Several stations including Ft. Wayne, Ind.; Columbia, Mo.; Omaha, Nebr.; and Rochester, N. Y., had their warmest December since 1931 and it was the eighth warmest at Rochester, N. Y., since 1830. This was the warmest December at Kansas City, Mo., and Oklahoma City, Okla., since 1889 and 1890, respectively. At Burlington, Vt., the temperature failed to fall as low as zero during the month for the first time since 1954.

In contrast, the month was 4° to 6° colder than normal in California's Central Valley, and stations throughout the valley reported this December to be among the coldest on record. It was the coldest December since 1924 at Red Bluff in the north end of the valley. While below normal temperatures persisted in California's Central Valley, elsewhere in the Far West the first half of the month was relatively mild and the second half cold. During the week ending the 19th, subzero minima were recorded as far south as New Mexico and freezing occurred at Yuma, Ariz.

PRECIPITATION.--Precipitation was much above normal in the Far Southwest, from the central Great Plains through the upper Mississippi Valley and Great Lakes region, along the north Pacific coast, in southern Texas, and some other small areas along the Gulf coast.

Near-record precipitation fell in the Far Southwest as several storms crossed that region during the month. In Arizona, Flagstaff measured 6.63 inches for its wettest December and Tucson 5.02 inches which was the second greatest amount for December there since 1867. San Diego, Calif., had 6.60 inches, the most since 1943. As storms in the Southwest moved northeastward to the Great Lakes, heavy precipitation along their paths totaled as much as 5 inches for the month in the central Great Plains and 6 inches in the lower Great Lakes region.

The most important deficits occurred in the East. Along the Atlantic coast from Delaware to South Carolina and westward through West Virginia and much of Kentucky and Tennessee, precipitation was less than 25 percent of normal. At four stations in Virginia and one in North Carolina, only traces of precipitation were observed during the entire month. Amounts were less than 50 percent of normal in southern New England, southeastern New York, New Jersey, and southern Pennsylvania, and less than 75 percent in most of the rest of the Northeast. This was the driest December of record at Lexington, Ky.; Asheville, N. C.; and a number of stations in West Virginia. The northeast drought area received little or no relief and the drought even intensified in the southern portion. At the end of the month, extreme drought covered Maryland, Delaware, the northern half of Virginia, New Jersey, eastern Pennsylvania, southeastern New York State, and southern New England.

SNOWFALL.--At the beginning of December, snowcover was limited to the higher western mountains and along the Canadian border east of the Rockies. During the second half of the month, the cover expanded over most inland areas of the Far West and the northern Great Plains. The snowpack in the western mountains was satisfactory, and winter resort areas reported excellent ski conditions. The lack of snow has been unfavorable in many eastern ski areas.

STORMS AND OTHER UNUSUAL PHENOMENA.--Considerable fog occurred during the first half of the month in the Utah area and late in the second week from the upper Mississippi Valley to the East coast. Glaze disrupted power and communication lines in the Dakotas the second week. During the last week, wet snow, glaze, and strong winds caused 40,000 families in the Milwaukee, Wis., area and 100,000 in the Chicago, Ill., area to be without electricity for periods up to several days. Heavy rains and melted snow in southeast Arizona produced floods that forced thousands of families from their homes and caused property damage in millions of dollars.

CONDENSED CLIMATOLOGICAL SUMMARY

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In		In
Alabama	Fairhope 2NE	84	30	2 Stations	12	2+	Thomasville	6.56	2 Stations	0.76
Alaska	Data will be delayed									
Arizona	2 Stations	85	5+	do	-16	19	Pinal Ranch	13.59	Black Mountain Mission	.72
Arkansas	Texarkana WBAP	79	5	Evening Shade 1NE	10	1	Rogers	5.14	Abbott	.75
California	Bonita	90	5	Bodie	-28	15	Mt Baldy Notch	19.65	Death Valley	.57
Colorado	Eversoll Ranch	80	4	Fraser	-34	18	Wolf Creek Pass 4W	9.97	Penrose 3NNW	T
Connecticut	Hartford Brainard Fld	66	31	West Thompson Dam	2	21	Torrington	2.66	Pauchaug Forest	1.15
Delaware	Lewes 1SW	69	31	2 Stations	13	27	Wilmington Porter Resvr	1.99	Milford 3WNW	.22
Florida	4 Stations	88	17+	do	19	8	Wewahitchka	6.67	Dry Tortugas	.02
Georgia	Quitman	80	14	Blairsville Exp Sta	10	1	Surreney 2WNW	5.33	Blairsville Exp Sta	.52
Hawaii	Data will be delayed									
Idaho	Slate Creek RS	66	28	Stanley	-25	17	Priest River Exp Sta	3.76	Dubois 34W	T
Illinois	Mt Carmel Waterworks	70	31	Rockford WBAP	0	27	Watseka 2NW	5.49	Shawneetown New Town	.59
Indiana	Vincennes 1NW	69	31	LaGrange Sewage Plant	5	26	Valparaiso Waterworks	6.57	Scottsburg	.44
Iowa	4 Stations	66	11	Le Mars 2N	-3	27	Tipton	D 3.61	Inwood 2W	.15
Kansas	Hugoton	81	4	Syracuse 2W	-2	19	Girard	4.01	Glen Elder Dam	D .30
Kentucky	Jackson	74	31	3 Stations	9	3+	Paducah FAA AP	2.15	Blaine 2W	.12
Louisiana	Donaldsonville	81	31	Springville Fire Tower	15	27	Simpson	9.37	Springhill 2S	2.40
Maine	Saco	57	31	Clayton Lake 2	-26	12	2 Stations	3.55	Middle Dam	.70
Maryland	5 Stations	71	31	Sines Deep Creek 2	8	27	Sines Deep Creek 2	1.51	Leonardtown 3NW	.30
Massachusetts	West Medway	66	31	2 Stations	-2	21+	Chester 2	3.20	New Bedford	1.22
Michigan	Boyne Falls	63	31	3 Stations	-10	20+	Detroit WBAP M Wayne C	6.00	St James Beaver Island	1.35
Minnesota	Winona	58	31	do	-23	27	Minnesota City Dam 5	2.59	Luverne	.31
Mississippi	2 Stations	79	31+	Moorhead	12	1	Pearlington	7.18	Lake Cormorant 1W	1.08
Missouri	Cole Camp 7S	76	30	Maryville 2E	7	1	Cole Camp 7S	5.40	Goldsberry	.58
Montana	Yellowtail Dam	70	4	Opheim 10N	-30	27	Troy 18N	5.43	2 Stations	.00
Nebraska	2 Stations	75	5+	Anselmo	-13	27	Greeley	2.56	Franklin	.17
Nevada	Amargosa Ranch	71	7	Deeth	-28	18	Glenbrook	4.41	Leonard Creek Ranch	.21
New Hampshire	Windham	62	31	Mount Washington	-16	19	Mount Washington	4.65	Gilmanton 2E	1.08
New Jersey	2 Stations	67	31	High Point Park	1	27	Burlington	3.53	Fortescue	.80
New Mexico	Bitter Lakes WL Ref	80	30	Fence Lake	-26	19	McCauley Ranch	7.94	Farnsworth Ranch	.25
New York	Sefauket	66	31	Wanakena Ranger School	-21	20	Little Falls City Res	5.94	Plattsburgh	.62
North Carolina	3 Stations	76	13+	Celo 2S	4	1	Cape Hatteras WB	2.24	Yanceyville 2NNE	T
North Dakota	2 Stations	68	5+	Medora 22NNW	-30	28	Hankinson RR Station	1.46	2 Stations	T
Ohio	Gallipolis 5W	70	31	Tom Jenkins Dam	6	27	Montpelier	5.09	Senecaville Dam	.17
Oklahoma	Freedom	83	4	Kenton	4	16	Lyons 1NW	5.02	Tipton 4S	.50
Oregon	Pilot Rock 1SE	68	4	Austin 3S	-20	23	Cape Blanco	19.91	2 Stations	.03
Pennsylvania	4 Stations	69	31+	Coudersport 4NW	-7	20	Corry	3.06	Kegg	.21
Puerto Rico	2 Stations	93	25+	Carite Camp Tunnel	52	28	Rio Blanco Upper	25.17	Aguirre Research Sta	.57
Rhode Island	Providence WBAP	69	31	Greenville	5	20	Kingston	1.82	Block Island WBAP	1.36
South Carolina	Beaufort 7SW	80	6	Chester 2WSW	13	8	Hilton Head	2.70	Marion	.20
South Dakota	Rapid City WBAP	75	4	Ralph	-20	27	Victor 1ESE	1.35	Harding 3SE	T
Tennessee	Newbern	77	10	Mountain City No 2	6	1	Moscow	2.40	Unicoi 2ESE	.07
Texas	Armstrong	86	7	Dalhart FAA AP	8	16	Livingston 2NNE	10.42	Tampico	T
Utah	2 Stations	67	6+	Woodruff	-18	16	Blowhard Mtn Radar	7.52	Manila	D .25
Vermont	Dorset 1S	60	31	West Burke	-17	21	Mount Mansfield	4.38	South Newburg	1.18
Virginia	Quantico 1S	76	31	2 Stations	6	27	Wallaceton Lk Drummond	1.25	4 Stations	T
Washington	Walla Walla WB City	67	3	Winthrop 1WSW	-10	26	Spruce	23.17	Ice Harbor Dam	.24
West Virginia	Gassaway	74	12	4 Stations	2	27+	Thomas	2.43	Franklin 2NE	.13
Wisconsin	West Allis	63	31	North Pelican	-16	28	Ridgeland 1NNE	3.92	Minocqua Dam	1.25
Wyoming	2 Stations	70	4	Big Piney	-30	16	Lake Yellowstone	1.77	4 Stations	T

+ And also on an earlier date or dates

NOTE: Dates in the above Condensed Climatological Summary apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	999.0	1022.0	58	34	46.0	- 1.3	73	31	17	1	0	16	35	71	2.06	- 2.96	0.85	6	0	0.0	0	0.1	15	24	S	24	11	5	15	5.9	68
HUNTSVILLE	600	998.0	1021.7	57	35	46.0	2.4	72	31	18	1	0	16	35	67	0.76	- 4.15	0.40	6	0	T	T	0.7	17	32	25	24	8	6	17	6.3	
MOBILE	211	1013.2	1021.2	64	44	53.7	- 0.4	75	31	29	1	0	2	44	75	3.97	- 1.49	1.88	7	1	0.0	0	4.3	7	21	6	18+	11	6	14	5.9	
MONTGOMERY	194	1014.6	1021.9	61	37	48.6	0.4	75	31	23	8	0	12	37	71	3.57	- 1.24	1.56	8	1	0.0	0	0.8	5	23	S	24	11	8	12	5.6	60
ALASKA												B																				
ANCHORAGE PRK STRIP	85			20	5	12.2	- 2.1	38	12	-18	22	0	31			1.47	0.53	0.62	10		22.7	30										
ANCHORAGE	141	1000.0	1005.0	21	6	13.1		42	13+	-14	22	0	31	5	68	1.44		0.47	9	0	23.9	27	2.9	1	23	21	15	12	5	14	5.6	52
ANNETTE	110	1002.0	1006.2	38	29	33.0	- 3.0	45	8+	5	31	0	17	26	75	13.72	1.61	2.26	23	0	12.0	3	5.6	12	41	17	22	3	5	23	8.2	
BARTER ISLAND	39	1011.5	1013.6	- 6	-20	-13.2	- 2.8	24	26	-48	19	0	31	-19	74	0.51	0.34	0.20	7	0	5.7	16	1.7	7	28	22	26+	Z	Z	Z		
BARROW	22	1013.5	1014.4	- 6	-19	-12.5	- 1.3	25	26	-38	10	0	31	-18	72	0.68	0.39	0.18	15	0	12.9	20	3.7	27	40	28	28+	Z	Z	Z		
BETHEL	125	1004.4	1010.4	9	- 5	2.2	- 2.6	35	9	-28	17	0	31	- 2	79	0.50	- 0.52	0.21	9	0	7.3	9	2.4	36	43	19	11	11	0	20	6.7	
COLD BAY	94	1004.4	1008.2	33	24	28.5	- 0.3	43	18	14	16	0	27	24	82	1.77	- 0.82	0.34	22	0	9.7	4	3.2	29	61	12	2	3	7	21	7.9	
FAIRBANKS	436	993.6	1012.0	- 5	-24	-14.1	- 6.4	26	27	-49	23	0	31	-18	82	1.92	1.38	0.78	14	0	33.5	36	1.2	27	32	24	28+	7	8	16	6.9	
JUNEAU	12	1004.7	1005.6	31	22	26.6	- 1.8	41	14	- 7	31	0	27	22	82	4.26	0.04	0.81	21	0	16.9	7	10.2	11	36	12	19+	5	1	25	8.4	16
KING SALMON	43	1005.8	1007.6	15	- 5	5.3	- 7.9	39	10	-30	22	0	31	0	77	1.62	0.60	0.55	13	0	16.0	15	1.7	3	30	10	18	9	8	14	6.0	
KOTZEBUE	10	1010.8	1011.2	1	-12	- 5.6	- 2.0	31	27	-38	18+	0	31	-11	76	0.79	0.50	0.39	10	0	19.3	23	2.1	5	51	28	27	9	4	18	6.4	
MC GRATH	334	998.0	1011.9	- 3	-24	-13.8	- 6.8	31	11	-52	24+	0	31	-21	67	0.29	- 0.72	0.16	8	0	18.4	23	0.9	25	21	30	28	9	7	15	6.3	
NOME	13	1009.8	1010.5	8	- 5	1.9	- 4.4	31	27	-30	16	0	31	- 4	76	0.53	- 0.46	0.14	10	0	5.3	15	7.6	36	44	2	18	13	5	13	5.3	48
ST. PAUL ISLAND	22	1006.8	1007.8	32	23	27.6	1.2	39	8+	2	22	0	26	25	88	2.65	0.82	0.62	24	0	8.9	4	2.3	12	46	13	7	0	4	27	9.1	
SHEMYA	122	1000.0	1003.9	37	30	33.3	1.9	43	5+	23	2	0	22	30	86	6.00	3.86	1.15	23	0	15.3	4	5.8	21	63	21	16	1	7	23	8.6	
YAKUTAT	28	1000.7	1001.7	29	14	21.4	- 6.7	43	14	-14	26	0	30	19	88	12.16	- 0.11	2.91	20	0	64.1	29	4.9	12	38	13	13	5	3	23	7.7	
ARIZONA																																
FLAGSTAFF	6993	785.3	1018.0	42	18	30.2	- 0.2	67	4	- 2	24+	0	31	20	72	6.63	4.98	1.55	14	0	38.5	17	1.4	18	20	21	30	9	8	14	6.0	
PHOENIX	1117	976.0	1015.5	65	41	52.9	1.3	82	5	31	20	0	1	41	72	3.19	2.34	1.15	11	4	0.0	0	2.5	12	32Y	S	22	13	7	11	5.0	65
TUCSON	2584	926.2	1015.0	63	42	52.1	0.2	78	5	30	20	0	3	36	64	5.02	4.10	1.18	13	2	0.3	T	4.4	14	29	SE	22	10	6	15	5.8	62
WINSLOW	4895	851.7	1019.5	47	25	36.1	3.6	62	28	13	20	0	27	26	70	1.45	0.93	0.44	13	0	3.2	1	3.0	20	26	21	29+	11	8	12	5.6	
YUMA	194	1008.5	1015.6	64	45	54.4	- 2.6	79	5	35	24	0	0	40	65	1.67	1.35	0.49	8	1	0.0	0	4.2	2	34	E	16	15	6	10	4.6	67
ARKANSAS																																
FORT SMITH	449	1003.1	1019.9	59	34	46.4	4.1	75	30	21	8	0	19	36	73	1.37	- 1.45	0.83	8	0	0.0	0	0.8	19	34	W	24	7	5	19	7.1	44
LITTLE ROCK	257	1011.2	1020.9	58	36	46.7	4.8	75	5	20	8+	0	13	37	72	2.05	- 2.04	1.30	6	1	0.0	0	1.8	22	33	W	24	9	7	15	6.1	52
TEXARKANA	372	1007.1	1020.4	61	40	50.9	4.0	79	5	26	27+	0	7	40	73	2.41	- 2.14	1.40	10	1	0.0	0	2.4	17				12	3	16	6.1	
CALIFORNIA																																
BAKERSFIELD	494	1000.0	1017.8	49	37	42.8	- 6.0	63	28	25	19	0	8	38	83	1.60	0.63	0.93	7	0	T	0	0.4	27	24	20	28	4	7	20	7.7	
BISHOP	4108			51	22	36.7	- 2.6	66	3	12	22	0	31			2.16	0.98	2.16	2		0.0	0						13	7	11	5.0	
BLUE CANYON	5280			42	29	35.9	- 4.4	60	2	18	26	0	21			9.00	- 1.24	3.00	8		68.5	70			35	18	28	8	8	15	6.5	
BURBANK	724	988.8	1014.8	65	43	54.1	- 1.5	84	4	34	18	0	0	38	61	6.84	4.13	5.39	9	1	0.0	0	0.1	30	28	15	29	11	7	13	5.4	
EUREKA U	43			54	40	47.0	- 1.9	62	3	29	16	0	2			5.22	- 1.49	2.03	12		0.0	0			38	SE	27	8	4	19	6.8	52
FRESNO	328	1005.8	1017.7	49	35	42.0	- 5.0	58	28	25	19	0	12	39	90	1.73	- 0.24	0.74	9	0	T	T	1.5	13	20	NW	11	5	5	21	7.9	41
LONG BEACH	34	1014.2	1015.7	64	44	54.4	- 1.6	82	4	35	23	0	0	44	72	3.44	1.47	1.58	10	2	0.0	0	0.7	32	26	19	29	13	7	11	4.9	
LOS ANGELES	97	1011.5	1015.2	64	46	55.1	- 1.8	83	4	38	15	0	0	42	65	3.25	0.86	2.00	10	1	0.0	0	1.3	3	40Y	SW	29	11	8	12	5.2	
LOS ANGELES U	270			66	47	56.9	- 1.3	87	4	39	23+	0	0			5.73	2.86	3.92	11		0.0	0			28	S	29	12	10	9	4.6	63
MT SHASTA R	3544			43	24	33.6	- 2.3	62	6	12	23+	0	29			5.18	- 1.04	3.02	10		48.7	26										
OAKLAND	6	1016.3	1016.4	52	41	46.5	- 3.0	58	1	32	21	0	1	39	75	3.63	0.05	1.28	7	1	0.0	0	2.0	12	38	15	28	10	6	15	6.1	
RED BLUFF	341	1003.7	1016.6	50	33	41.5	- 5.6	61	19	22	21	0	12			1.65	- 2.56	0.66	8	0	0.0	0	0.3	20	43	S	28	8	5	18	6.7	49
SACRAMENTO	17	1016.3	1017.2	47	35	41.0	- 5.4	55	28	24	20	0	11	36	85	2.44	- 0.80	0.91	8	1	0.0	0	1.0	18	33	SE	28	6	5	20	7.4	42
SANDBERG R	4517			43	33	38.1	- 4.6	57	6+	20	23+	0	16			3.90	1.41	3.41	9		2.3	1			43	35	23	10	3	18	5.9	
SAN DIEGO	13	1014.2	1015.3	64	47	55.1	- 2.0	83	5	40	24	0	0	44	68	6.60	4.55	2.21	12	2	0.0	0	0.2	35	31	S	29	13	6	12	5.2	65
SAN FRANCISCO	8	1016.3	1016.9	52	38	44.9	- 5.2	59	1	30	21+	0	6	37	76	5.02	0.93	2.07	7	0	0.0	0	1.1	12	46	S	28	9	7	15	6.4	
SAN FRANCISCO U	52			53	44	48.3	- 4.2	62	1	35	21	0	0			3.51	- 0.76	1.34	8		0.0	0			45	SE	28					63
SANTA CATALINA	1568			59	50	54.5	- 1.6	80	4	42	16	0	0			4.32	1.75	2.47	10	1	0.0	0						10	7	14	5.8	
SANTA MARIA	236			62	36	48.8	- 3.6	78	3	27	23+	0	9			2.47	- 0.11	1.47	8		0.0	0						14	7	10	4.9	
COLORADO																																
ALAMOSA	7536			39	6	22.4	3.2	56	5	-15	19	0	31			0.76	0.51	0.28	7		10.8	5						10	14	7	4.9	
COLORADO SPRINGS	6145	808.0	1016.3	47	23	34.7	3.0	68	4	1	16	0	25	13	47	0.45	0.21	0.21	5	0	6.1	3	1.5	6	35	26	30+	9	9	13	6.2	
DENVER	5283	833.4	1014.8	49	21	35.0	3.4	68	5	0	16+	0	30	17	58	0.53	0.06	0.32	5	0	5.6	3	2.3	21	33	SW	30	7	9	15	6.5	68

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
COLORADO																																
GRAND JUNCTION	4855	852.7	1019.4	43	24	33.8	4.7	61	29	13	21	0	27	24	73	0.76	0.19	0.41	8	0	3.5	2	1.0	7	30	SW	29	5	8	18	6.8	52
PUEBLO	4684	853.7	1016.1	54	18	36.1	2.9	77	4	4	18	0	29	15	51	0.07	-0.23	0.03	4	0	1.1	T	0.9	1	49	SW	30	13	4	14	5.8	73
CONNECTICUT																																
BRIDGEPORT	7	1017.6	1018.3	45	32	38.1	4.9	57	31	18	27	0	17	31	76	1.35	-2.16	0.55	7	0	0.3	T	6.8	30	38	36	26	7	9	15	6.4	
HARTFORD	169	1010.5	1017.2	41	26	33.8	4.9	65	31	8	21	0	24	24	69	2.02	-1.45	0.81	9	0	4.5	3	2.5	27	28	N	26	8	5	18	6.8	64
NEW HAVEN	6			43	27	35.1	2.7	57	31	15	20	0	23			1.59	-2.43	0.56	8		2.4	2			30	N	26	9	7	15	6.3	62
DELAWARE																																
WILMINGTON	78	1015.9	1018.9	47	29	37.7	2.6	63	31+	15	27	0	21	29	71	1.54	-1.49	0.93	5	2	0.0	0	3.7	28	25	30	17	6	7	18	6.9	
DIST.OF COLUMBIA																																
WASH NATL AP	14	1016.6	1018.9	51	32	41.5	3.4	70	31	20	27	0	17	30	65	0.47	-2.31	0.32	5	1	0.2	T	2.3	27	33	NW	26	4	5	22	7.7	42
FLORIDA																																
APALACHICOLA U	13			62	47	54.9	-0.9	75	6	34	1	0	0			5.94	2.98	2.74	8	1	0.0	0			29	N	7	11	5	15	5.6	50
DAYTONA BEACH	31	1019.3	1020.6	70	49	59.7	-0.6	80	16+	37	9+	0	0	52	77	2.14	0.19	1.06	5	0	0.0	0	3.8	34	26	36	7	7	6	18	6.8	
FORT MYERS	15	1018.6	1018.9	77	56	66.3	1.3	83	18+	44	1	0	0	58	81	0.85	-0.44	0.84	3	0	0.0	0	4.1	5	22	9	30	10	10	11	5.5	
JACKSONVILLE	24	1020.0	1021.1	66	45	55.3	-0.8	76	13	31	1	0	2	46	77	3.75	1.53	2.29	9	1	0.0	0	4.1	36	25	NE	27+	11	6	14	5.8	63
KEY WEST	4	1017.3	1018.1	77	67	71.9	1.3	81	17	60	1	0	0	63	74	1.05	-0.64	0.75	4	1	0.0	0	8.7	6	31	W	20	8	13	10	5.6	74
LAKELAND U	214			72	53	62.3	-0.1	82	16	39	1	0	0			3.48	1.62	2.66	5		0.0	0						10	10	11	5.7	69
MIAMI	7	1018.3	1018.6	78	61	69.3	1.2	85	17	49	21	0	0	58	70	0.62	-1.05	0.42	4	0	0.0	0	3.6	6	25	10	30	4	13	14	6.5	
ORLANDO	108	1015.9	1020.2	73	53	62.6	1.7	82	15	40	1	0	0	52	72	2.23	0.34	1.47	3	1	0.0	0	3.6	1	22	4	7	9	4	18	6.2	
PENSACOLA	112	1017.3	1021.4	63	44	53.5	-0.8	73	12+	32	26+	0	2	45	73	3.46	-0.76	1.84	10		0.0	0	3.6	4	28	N	7					51
TALLAHASSEE	55	1019.0	1021.4	67	40	53.9	-0.2	79	13	24	8	0	7	43	72	4.75	1.31	3.12	8	0	0.0	0	2.6	2	25	36	7	11	8	12	5.6	
TAMPA	19	1020.0	1020.1	72	49	60.6	-1.7	79	31	32	1	0	1	51	74	2.34	0.45	1.90	3	0	0.0	0	3.7	5	21	18	25	8	10	13	6.0	69
WEST PALM BEACH	15	1018.3	1018.9	77	59	68.1	-0.1	85	15	44	21	0	0	56	68	1.75	-0.82	1.26	9	0	0.0	0	4.0	5	28	1	7	6	14	11	6.2	
GEORGIA																																
ATHENS	802	991.9	1021.6	58	34	46.1	1.5	70	31+	22	1	0	15	34	66	1.03	-3.50	0.37	8	0	0.0	0	2.9	27	21	29	6	9	8	14	5.9	
ATLANTA	1010	984.1	1021.6	56	34	44.8	0.0	68	31	20	8	0	13	33	67	1.70	-2.68	0.69	8	0	0.0	0	2.4	27	29	NW	6	9	9	13	6.0	61
AUGUSTA	143	1015.9	1021.2	62	33	47.2	0.0	74	31+	20	8	0	17	35	71	1.16	-2.17	0.41	8	0	0.0	0	2.3	27	20	27	25+	9	8	14	5.6	
COLUMBUS	385			61	35	48.2	0.5	74	31	23	8	0	15	37	73	2.75	-1.81	1.15	7		0.0	0	0.8	33	20	30	6	11	6	14	5.9	
MACON	354	1008.8	1021.9	61	34	47.4	-1.6	73	31	19	8	0	16	37	73	1.83	-2.22	0.86	8	0	0.0	0	1.8	31	25	N	6	8	10	13	6.1	66
ROME	637			57	28	42.7	0.3	70	31	16	8	0	23			1.27	-3.86	0.75	8		T	0										
SAVANNAH	46	1019.6	1021.4	64	37	50.1	-1.3	76	31	20	8	0	13	39	72	2.99	0.18	1.36	8	0	0.0	0	1.8	32	26	SW	13+	8	7	16	6.1	53
HAWAII																																
HILO	31	1016.6	1017.6	76	64	69.9	-1.6	80	1	60	29	0	0	63	81	14.94	-0.24	2.28	29	0	0.0	0	1.3	31	32	35	1	0	3	28	9.1	9
HONOLULU	7	1016.6	1017.0	79	68	73.3	-0.3	83	27+	63	12	0	0	62	70	7.97	4.98	6.46	13	2	0.0	0	9.4	6	31	NE	6	3	11	17	7.1	47
KAHULUI	48	1014.6	1016.7	77	64	70.7	-2.0	82	26+	57	31+	0	0			2.05	-0.65	0.75	11	0	0.0	0	10.7	7	33	E	14	6	16	9	6.1	60
LIHUE	103	1012.9	1018.2	75	67	71.1	-1.1	78	24+	63	27	0	0	64	80	3.04	-2.14	0.56	22	1	0.0	0	11.1	6	29	NE	2	0	11	20	8.2	32
IDAHO																																
BOISE	2838	915.3	1018.1	38	23	30.1	-2.1	55	28	8	23	0	29	24	81	0.61	-0.71	0.27	6	0	4.5	3	2.4	13	30	SE	27+	6	5	20	7.3	59
IDAHO FALLS 42NW R	4790			33	7	19.7	0.9	48	6	-14	26	0	31			0.32	-0.29	0.17	6				0.7	27	26	SSW	31					
IDAHO FALLS 46W R	4932			34	9	21.3	0.5	49	6	-10	27+	0	31			0.36	-0.23	0.12	8		2.5	2	1.9	24	39	SSW	29					
LEWISTON	1413			43	30	36.5	1.6	63	28	17	17	0	20			0.14	-1.23	0.06	6		0.9	T						1	6	24	8.6	
POCATELLO	4454	862.2	1019.2	37	15	25.6	-1.8	52	4	-2	21	0	29	17	72	1.20	0.20	0.49	10	0	12.1	5	3.5	19	38	S	28	6	8	17	7.1	39
ILLINOIS																																
CAIRO U	314			53	37	45.2	5.7	68	5	25	1	0	9			2.00	-1.67	0.48	7		0.0	0			35	SW	24	10	6	15	6.1	52
CHICAGO O HARE	658	990.9	1016.0	43	28	35.3	7.9	58	31	9	28	0	21	29	77	3.32	1.49	1.77	9	0	6.6	3	5.2	24	44	2	24	3	8	20	7.8	
CHICAGO MIDWAY	607	993.2		42	30	36.3	7.2	60	31	13	28	0	20	28	73	4.42	2.52	2.79	11	2	5.8	3	6.6	23	47	NE	24	3	6	22	7.9	25
MOLINE	582	993.9	1016.1	43	26	34.5	7.6	61	31+	3	28	0	21	28	78	2.82	1.17	2.01	8	0	5.7	4	5.5	24	32	NE	24	5	9	17	7.1	34
PEORIA	652	992.6	1017.2	43	27	35.4	6.3	61	30	6	28	0	19	31	82	3.35	1.41	2.62	9	0	4.2	3	4.5	22	32	NW	24	4	9	18	7.3	43
ROCKFORD	724	987.8	1015.5	40	25	32.3	6.7	56	31	0	27	0	24	27	79	3.03	1.33	1.91	8	0	5.5	4	3.9	24				7	5	19	7.2	
SPRINGFIELD	588	994.9	1017.6	46	30	38.2	6.2	65	30	14	28	0	19	32	77	2.49	0.60	1.55	10	0	1.7	1	6.6	21	35	N	24	5	9	17	7.1	45

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

DECEMBER 1965

State and Station	Elevation (ground)	Pressure		Temperature										Average dew point	Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32 F. or below			Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	F.	F.	°F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
INDIANA																																
EVANSVILLE	381	1005.4	1019.9	51	32	41.5	5.4	68	30	15	7	0	20	30	66	1.51	- 1.57	0.40	6	0	T	T	4.8	24	29	SW	24	6	6	19	7.1	49
FORT WAYNE	791	986.5	1017.2	43	30	36.6	8.2	61	31+	15	26	0	20	31	81	3.02	0.93	1.19	10	0	2.5	2	7.3	23	31	SW	31	3	4	24	8.4	27
INDIANAPOLIS	793	988.5	1018.3	47	31	38.6	7.5	67	30	18	28+	0	22	30	74	2.97	0.29	1.42	9	0	2.9	3	5.8	23	35	SW	31	8	3	20	7.2	35
SOUTH BEND	773	987.8	1016.3	42	31	36.4	7.7	60	31+	10	26	0	19	30	77	5.50	3.31	3.33	14	0	8.6	4	7.4	23	26	22	31+	1	7	23	8.6	
IOWA																																
BURLINGTON	694			46	28	36.9	8.5	63	11	8	28+	0	21	32	80	3.06	1.46		8	0	3.7		4.5	26	32	3	24					
DES MOINES	938	980.7	1016.3	44	26	35.3	10.0	64	11	9	27	0	25	27	76	1.64	0.50	0.99	6	1	2.4	2	3.8	26	32	SW	30	8	4	19	6.9	50
DUBUQUE	1065			39	23	31.1	7.6	58	31	3	27	0	27			3.33	1.43	1.49	8		4.2	3						8	4	19	7.1	
SIOUX CITY	1095	975.3	1016.1	43	23	33.0	8.0	59	11	2	27	0	27	25	74	0.33	- 0.41	0.18	4	0	1.2	1	2.3	29	31	NW	30	9	2	20	6.9	47
WATERLOO	868	982.7	1015.3	42	24	32.6	9.4	61	11	6	27	0	27	27	79	2.12	0.99	0.84	7	0	1.0	T	2.9	27	31	32	5	8	4	19	7.1	
KANSAS																																
CONCORDIA	1470	962.4	1016.5	48	27	37.8	5.8	69	4	10	27	0	25	29	75	1.08	0.37	0.70	6	0	2.1	1	3.9	24	34	S	30	7	4	20	7.1	52
DODGE CITY	2582	924.5	1017.3	47	26	36.9	2.2	74	4	10	27+	0	22	28	74	2.01	1.54	0.77	9	1	9.1	4	3.8	24	34	N	24	6	7	18	7.0	71
GOODLAND	3645	886.9	1016.9	46	19	32.8	2.4	74	4	3	16	0	30	21	69	0.55	0.11	0.27	6	0	5.4	3	4.7	24	26	15	25+	8	11	12	5.8	
TOPEKA	876	984.8	1017.4	50	29	39.9	6.5	68	30+	14	27	0	23	29	69	2.46	1.07	1.66	7	0	3.6	2	4.1	24	34	S	30	4	5	22	7.9	45
WICHITA	1321	968.8	1017.6	51	31	41.2	5.4	65	11+	19	27+	0	21	33	76	2.25	1.31	1.27	8	0	0.9	1	3.3	22	35	SW	30	4	8	19	7.7	39
KENTUCKY																																
COVINGTON	869	986.8	1019.1	46	32	38.8	5.5	62	31	20	28+	0	19	28	67	1.19	- 1.56	0.23	9	0	2.5	2	6.8	23	28	22	25	4	7	20	7.5	
LEXINGTON	966	984.1	1020.3	48	32	39.6	3.7	66	31	18	1	0	21	30	71	0.61	- 2.84	0.24	8	0	1.3	T	6.9	19	29	21	25	5	5	21	7.5	
LOUISVILLE	474	1001.7	1019.7	50	34	42.3	6.0	68	24	20	28+	0	17	29	61	1.14	- 2.08	0.35	7	0	T	0	5.2	23	35	SW	24	6	5	20	7.3	48
LOUISIANA																																
ALEXANDRIA	92	1016.9	1021.1	63	39	51.2	- 0.1	77	31	23	8	0	11	44	81	7.85	2.12	4.10	11	1	0.0	0	1.8	7	29	29	24	9	7	15	6.4	
BATON ROUGE	64	1018.3	1020.9	65	42	53.5	- 0.2	77	31	27	27+	0	6	45	77	4.71	- 0.39	1.92	9	0	0.0	0	3.1	7	27	30	24	7	10	14	6.5	
LAKE CHARLES	14	1019.3	1020.3	66	46	55.9	1.3	78	12	31	8	0	2	49	82	5.00	- 0.76	2.05	10	0	0.0	0	4.2	9	25	31	24	5	9	17	7.1	
NEW ORLEANS	3	1019.6	1020.6	64	44	54.0	- 1.4	77	31	28	27	0	3	47	78	7.35	3.25	2.55	10	1	0.0	0	4.0	5	21	8	18	8	8	15	6.3	
SHREVEPORT	252	1010.8	1020.3	62	42	52.0	2.4	75	5	29	27	0	4	43	74	6.29	1.35	3.35	12	1	0.0	0	2.7	14	37	14	23	9	8	14	6.2	53
MAINE																																
CARIBOU	624			24	8	15.9	0.4	37	31	-16	12	0	31			1.56	- 0.87	0.44	12		17.8	24						3	4	24	8.4	
PORTLAND	61	1013.9	1016.1	37	19	27.9	2.1	50	31	- 3	20	0	30	21	76	2.40	- 1.45	0.96	10	0	9.1	6	3.0	31	29	NW	26	9	4	18	6.7	53
MARYLAND																																
BALTIMORE	148	1013.2	1019.1	49	28	38.3	2.5	68	31	15	27	0	22	26	63	0.63	- 2.36	0.32	2	1	T	T	3.5	28	32	N	26	4	7	20	7.4	46
MASSACHUSETTS																																
BLUE HILL OBS R	629			40	25	32.5	2.5	62	31	7	20	0	27			1.95	- 2.01	0.85	10		2.6	1			41	NW	26					51
BOSTON	15	1015.6	1016.7	42	30	36.1	2.8	63	31	13	20	0	18	26	68	1.73	- 1.90	1.00	8	0	2.3	1	5.7	29	31	NW	26	9	7	15	6.3	55
NANTUCKET	43	1016.3	1016.6	43	28	35.4	- 0.7	51	31+	16	20+	0	23	29	78	1.64	- 2.29	0.87	8	1	0.3	T	4.5	29	36	N	26	7	9	15	6.6	52
PITTSFIELD	1170			36	21	28.7	3.4	57	31	3	27	0	30			2.74	- 0.51	1.29	17		7.4	2										
WORCESTER	986	978.7	1016.6	37	23	30.1	2.9	60	31	4	20	0	28	21	71	2.21	- 1.38	1.20	8	0	2.3	2	5.8	28	32	32	26	8	7	16	6.2	
MICHIGAN																																
ALPENA	689	988.8	1014.7	36	22	29.1	5.0	62	31	- 1	20	0	29	24	80	1.93	0.09	0.80	14	0	6.5	3	2.2	25	31	NE	25	1	5	25	8.8	16
DETROIT	619	992.9	1016.3	41	31	35.9	6.0	60	31	19	19	0	18	28	72	3.93	1.85	2.45	12	0	1.6	1	6.2	24	33	N	25	3	4	24	8.5	19
DETROIT M WAYNE CO	633	991.5	1016.3	41	29	35.0	5.1	59	31	15	7	0	23	28	75	6.00	4.08	3.71	10	0	1.6	1	5.5	23				3	4	24	8.5	
DETROIT WILLOW RUN	711	987.8	1016.7	40	27	33.2	3.8	58	31	15	19+	0	24	26	74	4.81	2.83	2.85	10	0	1.2	1	6.6	23	30	35	25	4	4	23	8.4	
FLINT	770	987.1	1015.6	41	30	35.4	9.5	61	31	17	28	0	18	28	73	2.56	0.76	1.33	12	0	7.2	5	6.0	23	31	1	25	2	4	25	8.6	
GRAND RAPIDS	784	985.4	1015.4	40	28	33.5	6.5	60	31	7	26	0	22	29	83	4.23	2.20	1.40	18	0	9.6	5	4.8	22	31	N	25	2	7	22	8.5	30
HOUGHTON LAKE	1150	971.9	1015.1	35	23	28.9		55	31	1	26	0	29	26	85	2.73		0.80	16	0	11.8	5	4.0	24	23	25	31	1	5	25	8.9	
LANSING	841	983.4	1015.9	40	26	32.8	5.3	61	31	5	26	0	22	31	91	3.54	1.55	1.49	16	1	8.5	7	6.3	23	31	NE	25	1	6	24	8.5	21
MARQUETTE U	677			34	24	28.9	4.8	49	31	7	28	0	27			2.02	0.10	0.76	14		7.6	5			30	SW	31	2	5	24	8.8	19
MUSKEGON	627	991.9	1015.5	39	28	33.5	3.6	53	31+	3	26	0	21	29	82	3.69	1.69	1.01	14	0	15.1	6	4.0	24	29	20	31	1	7	23	8.7	
SAULT STE MARIE	721	986.5	1013.8	32	21	26.8	5.9	48	31	1	26	0	29	23	86	2.61	0.33	0.82	21	0	13.4	6	1.1	19	26	25	31+	3	3	25	8.7	23
MINNESOTA																																
DULUTH	1428	961.1	1014.6	28	14	21.1	7.1	37	30+	- 9	28	0	30	17	82	1.67	0.51	0.49	17	0	8.6	17	2.5	27	41	NE	11	3	3	25	8.6	24

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

DECEMBER 1965

State and Station	Elevation (ground)	Pressure		Temperature												Precipitation							Wind					No. of days (sunrise to sunset)				
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	°F.	°F.	F.	F.	F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MINNESOTA																																
INTERNATIONAL FALLS	1179	969.9	1014.8	25	9	17.1	7.7	37	7	-17	27	0	31	14	84	1.60	0.76	0.56	11	0	14.5	25	1.3	24	26	15	26	3	5	23	8.2	
MINNEAPOLIS	834	983.7	1015.2	34	22	28.0	9.9	47	30	- 2	27	0	28	24	84	1.23	0.37	0.67	9	2	1.2	1	1.9	29	34	W	31	7	5	19	7.3	36
ROCHESTER	1297	966.1	1015.2	35	23	28.5	9.9	49	31+	0	27	0	29	23	91	1.41	0.44	0.97	10	1	0.9	T	4.3	26	35	29	31	7	3	21	7.3	
ST CLOUD	1034	975.6	1014.9	31	17	24.1	7.5	43	7	- 7	27	0	31		80	1.11	0.38	0.58	10		1.7	4						7	5	19	7.3	
MISSISSIPPI																																
JACKSON	310	1009.5	1021.5	62	36	49.4	0.0	76	31	19	8	0	13	40	77	3.65	- 1.65	1.62	9	1	0.0	0	1.7	12	29	SW	24	8	8	15	6.3	56
MERIDIAN	290	1010.5	1022.0	62	34	47.9	- 0.4	74	31	17	8	0	18	39	80	4.28	- 1.03	1.70	8	0	0.0	0	0.0		18	18	24	9	8	14	6.1	
VICKSBURG U	234			62	43	52.5	2.2	75	31	28	26+	0	3			4.19	- 0.75	2.09	9		0.0	0			25	S	24	9	13	9	5.4	60
MISSOURI																																
COLUMBIA	778	988.5	1017.3	51	34	42.5	8.7	72	30	20	28	0	18	32	70	2.42	0.46	1.10	9	1	3.4	3	5.4	23	30	NW	3	4	8	19	7.4	62
KANSAS CITY	742	989.5	1017.0	53	35	44.0	8.2	70	11	19	27	0	17	32	66	2.25	0.72	1.54	8	0	2.5	1	5.1	23	30	S	29	4	6	21	7.8	49
SAINT JOSEPH	811			52	31	41.0	9.5	70	11	16	27	0	21	30	69	1.81	0.45	1.12	6	0	2.0	1	3.0	23	31	33	24	5	7	19	7.2	
ST LOUIS	535	997.6	1018.5	51	32	41.7	6.9	72	30	16	28	0	17	32	69	3.17	1.20	1.27	10	0	0.1	0	5.6	23	31	SW	24	3	10	18	7.5	51
SPRINGFIELD	1268	972.6	1018.8	54	32	43.2	6.5	72	30	19	28+	0	18	33	71	3.84	1.65	1.27	8	1	0.2	T	4.4	21	29	SW	30	6	5	20	7.2	53
MONTANA																																
BILLINGS	3567	887.6	1014.9	39	18	28.5	0.1	60	4	- 9	26	0	28	15	62	0.74	0.15	0.24	7	0	10.0	7	6.5	25	36	NW	2	7	8	16	6.5	53
GLASGOW	2284			33	13	22.7	5.0	54	4	-16	26	0	31			0.12	- 0.33	0.06	3		1.2	1						3	9	19	7.5	
GREAT FALLS	3662	884.2	1015.4	38	20	29.1	1.8	60	3	-15	27+	0	23	16	62	0.59	- 0.01	0.32	6	0	6.5	3	8.2	23	41	SW	20	3	10	18	7.5	55
HAVRE	2582			31	12	21.4	0.5	54	4	-18	26	0	29			0.19	- 0.28	0.13	4		3.7	4			33	W	2	3	6	22	7.9	44
HELENA	3828	877.8	1016.7	38	17	27.5	3.3	59	3	- 8	27+	0	29	17	67	0.15	- 0.38	0.05	6	0	1.4	1	3.7	23	36	S	29+	3	7	21	7.6	32
KALISPELL	2965	908.6	1016.0	34	19	26.1	1.1	54	4	- 4	25	0	29	23	86	0.57	- 0.76	0.22	12	0	8.0	4	1.2	21	26	22	28	2	4	25	8.6	
MILES CITY	2629	919.7	1015.6	36	15	25.3	2.1	56	4	-17	27	0	29	16	69	0.40	0.03		8	0	4.2		2.2	29								
MISSOULA	3190	902.5	1017.4	34	20	27.2	3.7	57	4	6	17	0	30	22	80	0.43	- 0.65	0.10	11	0	6.4	2	0.4	15	29	W	28	0	7	24	8.8	30
NEBRASKA																																
GRAND ISLAND	1841	948.9	1016.8	45	23	33.9	6.7	71	4	3	27	0	29	24	73	0.53	- 0.03	0.25	7	0	1.9	1	4.0	27	25	36	24	7	2	22	7.4	
LINCOLN U	1150			46	27	36.2	5.6	61	4	7	27	0	22			1.36	0.46	0.50	8		2.0	T			39	S	26	7	4	20	7.0	50
NORFOLK	1544			43	21	32.0	6.8	62	4	- 2	27	0	30			0.45	- 0.28	0.23	6		1.7	1						7	4	20	7.1	
NORTH PLATTE	2775	915.7	1016.6	42	16	28.9	1.5	63	7	- 3	27	0	31	20	76	1.02	0.62	0.69	5	0	6.3	3	3.1	31	26	SE	25	6	9	16	6.5	49
OMAHA	978	980.4	1016.5	47	27	36.9	8.7	65	11	8	27	0	23	29	76	1.40	0.60	0.85	6	0	1.7	1	2.2	28	30	N	24	7	5	19	7.0	54
SCOTTSBLUFF	3957	877.4	1016.9	44	18	30.9	2.3	65	4	- 2	27	0	29	19	67	0.65	0.25	0.49	5	0	4.2	2	4.1	32	39	28	30	9	8	14	6.1	
VALENTINE	2587			42	18	30.3	5.2	60	4	- 7	27	0	30			0.29	- 0.05	0.23	3		1.3	1			35	NW	30	8	7	16	6.6	60
NEVADA																																
ELKO	5050	843.9	1021.4	31	8	19.2	- 7.2	48	28	-14	18	0	30	12	78	0.76	- 0.25	0.26	8	0	14.3	5	0.6	5	25	14	28	7	7	17	6.9	
ELY	6253	806.3	1017.9	38	11	24.5	- 2.3	59	3	-16	18	0	30	10	56	1.28	0.60	0.43	10	0	12.7	6	7.8	19	43	SE	28	6	8	17	7.1	68
LAS VEGAS	2162	939.0	1016.6	54	36	45.0	- 0.1	64	7+	27	20	0	8	32	63	1.00	0.60	0.54	6	0	0.0	0	3.2	25	36	SW	30	11	6	14	5.9	65
RENO	4404	864.2	1017.1	43	17	29.9	- 2.0	65	4	0	23	0	29	16	61	1.19	0.11	0.59	10	0	9.8	2	1.5	18	48	SW	28	6	11	14	6.5	73
WINNEMUCCA	4299	866.2	1017.9	42	16	28.8	- 1.0	57	5	- 3	20	0	30	19	69	0.59	- 0.35	0.19	7	0	5.7	2	1.4	14	47	SW	28	6	8	17	6.6	45
NEW HAMPSHIRE																																
CONCORD	342	1003.7	1016.9	37	17	27.3	2.3	61	31	- 2	21	0	31	20	75	1.52	- 1.73	0.90	9	0	4.6	3	2.5	32	37	NW	26	9	4	18	6.6	46
MT WASHINGTON OBS	6262			18	5	11.6	2.8	36	31	-16	19	0	31			4.65	- 1.66	0.88	18	0	29.1	17			87Y	W	22	3	3	25	8.5	21
NEW JERSEY																																
ATLANTIC CITY	64	1016.6	1019.0	46	26	36.4	- 0.2	65	31	9	27	0	23	27	72	1.09	- 2.13	0.62	4	0	0.0	0	5.0	28	26	33	26	9	6	16	6.5	56
ATLANTIC CITY U	11			46	33	39.5	1.2	57	31	17	27	0	14			1.32	- 2.16	0.61	4						41	SSW	25					
NEWARK	11	1017.3	1018.3	46	31	38.8	3.5	63	31	18	27	0	18	26	63	1.86	- 1.36	0.85	6	1	T	T	5.5	27	27	30	4	7	7	17	6.6	
TRENTON U	56			45	32	38.5	3.3	61	31	17	27	0	16			1.79	- 1.08	0.84	6		0.0	0			35	NW	25	7	11	13	6.2	55
NEW MEXICO																																
ALBUQUERQUE	5310	838.5	1018.8	46	25	35.8	- 1.2	61	5	10	16+	0	26	25	68	1.42	0.96	0.55	9	1	3.0	2	0.8	36	29	E	15	15	6	10	4.7	72
CLAYTON	4969			52	26	38.6	2.6	73	4	6	16	0	24			0.70	0.35	0.27	4		5.2	3						13	6	12	5.0	
RATON	6379			50	17	33.7	2.5	69	4	0	19	0	31			0.37	0.11	0.15	4		2.8	2						12	10	9	4.4	
ROSWELL	3617			57	27	42.0	3.0	75	30	15	26	0	24			0.47	- 0.07	0.27	7	0	2.7	2			34	SW	23	12	8	11	4.9	66
SILVER CITY	5373			51	30	40.5	- 1.0	68	5	20	19	0	24			2.86	2.21	1.08	12		7.5	4						9	11	11	5.3	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		°F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW YORK																																
ALBANY	275	1006.4	1017.6	39	23	30.8	4.3	60	31	1	27	0	24	24	74	0.97	-1.62	0.38	10	0	2.7	1	3.6	25	26	NW	19	4	4	23	8.1	29
BINGHAMTON	1590	956.3	1016.9	36	25	30.4	3.6	59	31	7	26	0	26	25	80	1.69	-0.87	0.59	19	0	5.4	2	5.3	24	29	NW	26	0	7	24	8.9	24
BUFFALO	705	989.8	1016.3	40	29	34.3	6.6	60	31	8	27	0	21	29	80	2.60	-0.40	0.94	16	0	7.0	4	6.6	22	32	SW	1	1	2	28	9.2	18
NEW YORK U	132	1015.2	1018.4	46	35	40.5	4.6	63	31	18	27	0	10	29	64	1.72	-1.54	0.82	6	0	T	T	4.5	26	25	NW	6	9	8	14	6.0	43
J.F. KENNEDY	15	1017.3	1018.1	45	32	38.6	3.7	56	31	16	27	0	15	29	69	2.22	-1.01	1.48	5	0	T	T	5.0	29	31	36	26	7	9	15	6.5	
NEW YORK LA GUARDIA	11	1016.3	1018.1	44	35	39.6	3.2	63	31	21	27	0	10	26	60	1.47	-1.92	0.64	7	0	T	T	4.8	29	34	N	26	6	6	19	6.8	
ROCHESTER	547	996.6	1017.3	41	29	34.6	5.9	62	31	5	27+	0	21	26	72	2.21	-0.17	0.88	15	0	6.0	3	5.6	24	31	SW	1	1	3	27	9.1	17
SYRACUSE	410	1001.4	1016.6	39	26	32.1	4.3	62	31	0	27	0	24	26	77	1.92	-1.23	0.62	18	0	7.1	2	3.7	25	26	W	1	0	5	26	8.8	24
NORTH CAROLINA																																
ASHEVILLE	2140	942.8	1020.5	54	27	40.3	2.4	68	5	14	27+	0	24	29	71	0.16	-3.46	0.07	3	0	T	T	3.7	35	44	34	25	12	8	11	5.4	67
CAPE HATTERAS R	7	1019.6	1019.9	56	40	48.2	0.0	69	31	24	23	0	5	39	72	2.24	-2.34	1.82	6	1	0.0	0	3.6	31	31	SW	25	7	15	9	5.8	48
CHARLOTTE	735	992.6	1020.5	56	32	44.0	1.3	68	13	22	8+	0	18	32	66	0.43	-3.19	0.25	6	0	0.0	0	2.2	25	28	SW	25	11	8	12	5.5	72
GREENSBORO	897	988.2	1020.4	56	31	43.2	3.3	68	13	18	20	0	19	31	66	0.64	-2.49	0.47	3	0	T	T	3.4	25	32	NW	25	8	8	15	6.2	64
RALEIGH	434	1004.1	1020.3	57	31	43.8	1.9	69	13+	19	27	0	19	31	63	0.25	-2.77	0.25	1	0	0.0	0	3.3	26	24	34	6	10	7	14	5.6	60
WILMINGTON	28	1019.6	1020.8	61	37	48.8	0.6	74	31	24	8	0	12	36	66	0.81	-2.61	0.41	7	0	0.0	0	2.5	30	29	SW	25	10	9	12	5.3	58
NORTH DAKOTA																																
BISMARCK	1647	953.6	1015.6	35	12	23.6	5.8	62	4	-10	27	0	31	14	69	0.29	-0.07	0.18	5	0	2.3	1	3.2	33	34	W	2	7	8	16	6.6	55
FARGO	896	981.4	1015.5	29	10	19.2	4.8	49	7	-15	27	0	31	16	83	1.01	0.43	0.52	7	0	6.1	5	1.5	32	34	SE	26	2	6	23	8.3	33
WILLISTON	1899			32	10	20.9	4.7	55	4	-19	27	0	31			0.61	0.11	0.52	3		6.7	5			47	NW	2	8	10	13	5.9	55
OHIO																																
AKRON	1208	972.2	1018.0	43	30	36.4	5.9	62	31	16	20+	0	22	28	74	1.75	-0.52	0.70	12	0	1.8	T	7.6	24	23	22	31+	3	6	22	7.9	
CINCINNATI OBS	761			47	34	40.9	5.6	65	31	20	26	0	16			1.16	-1.61	0.97	8		1.2	1			21	W	5					46
CLEVELAND	777	987.5	1017.2	43	31	37.4	7.5	62	31	17	27+	0	20	31	80	2.07	-0.27	0.73	13	0	1.2	T	8.4	22	29	N	25	4	5	22	8.0	30
COLUMBUS	812	988.2	1019.1	44	30	36.6	5.1	63	31	16	7	0	23	29	76	1.24	-1.10	0.77	10	0	1.1	1	5.1	22	28	SW	31	5	4	22	7.7	37
DAYTON	1002	981.7	1018.8	43	29	36.2	4.9	61	31	14	7	0	22	29	77	1.46	-0.91	0.76	11	0	2.0	2	7.5	21	28	SW	25	5	3	23	7.8	37
MANSFIELD	1295			41	29	35.2	6.0	58	31+	15	7	0	22			1.88	-0.77	0.99	11	0	0.8	T						5	3	23	8.1	
TOLEDO	676	991.5	1017.3	41	27	34.1	5.8	61	31	12	7	0	25	27	76	3.61	1.66	1.51	11	0	0.9	T	6.5	23	29	N	25	4	5	22	8.1	30
YOUNGSTOWN	1178	973.9	1017.7	41	30	35.4	6.0	59	31+	14	27+	0	21	29	78	2.33	-0.35	1.05	13	0	3.9	1	6.9	23	25	22	3	3	5	23	8.2	
OKLAHOMA																																
OKLAHOMA CITY	1280	971.2	1018.2	59	38	48.8	8.5	73	4	26	19	0	9	36	68	2.51	1.10	2.24	7	0	T	T	3.4	19	34	NW	24	9	4	18	6.7	50
TULSA	650	994.2	1018.8	58	36	46.8	7.2	75	4	23	26+	0	17	35	69	4.29	2.67	3.19	7	1	T	T	4.7	19	34	SW	30	7	5	19	7.0	53
OREGON																																
ASTORIA	8	1012.5	1013.2	46	35	40.3	-2.8	56	6+	24	16+	0	14	37	90	11.78	-1.87	1.84	25	1	3.4	2	4.0	14	35	20	27	2	9	20	8.1	
BURNS U	4151	870.3	1016.7	37	15	26.2	-2.9	54	5	-9	23	0	31	19	74	0.82	-0.61	0.28	10		9.8	8	2.0	33				7	7	17	7.0	
EUGENE	359	1001.4	1014.9	44	35	39.2	-2.6	59	6	21	20	0	10	36	90	7.69	1.08	2.27	13	0	4.8	2	4.9	18	36	18	29	0	3	28	9.3	
MEACHAM	4050			33	23	28.1	-1.7	52	6	4	23	0	27			1.57	-2.96	0.47	16		13.2	12						2	4	25	8.5	
MEDFORD	1298	967.8	1016.7	43	28	35.0	-1.9	56	3	12	20	0	22	30	85	3.71	0.33	1.45	12	0	9.0	2	0.6	14	44	14	27	6	3	22	7.6	
PENDLETON	1482	960.7	1015.6	44	30	36.9	0.4	63	28	19	23+	0	17	30	79	0.27	-1.22	0.11	6	0	0.1	T	2.0	20	35	22	28	2	8	21	8.3	
PORTLAND	21	1013.5	1014.9	45	34	39.5	-1.8	60	3	19	17	0	17	36	88	7.34	0.96	1.88	18	0	T	0	5.3	14	48	SW	23	1	3	27	8.8	23
SALEM	196	1007.1	1014.6	43	32	37.8	-3.7	60	6	18	15	0	14	35	88	7.95	0.58	1.94	20	0	7.4	2	6.0	17	32	18	28+	0	6	25	8.9	
SEXTON SUMMIT R	3836	880.1	1015.3	38	28	33.1	-3.7	54	3	19	31	0	22			6.95	2.19	3.18	13		64.0	62			51	9	29	7	4	20	7.3	
PACIFIC AREA																																
CANTON ISLAND	8			90	79	84.1	1.0	92	18+	74	3	19	0			7.71	5.17	4.43	16		0.0	0						2	11	18	7.6	
ENIWETOK	13	1009.1	1009.7	86	77	81.4	-0.6	87	24+	74	28+	0	0	73	76	2.25	-0.38	0.68	13		0.0	0	18.8	5								
TAGUAC GUAM R	361			84	73	78.2	-0.5	85	22+	66	17	0	0			3.13	-2.98	0.63	21		0.0	0			23	E	14					66
JOHNSTON	7	1012.5	1013.0	81	74	77.3	-0.8	83	25+	70	8	0	0	69	75	2.24	-0.76	0.96	18	1	0.0	0	14.5	9	47	E	1	11	10	10	5.7	44
KOROR R	94	1005.4	1008.9	86	76	80.9	0.0	88	17+	74	30+	0	0	75	83	12.67	0.95	1.52	26	3	0.0	0	8.2	7	23	NE	18	0	0	31	9.9	35
KWAJALEIN	8	1007.8	1008.6	86	77	81.3	0.5	87	30+	73	27	0	0	75	81	4.49	-4.47	1.41	20	0	0.0	0	17.0	6	29	4	14	1	12	18	8.2	
MAJURO WB AIRPORT	10	1007.8	1008.3	85	77	80.8	0.5	87	2	74	27+	0	0	75	84	9.55	-1.57	2.02	25	0	0.0	0	13.6	7	29	E	3+	0	6	25	8.8	57
MARCUS ISLAND	20			81	71	75.7	0.0	84	2	68	30+	0	0			1.82		0.43	12		0.0	0			27	W	30	8	15	8	5.4	53
PONAPE R	123	1002.7	1008.2	85	76	80.6	0.4	88	15+	73	13+	0	0	74	83	14.20	-4.14	3.38	24	1	0.0	0	8.9	6	21	NE	12	0	4	27	9.0	54
TRUK MOEN ISLAND	5	1007.8	1008.2	85	77	81.3	0.5	88	16+	73	12	0	0	75	81	4.26	-8.98	1.26	20	1	0.0	0	11.8	7	25	SE	12	1	4	26	8.8	57
WAKE	11	1014.6	1015.0	81	72	76.6	-2.3	83	8+	69	31+	0	0	66	72	0.51	-1.31	0.19	10	0	0.0	0	15.3	4	35	4	2+	14	10	7	4.7	
YAP R	55	1006.8	1008.8	86	77	81.2	0.2	88	9	73	1	0	0	75	82	3.69	-6.47	1.74	18	1	0.0	0	10.8	5	24	NE	18	0	4	27	9.3	70

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

DECEMBER 1965

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	°F.	F.	°F.	°F.	F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PENNSYLVANIA																																
ALLENTOWN	387	1004.1	1018.5	42	26	33.9	2.6	61	31	13	27+	0	26	26	73	1.79	-1.48	0.97	7	1	T	0	4.1	29	30	32	26	5	6	20	7.3	
ERIE	732	989.8	1017.1	41	31	36.0	5.3	59	31+	12	26	0	18	28	74	2.68	0.07	1.18	14	0	5.3	10	7.5	22	26	1	25	2	1	28	8.8	
HARRISBURG	338	1005.8	1018.9	43	28	35.7	2.7	65	31	14	27	0	20	24	66	0.87	-2.04	0.42	8	1	T	T	3.0	30	34	NW	26	5	5	21	7.6	48
PHILADELPHIA	5	1018.0	1018.9	46	28	37.0	3.1	62	31	17	27+	0	23	27	67	1.85	-1.09	0.87	7	0	T	0	4.6	28	29	NW	26	7	7	17	6.9	51
PITTSBURGH	1137	973.2	1018.3	44	31	37.5	6.8	65	12	15	20	0	17	29	74	0.63	-1.77	0.14	16	0	1.8	1	6.9	23	25	24	3	3	6	22	8.2	29
READING U	266			45	32	38.5	3.8	67	31	16	27	0	17			1.94	-1.20	1.14	7		T	T			39	N	26	5	12	14	6.8	44
SCRANTON	930	983.1	1018.3	40	27	33.5	4.1	63	31	10	27	0	24	25	72	1.30	-1.17	0.62	9	0	1.3	T	3.3	24	29	NW	26	4	3	24	8.3	35
WILLIAMSPORT	527	998.6	1018.2	42	27	34.7	4.3	58	31	12	27	0	23	25	71	0.93	-2.11	0.43	11	0	0.7	T	2.4	27	23	32	26+	3	5	23	8.1	
RHODE ISLAND																																
BLOCK ISLAND	110			42	31	36.4	0.5	53	4	16	20	0	13			1.36	-2.23	0.47	8		T	T						3	15	13	6.5	
PROVIDENCE	51	1014.9	1017.1	44	27	35.4	3.4	69	31	12	20	0	22	25	68	1.42	-2.20	0.62	9	0	1.9	1	4.6	28	30	34	26	10	6	15	6.1	60
SOUTH CAROLINA																																
CHARLESTON	41	1019.3	1021.0	62	37	49.3	-0.7	75	31	21	8	0	13	38	70	1.20	-1.65	0.85	7	0	0.0	0	2.3	32	36Y	N	6	9	7	15	6.3	58
CHARLESTON U	9			60	44	52.1	0.4	72	6	33	1	0	0			1.59	-1.15	1.05	8		0.0	0			37	N	6					
COLUMBIA	217	1012.5	1020.9	61	33	47.3	0.9	74	31	20	8	0	17	35	68	0.64	-2.88	0.27	7	0	0.0	0	2.5	26	28	26	25	12	6	13	5.1	62
GNVLE-SPARTANBURG	957	985.4	1020.9	57	33	45.0	1.0	69	13	22	28	0	18	32	64	0.37	-3.66	0.29	3	0	0.0	0	2.9	26	31	N	26+	11	6	14	5.5	60
SOUTH DAKOTA																																
ABERDEEN	1296	966.8	1015.3	35	16	25.4	7.3	55	7	-8	27	0	31	18	74	0.38	-0.23	0.34	5	0	0.7	3	2.2	30	28	17	25	6	5	20	7.2	
HURON	1282	967.5	1015.4	39	18	28.4	9.6	59	7	-4	27	0	31	21	77	0.57	0.01	0.53	4	0	0.2	1	2.0	28	36	SE	25	8	3	20	7.0	56
RAPID CITY	3165	901.5	1014.8	46	21	33.3	6.1	75	4	-2	27	0	29	19	62	0.12	-0.18	0.12	2	0	0.7	T	4.9	31	42	N	26	8	6	17	6.6	54
SIOUX FALLS	1418	962.8	1015.6	37	20	28.4	7.3	53	7	-2	27	0	30	22	79	0.60	-0.14	0.31	5	0	0.1	1	3.0	28	40	28	30	7	5	19	7.1	
TENNESSEE																																
BRISTOL	1507	965.8	1021.5	51	27	38.9	0.6	65	12	14	1	0	23	27	66	0.21	-3.00	0.19	3	0	0.1	T	2.2	26	25	27	25	4	9	18	7.2	
CHATTANOOGA	670	996.3	1021.6	54	29	41.5	-1.0	67	31	17	8+	0	21	32	75	0.86	-4.33	0.36	6	0	0.0	0	0.9	28	25	S	24+	9	3	19	6.4	50
KNOXVILLE	980	985.8	1021.9	54	33	43.0	1.4	70	31	20	1	0	19	31	66	0.45	-3.78	0.29	5	0	T	T	1.8	27	32	SW	25	6	7	18	6.8	47
MEMPHIS	255	1010.8	1021.3	56	36	45.8	3.3	71	10	17	1	0	14	35	66	1.17	-3.76	0.78	7	0	0.0	0	3.1	20	33	SE	24	9	7	15	6.2	55
NASHVILLE	590	998.6	1020.9	55	34	44.8	3.4	70	30	16	1	0	16	33	67	1.01	-3.18	0.64	4	0	0.0	0	3.6	21	35	S	24	8	6	17	6.6	50
OAK RIDGE	905			52	30	41.4	1.3	64	31+	17	1	0	18			0.67	-5.23	0.46	5		T	T			24Y		24	7	6	18	6.5	
TEXAS																																
ABILENE	1762	956.0	1018.2	61	42	51.4	5.3	75	11+	28	25	0	3	40	68	0.97	-0.29	0.41	6	1	0.0	0	5.2	19	54	W	23	10	5	16	6.4	45
AMARILLO	3604	891.0	1016.0	56	30	42.9	3.6	76	4	17	19	0	22	25	56	0.38	-0.39	0.13	6	0	1.4	1	6.2	23	42	SW	22	15	5	11	4.8	63
AUSTIN	597	997.3	1019.4	65	47	56.0	3.3	76	31+	32	26+	0	2	46	75	4.28	1.75	2.61	12	2	0.0	0	0.9	4	38	NW	24	8	4	19	7.1	34
BROWNSVILLE	16	1016.9	1017.6	72	58	64.9	2.0	79	13	42	20	0	0	60	86	3.98	2.26	1.48	11	2	0.0	0	3.3	10	36	SW	24	3	7	21	7.7	46
CORPUS CHRISTI	41	1016.9	1018.3	71	54	62.6	3.4	82	14	37	20	0	0	56	82	3.14	1.06	1.15	10	2	0.0	0	4.3	9	36	N	24+	5	4	22	7.6	32
DALLAS	481	1002.0	1019.6	61	43	52.1	4.0	78	11	31	25	0	3	42	72	1.58	-1.09	0.77	8	0	0.0	0	3.9	17	34	W	24	9	4	18	6.6	49
DEL RIO	1026	981.7	1018.3	65	47	56.4	4.1	78	11	32	20	0	1	47	75	1.09	0.27	0.95	4	0	0.0	0	3.0	12	24	32	24	7	5	19	7.0	
EL PASO	3918	883.2	1016.9	57	34	45.7	1.6	69	30	25	25+	0	13	31	61	0.74	0.25	0.30	10	0	T	0	1.2	30	45	W	23	10	8	13	5.4	68
FORT WORTH	537	999.0	1019.9	63	43	52.8	5.1	78	11	31	25	0	2	42	72	1.73	-0.62	0.67	10	0	0.0	0	2.9	18	35	24	24	9	5	17	6.6	
GALVESTON U	7			66	56	60.7	3.5	75	12	43	25	0	0			9.00	5.11	3.81	8		0.0	0			29	E	3					51
HOUSTON U	41			67	53	59.9	3.4	78	31	40	28+	0	0			6.05	1.95	2.17	10		0.0	0										
HOUSTON	50	1017.6	1019.7	68	50	58.9	3.2	79	31+	37	20	0	0	50	77	6.15	1.79	2.15	11	2	0.0	0	3.4	8	31	31	24	5	6	20	7.4	56
LUBBOCK	3254	904.2	1016.7	60	35	47.0	6.0	75	5	22	19	0	17	32	62	0.50	-0.15	0.31	5	1	0.7	T	4.4	23	30	26	11	14	4	13	5.1	
MIDLAND	2851	917.4	1016.5	62	38	49.7	3.8	75	30	26	25	0	8	38	74	0.29	-0.37	0.13	5	0	T	0	3.8	19	32	25	11	11	4	16	5.9	
PORT ARTHUR	16	1019.3	1020.1	67	48	57.4	2.6	79	12	34	28+	0	0	51	83	5.78	0.69	2.20	10	0	0.0	0	5.0	9	35	NW	24	5	5	21	7.2	55
SAN ANGELO	1903	950.6	1018.0	62	41	51.5	3.8	76	5	25	25	0	7	42	75	0.63	-0.22	0.22	8	0	0.0	0	3.9	21	43	30	23	9	4	18	6.5	
SAN ANTONIO	788	990.9	1019.3	65	46	55.5	1.8	76	31+	30	26+	0	4	48	81	4.51	2.76	2.80	12	1	0.0	0	2.6	5	27	NW	24	5	8	18	7.2	39
VICTORIA	104	1014.9	1019.0	68	50	59.3	2.1	78	30	38	20	0	0	52	82	4.91	2.30	1.80	11	0	0.0	0	2.9	6	39Y	NNW	24	4	3	24	7.8	
WACO	500	1001.4	1019.6	62	43	52.4	2.1	78	11	28	26	0	3	44	76	2.31	-0.43	1.01	8	0	0.0	0	2.1	18	35	27	24	10	3	18	6.5	
WICHITA FALLS	994	981.4	1018.4	61	37	48.9	4.3	74	30+	24	26	0	12	40	77	0.62	-0.83	0.36	6	0	T	0	4.7	20	37	30	24	9	7	15	6.2	
UTAH																																
MILFORD	5028			40	18	29.1	0.9	62	5	-12	24	0	29			1.66	0.95	0.46	13		13.2	5						6	5	20	7.4	
SALT LAKE CITY	4220	871.3	1019.0	38	22	30.2	0.1	53	28	9	23	0	29	24	79	1.81	0.57	0.42	12	0	12.8	4	1.7	18	34	S	29+	2	10	19	8.0	48
WENDOVER	4237			34	20	26.9	-2.9	47	29+	5	20	0	28			0.59	0.30	0.43	7		2.7	2						10	6	15	6.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days		Average dew point		Total	Departure from normal	Greatest in 24 hours	No. of days		Snow, Sleet		Resultant speed	Resultant direction	Fastest mile			Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
												Max. 90 F. or above	Min. 32 F. or below						.01 inch or more	With thunderstorms	Total	Maximum depth on ground			Speed	Direction	Date					
	Ft.	Mb.	Mb.	°F.	°F.	°F.	°F.	°F.		F.				°F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
VERMONT																																
BURLINGTON	332	1003.7	1016.5	35	23	28.6	7.1	56	31	4	20	0	24	23	79	1.47	- 0.66	0.30	14	0	11.9	3	2.8	20	27	N	26	0	5	26	9.1	22
VIRGINIA																																
LYNCHBURG	916			54	30	41.6	3.1	70	31	16	27	0	19			0.33	- 2.81	0.20	5	0	0.1	T			26	SW	25	9	7	15	6.1	67
NORFOLK	26	1018.6	1019.8	53	34	43.5	1.0	71	31	23	29+	0	16	30	60	1.08	- 1.66	0.75	3	0	T	0	2.8	25	34	S	25	4	13	14	6.6	49
RICHMOND	162	1013.9	1019.9	53	30	41.3	1.6	69	31	18	8	0	20	27	61	0.72	- 2.25	0.41	2	1	T	T	1.7	24	27	N	26	6	10	15	6.6	61
ROANOKE	1149	976.6	1019.5	53	30	41.5	3.1	68	31+	17	29+	0	16	27	58	0.18	- 2.80	0.11	4	0	0.3	T	4.1	29	29	29	25	7	10	14	6.4	
WASHINGTON																																
OLYMPIA	195	1006.1	1013.5	44	33	38.3	- 2.4	58	6+	23	14	0	13	36	93	7.81	- 1.24	1.54	22	0	14.0	4	4.9	20	29	20	3	1	1	29	9.3	
SEATTLE TACOMA	400	996.6	1013.3	45	36	40.4	- 0.4	60	3	25	15	0	11	34	81	7.10	0.81	1.32	21	0	15.3	8	3.8	18	31	20	20	1	4	26	8.8	18
SPOKANE	2356	929.2	1014.9	36	25	30.0	- 0.1	48	6	10	25	0	28	27	86	1.63	- 0.80	0.35	14	0	15.4	10	3.5	17	40	S	28	2	4	25	8.7	14
STAMPEDE PASS R	3958			29	22	25.5	- 1.5	41	6	14	25+	0	31			6.20	- 9.99	1.07	19		42.6	47						1	4	26	9.2	
TATOOSH ISLAND R	101	1007.5	1010.7	46	40	42.9	- 1.5	54	6+	33	31+	0	0	39	84	13.28	1.12	1.74	26	2	7.2	1	8.3	14	65	E	27	3	4	24	8.4	16
WALLA WALLA U	949			45	32	38.5	0.7	67	3	19	15	0	13			0.29	- 1.56	0.08	8		T	T			31	SE	24	2	4	25	8.9	13
YAKIMA	1052	976.3	1015.8	40	23	31.0	- 0.5	55	4	9	31+	0	30	25	80	1.39	0.27	0.95	8	0	14.0	13	2.8	26	25	22	30	4	8	19	7.6	
WEST INDIES																																
SAN JUAN P.R.	15	1012.5	1014.8	84	71	77.4	1.2	90	21	67	1	1	0	70	79	5.05	- 0.40	2.48	14	3	0.0	0	4.8	8	35	NE	10	11	8	12	5.7	54
SWAN ISLAND	28			82	75	78.5	- 0.2	85	6+	71	8	0	0			4.02	- 1.62	1.48	14	1	0.0	0						7	15	9	5.9	
WEST VIRGINIA																																
BECKLEY	2504	929.6	1020.6	46	28	37.1		62	12	12	1	0	21	26	67	0.57		0.22	9	0	6.9	3	6.2	24	28	29	25	4	6	21	7.8	
CHARLESTON	939	984.8	1019.7	50	30	39.8	2.7	69	31	15	27+	0	22	29	69	0.45	- 2.80	0.16	8	0	2.7	2	4.2	23	25	23	25	5	6	20	7.7	
ELKINS	1970	946.8	1019.8	46	26	36.0	3.0	68	12	6	27	0	23	28	77	0.90	- 2.18	0.31	12	0	4.6	2	4.3	27	31	29	25	2	6	23	8.3	
HUNTINGTON	827	989.2	1019.8	50	33	41.6	4.2	68	31+	17	27	0	19	30	68	0.31	- 2.50	0.12	6	0	1.0	1	4.7	21	22	27	25	5	7	19	7.3	
PARKERSBURG U	615			48	33	40.6	4.8	68	31	18	27	0	18			0.46	- 2.38	0.13	9		0.3	T			31	W	25					30
WISCONSIN																																
GREEN BAY	682	988.5	1015.0	35	23	28.7	6.7	51	31	4	28	0	27	24	81	2.31	1.13	1.09	12	0	2.8	1	4.0	27	30Y	SW	31	3	7	21	7.9	22
LA CROSSE	651	990.5	1016.0	38	24	30.5	8.7	59	31	8	27	0	27	25	79	2.02	0.87	0.93	8	1	1.3	1	2.1	24	23	24	31+	7	1	23	7.6	
MADISON	858	983.1	1015.3	38	22	29.8	7.7	55	31	3	28	0	29	26	83	2.50	1.19	1.16	9	0	5.7	2	4.1	27	28	NE	25	5	3	23	7.8	37
MILWAUKEE	672	989.8	1015.7	39	27	32.9	8.3	55	31	6	28	0	24	28	81	3.73	2.10	1.80	11	0	14.5	4	4.7	26	42	N	25	3	7	21	8.1	30
WYOMING																																
CASPER	5338	834.4	1015.7	39	19	29.1	1.8	59	4	- 9	15	0	27	14	56	0.87	0.39	0.34	7	0	10.0	5	13.0	24	39	24	28	7	8	16	6.5	
CHEYENNE	6126	808.7	1016.0	44	20	32.1	2.6	63	4	- 8	15	0	27	11	48	0.22	- 0.23	0.17	5	0	2.4	2	8.4	29	52	NW	2	6	8	17	6.7	63
LANDER	5563	825.6	1017.1	37	15	25.8	2.7	56	4	- 9	16	0	31	13	63	0.44	0.02	0.17	7	0	12.0	7	3.6	23	56	SW	28	7	7	17	6.6	68
SHERIDAN	3964	875.7	1016.2	43	14	28.8	2.5	70	4	-11	26	0	29	13	56	0.24	- 0.38	0.07	9	0	5.3	2	4.0	28	47	SW	29	7	8	16	6.5	62

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

A Maximum hourly average.
B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Z Sun continuously below horizon.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station ∅	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		°C.				°C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
ALABAMA																																
BIRMINGHAM	189	999.0	1022.0	14.4	1.1	7.8	-0.7	22.8	31	-8.3	1	0	16	1.7	71	52	-75	22	6	0	0	0	0.0	15	10.7	S	24	11	5	15	5.9	68
HUNTSVILLE	183	998.0	1021.7	13.9	1.7	7.8	1.3	22.2	31	-7.8	1	0	16	1.7	67	19	-105	10	6	0	T	T	0.3	17	14.3	25	24	8	6	17	6.3	
MOBILE	64	1013.2	1021.2	17.8	6.7	12.1	-0.2	23.9	31	-1.7	1	0	2	6.7	75	101	-38	48	7	1	0	0	1.9	7	9.4	6	18+	11	6	14	5.9	
MONTGOMERY	59	1014.6	1021.9	16.1	2.8	9.2	0.2	23.9	31	-5.0	8	0	12	2.8	71	91	-31	40	8	1	0	0	0.4	5	10.3	S	24	11	8	12	5.6	60
ALASKA												B																				
ANCHORAGE PRK STRIP	26			-6.7	-15.0	-11.0	-1.2	3.3	12	-27.8	22	0	31			37	13	16	10		577	762										
ANCHORAGE	43	1000.0	1005.0	-6.1	-14.4	-10.5		5.6	13+	-25.6	22	0	31	-15.0	68	37		12	9	0	607	686	1.3	1	10.3	21	15	12	5	14	5.6	52
ANNETTE	34	1002.0	1006.2	3.3	-1.7	0.6	-1.7	7.2	8+	-15.0	31	0	17	-3.3	75	348	41	57	23	0	305	76	2.5	12	18.3	17	22	3	5	23	8.2	
BARROW	7	1013.5	1014.4	-21.1	-28.3	-24.7	-0.7	-3.9	26	-38.9	10	0	31	-27.8	72	13	9	5	7	0	145	406	0.8	7	12.5	22	26+	Z	Z	Z		
BARTER ISLAND	12	1011.5	1013.6	-21.1	-28.9	-25.1	-1.6	-4.4	26	-44.4	19	0	31	-28.3	74	17	10	5	15	0	328	508	1.7	27	17.9	28	28+	Z	Z	Z		
BETHEL	38	1004.4	1010.4	-12.8	-20.6	-16.6	-1.4	1.7	9	-33.3	17	0	31	-18.9	79	13	-13	5	9	0	185	229	1.1	36	19.2	19	11	11	0	20	6.7	
COLD BAY	29	1004.4	1008.2	0.6	-4.4	-1.9	-0.2	6.1	18	-10.0	16	0	27	-4.4	82	45	-21	9	22	0	246	102	1.4	29	27.3	12	2	3	7	21	7.9	
FAIRBANKS	133	993.6	1012.0	-20.6	-31.1	-25.6	-3.6	-3.3	27	-45.0	23	0	31	-27.8	82	49	35	20	14	0	851	914	0.5	27	14.3	24	28+	7	8	16	6.9	
JUNEAU	4	1004.7	1005.6	-0.6	-5.6	-3.0	-1.0	5.0	14	-21.7	31	0	27	-5.6	82	108	1	21	21	0	429	178	4.6	11	16.1	12	19+	5	1	25	8.4	16
KING SALMON	13	1005.8	1007.6	-9.4	-20.6	-14.8	-4.4	3.9	10	-34.4	22	0	31	-17.8	77	41	15	14	13	0	406	381	0.8	3	13.4	10	18	9	8	14	6.0	
KOTZEBUE	3	1010.8	1011.2	-17.2	-24.4	-20.9	-1.1	-0.6	27	-38.9	18+	0	31	-23.9	76	20	13	10	10	0	490	584	0.9	5	22.8	28	27	9	4	18	6.4	
MC GRATH	102	998.0	1011.9	-19.4	-31.1	-25.4	-3.8	-0.6	11	-46.7	24+	0	31	-29.4	67	7	-18	4	8	0	467	584	0.4	25	9.4	30	28	9	7	15	6.3	
NOME	4	1009.8	1010.5	-13.3	-20.6	-16.7	-2.4	-0.6	27	-34.4	16	0	31	-20.0	76	13	-12	4	10	0	135	381	3.4	36	19.7	2	18	13	5	13	5.3	48
ST. PAUL ISLAND	7	1006.8	1007.8	0.0	-5.0	-2.4	0.7	3.9	8+	-16.7	22	0	26	-3.9	88	67	21	16	24	0	226	102	1.0	12	20.6	13	7	0	4	27	9.1	
SHEMYA	37	1000.0	1003.9	2.8	-1.1	0.7	1.1	6.1	5+	-5.0	2	0	22	-1.1	86	152	98	29	23	0	389	102	2.6	21	28.2	21	16	1	7	23	8.6	
YAKUTAT	9	1000.7	1001.7	-1.7	-10.0	-5.9	-3.7	6.1	14	-25.6	26	0	30	-7.2	88	309	-3	74	20	0	1628	737	2.2	12	17.0	13	13	5	3	23	7.7	
ARIZONA																																
FLAGSTAFF	2131	785.3	1018.0	5.6	-7.8	-1.0	-0.1	19.4	4	-18.9	24+	0	31	-6.7	72	168	126	39	14	0	978	432	0.6	18	8.9	21	30	9	8	14	6.0	
PHOENIX	340	976.0	1015.5	18.3	5.0	11.6	0.7	27.8	5	-0.6	20	0	1	5.0	72	81	59	29	11	4	0	0	1.1	12	14.3Y	S	22	13	7	11	5.0	65
TUCSON	788	926.2	1015.0	17.2	5.6	11.2	0.1	25.6	5	-1.1	20	0	3	2.2	64	128	104	30	13	2	8	T	2.0	14	13.0	SE	22	10	6	15	5.8	62
WINSLOW	1492	851.7	1019.5	8.3	-3.9	2.3	2.0	16.7	28	-10.6	20	0	27	-3.3	70	37	24	11	13	0	81	25	1.3	20	11.6	21	29+	11	8	12	5.6	
YUMA	59	1008.5	1015.6	17.8	7.2	12.4	-1.4	26.1	5	1.7	24	0	0	4.4	65	42	34	12	8	1	0	0	1.9	2	15.2	E	16	15	6	10	4.6	67
ARKANSAS																																
FORT SMITH	137	1003.1	1019.9	15.0	1.1	8.0	2.3	23.9	30	-6.1	8	0	19	2.2	73	35	-37	21	8	0	0	0	0.4	19	15.2	W	24	7	5	19	7.1	44
LITTLE ROCK	78	1011.2	1020.9	14.4	2.2	8.2	2.7	23.9	5	-6.7	8+	0	13	2.8	72	52	-52	33	6	1	0	0	0.8	22	14.8	W	24	9	7	15	6.1	52
TEXARKANA	113	1007.1	1020.4	16.1	4.4	10.5	2.2	26.1	5	-3.3	27+	0	7	4.4	73	61	-54	36	10	1	0	0	1.1	17				12	3	16	6.1	
CALIFORNIA																																
BAKERSFIELD	151	1000.0	1017.8	9.4	2.8	6.0	-3.3	17.2	28	-3.9	19	0	8	3.3	83	41	16	24	7	0	T	0	0.2	27	10.7	20	28	4	7	20	7.7	
BISHOP	1252			10.6	-5.6	2.6	-1.4	18.9	3	-11.1	22	0	31			55	25	55	2		0	0						13	7	11	5.0	
BLUE CANYON	1609			5.6	-1.7	2.2	-2.4	15.6	2	-7.8	26	0	21			229	-31	76	8		1740	1778			15.6	18	28	8	8	15	6.5	
BURBANK	221	988.8	1014.8	18.3	6.1	12.3	-0.8	28.9	4	1.1	18	0	0	3.3	61	174	105	137	9	1	0	0	0.0	30	12.5	15	29	11	7	13	5.4	
EUREKA U	13			12.2	4.4	8.3	-1.1	16.7	3	-1.7	16	0	2			133	-38	52	12		0	0			17.0	SE	27	8	4	19	6.8	52
FRESNO	100	1005.8	1017.7	9.4	1.7	5.6	-2.8	14.4	28	-3.9	19	0	12	3.9	90	44	-6	19	9	0	T	T	0.7	13	8.9	NW	11	5	5	21	7.9	41
LONG BEACH	10	1014.2	1015.7	17.8	6.7	12.4	-0.9	27.8	4	1.7	23	0	0	6.7	72	87	37	40	10	2	0	0	0.3	32	11.6	19	29	13	7	11	4.9	
LOS ANGELES	30	1011.5	1015.2	17.8	7.8	12.8	-1.0	28.3	4	3.3	15	0	0	5.6	65	83	22	51	10	1	0	0	0.6	3	17.9Y	SW	29	11	8	12	5.2	
LOS ANGELES U	82			18.9	8.3	13.8	-0.7	30.6	4	3.9	23+	0	0			146	73	100	11		0	0			12.5	S	29	12	10	9	4.6	63
MT SHASTA R	1080			6.1	-4.4	0.9	-1.3	16.7	6	-11.1	23+	0	29			132	-26	77	10		1237	660										
OAKLAND	2	1016.3	1016.4	11.1	5.0	8.1	-1.7	14.4	1	0.0	21	0	1	3.9	75	92	1	33	7	1	0	0	0.9	12	17.0	15	28	10	6	15	6.1	
RED BLUFF	104	1003.7	1016.6	10.0	0.6	5.3	-3.1	16.1	19	-5.6	21	0	12			42	-65	17	8	0	0	0	0.1	20	19.2	S	28	8	5	18	6.7	49
SACRAMENTO	5	1016.3	1017.2	8.3	1.7	5.0	-3.0	12.8	28	-4.4	20	0	11	2.2	85	62	-20	23	8	1	0	0	0.4	18	14.8	SE	28	6	5	20	7.4	42
SANDBERG R	1377			6.1	0.6	3.4	-2.6	13.9	6+	-6.7	23+	0	16			99	36	87	9		58	25			19.2	35	23	10	3	18	5.9	
SAN DIEGO	4	1014.2	1015.3	17.8	8.3	12.8	-1.1	28.3	5	4.4	24	0	0	6.7	68	168	116	56	12	2	0	0	0.1	35	13.9	S	29	13	6	12	5.2	65
SAN FRANCISCO	2	1016.3	1016.9	11.1	3.3	7.2	-2.9	15.0	1	-1.1	21+	0	6	2.8	76	128	24	53	7	0	0	0	0.5	12	20.6	S	28	9	7	15	6.4	
SAN FRANCISCO U	16			11.7	6.7	9.1	-2.3	16.7	1	1.7	21	0	0			89	-19	34	8		0	0			20.1	SE	28					63
SANTA CATALINA	478			15.0	10.0	12.5	-0.9	26.7	4	5.6	16	0	0			110	44	63	10	1	0	0						10	7	14	5.8	
SANTA MARIA	72			16.7	2.2	9.3	-2.0	25.6	3	-2.8	23+	0	9			63	-3	37	8		0	0						14	7	10	4.9	
COLORADO																																
ALAMOSA	2297			3.9	-14.4	-5.3	1.8	13.3	5	-26.1	19	0	31			19	13	7	7		274	127						10	14	7	4.9	
COLORADO SPRINGS	1873	808.0	1016.3	8.3	-5.0	1.5	1.7	20.0	4	-17.2	16	0	25	-10.6	47	11	5	5	5	0	155	76	0.7	6	15.6	26	30+	9	9	13	6.2	
DENVER	1610	833.4	1014.8	9.4	-6.1	1.7	1.9	20.0	5	-17.8	16+	0	30	-8.3	58	13	2	8	5	0	142	76	1.0	21	14.8	SW	30	7	9	15	6.5	68
GRAND JUNCTION	1480	852.7	1019.4	6.1	-4.4	1.0	2.6	16.1	29	-10.6	21	0	27	-4.4	73	19	5	10	8	0	89	51	0.4	7	13.4	SW	29	5	8	18	6.8	52
PUEBLO	1428	853.7	1016.1	12.2	-7.8	2.3	1.6	25.0	4	-15.6	18	0	29	-9.4	51	2	-6	1	4	0	28	T	0.4	1	21.9	SW	30	13	4	14	5.8	73

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days				Precipitation			No. of days		Snow, Sleet		Wind					No. of days (sunrise to sunset)				
																									Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	.25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
CONNECTICUT	M.	Mb.	Mb.	C.	C.	C.	˚C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
BRIDGEPORT	2	1017.6	1018.3	7.2	0.0	3.4	2.7	13.9	31	- 7.8	27	0	17	- 0.6	76	34	- 55	14	7	0	8	T	3.0	30	17.0	36	26	7	9	15	6.4	
HARTFORD	52	1010.5	1017.2	5.0	- 3.3	1.0	2.7	18.3	31	-13.3	21	0	24	- 4.4	69	51	- 37	21	9	0	114	76	1.1	27	12.5	N	26	8	5	18	6.8	64
NEW HAVEN	2			6.1	- 2.8	1.7	1.5	13.9	31	- 9.4	20	0	23			40	- 62	14	8		61	51			13.4	N	26	9	7	15	6.3	62
DELAWARE																																
WILMINGTON	24	1015.9	1018.9	8.3	- 1.7	3.2	1.4	17.2	31+	- 9.4	27	0	21	- 1.7	71	39	- 38	24	5	2	0	0	1.7	28	11.2	30	17	6	7	18	6.9	
DIST.OF COLUMBIA																																
WASH NATL AP	4	1016.6	1018.9	10.6	0.0	5.3	1.9	21.1	31	- 6.7	27	0	17	- 1.1	65	12	- 59	8	5	1	5	T	1.0	27	14.8	NW	26	4	5	22	7.7	42
FLORIDA																																
APALACHICOLA U	4			16.7	8.3	12.7	-0.5	23.9	6	1.1	1	0	0			151	76	70	8	1	0	0			13.0	N	7	11	5	15	5.6	50
DAYTONA BEACH	9	1019.3	1020.6	21.1	9.4	15.4	-0.3	26.7	16+	2.8	9+	0	0	11.1	77	54	5	27	5	0	0	0	1.7	34	11.6	36	7	7	6	18	6.8	
FORT MYERS	5	1018.6	1018.9	25.0	13.3	19.1	0.7	28.3	18+	6.7	1	0	0	14.4	81	22	- 11	21	3	0	0	0	1.8	5	9.8	9	30	10	10	11	5.5	
JACKSONVILLE	7	1020.0	1021.1	18.9	7.2	12.9	-0.4	24.4	13	- 0.6	1	0	2	7.8	77	95	39	58	9	1	0	0	1.8	36	11.2	NE	27+	11	6	14	5.8	63
KEY WEST	1	1017.3	1018.1	25.0	19.4	22.2	0.7	27.2	17	15.6	1	0	0	17.2	74	27	- 16	19	4	1	0	0	3.9	6	13.9	W	20	8	13	10	5.6	74
LAKELAND U	65			22.2	11.7	16.8	-0.1	27.8	16	3.9	1	0	0			88	41	68	5		0	0						10	10	11	5.7	69
MIAMI	2	1018.3	1018.6	25.6	16.1	20.7	0.7	29.4	17	9.4	21	0	0	14.4	70	16	- 27	11	4	0	0	0	1.6	6	11.2	10	30	4	13	14	6.5	
ORLANDO	33	1015.9	1020.2	22.8	11.7	17.0	0.9	27.8	15	4.4	1	0	0	11.1	72	57	9	37	3	1	0	0	1.6	1	9.8	4	7	9	4	18	6.2	
PENSACOLA	34	1017.3	1021.4	17.2	6.7	11.9	-0.4	22.8	12+	0.0	26+	0	2	7.2	73	88	- 19	47	10		0	0	1.6	4	12.5	N	7					51
TALLAHASSEE	17	1019.0	1021.4	19.4	4.4	12.2	-0.1	26.1	13	- 4.4	8	0	7	6.1	72	121	33	79	8	0	0	0	1.2	2	11.2	36	7	11	8	12	5.6	
TAMPA	6	1020.0	1020.1	22.2	9.4	15.9	-0.9	26.1	31	0.0	1	0	1	10.6	74	59	11	48	3	0	0	0	1.7	5	9.4	18	25	8	10	13	6.0	69
WEST PALM BEACH	5	1018.3	1018.9	25.0	15.0	20.1	-0.1	29.4	15	6.7	21	0	0	13.3	68	44	- 21	32	9	0	0	0	1.8	5	12.5	1	7	6	14	11	6.2	
GEORGIA																																
ATHENS	244	991.9	1021.6	14.4	1.1	7.8	0.8	21.1	31+	- 5.6	1	0	15	1.1	66	26	- 89	9	8	0	0	0	1.3	27	9.4	29	6	9	8	14	5.9	
ATLANTA	308	984.1	1021.6	13.3	1.1	7.1	0.0	20.0	31	- 6.7	8	0	13	0.6	67	43	- 68	18	8	0	0	0	1.1	27	13.0	NW	6	9	9	13	6.0	61
AUGUSTA	44	1015.9	1021.2	16.7	0.6	8.4	0.0	23.3	31+	- 6.7	8	0	17	1.7	71	29	- 55	10	8	0	0	0	1.0	27	8.9	27	25+	9	8	14	5.6	
COLUMBUS	117			16.1	1.7	9.0	0.3	23.3	31	- 5.0	8	0	15	2.8	73	70	- 46	29	7		0	0	0.4	33	8.9	30	6	11	6	14	5.9	
MACON	108	1008.8	1021.9	16.1	1.1	8.6	-0.9	22.8	31	- 7.2	8	0	16	2.8	73	46	- 56	22	8	0	0	0	0.8	31	11.2	N	6	8	10	13	6.1	66
ROME	194			13.9	- 2.2	5.9	0.2	21.1	31	- 8.9	8	0	23			32	- 98	19	8		T	0										
SAVANNAH	14	1019.6	1021.4	17.8	2.8	10.1	-0.7	24.4	31	- 6.7	8	0	13	3.9	72	76	5	35	8	0	0	0	0.8	32	11.6	SW	13+	8	7	16	6.1	53
HAWAII																																
HILO	9	1016.6	1017.6	24.4	17.8	21.1	-0.9	26.7	1	15.6	29	0	0	17.2	81	379	- 6	58	29	0	0	0	0.6	31	14.3	35	1	0	3	28	9.1	09
HONOLULU	2	1016.6	1017.0	26.1	20.0	22.9	-0.2	28.3	27+	17.2	12	0	0	16.7	70	202	126	164	13	2	0	0	4.2	6	13.9	NE	6	3	11	17	7.1	47
KAHULUI	15	1014.6	1016.7	25.0	17.8	21.5	-1.1	27.8	26+	13.9	31+	0	0			52	- 17	19	11	0	0	0	4.8	7	14.8	E	14	6	16	9	6.1	60
LIHUE	31	1012.9	1018.2	23.9	19.4	21.7	-0.6	25.6	24+	17.2	27	0	0	17.8	80	77	- 54	14	22	1	0	0	5.0	6	13.0	NE	2	0	11	20	8.2	32
IDAHO																																
BOISE	865	915.3	1018.1	3.3	- 5.0	- 1.1	-1.2	12.8	28	-13.3	23	0	29	- 4.4	81	15	- 18	7	6	0	114	76	1.1	13	13.4	SE	27+	6	5	20	7.3	59
IDAHO FALLS 42NW R	1460			0.6	-13.9	- 6.8	0.5	8.9	6	-25.6	26	0	31			8	- 7	4	6				0.3	27	11.6	SSW	31					
IDAHO FALLS 46W R	1503			1.1	-12.8	- 5.9	0.3	9.4	6	-23.3	27+	0	31			9	- 6	3	8		64	51	0.8	24	17.4	SSW	29					
LEWISTON	431			6.1	- 1.1	2.5	0.9	17.2	28	- 8.3	17	0	20			4	- 31	2	6		23	T						1	6	24	8.6	
POCATELLO	1358	862.2	1019.2	2.8	- 9.4	- 3.6	-1.0	11.1	4	-18.9	21	0	29	- 8.3	72	30	5	12	10	0	307	127	1.6	19	17.0	S	28	6	8	17	7.1	39
ILLINOIS																																
CAIRO U	96			11.7	2.8	7.3	3.2	20.0	5	- 3.9	1	0	9			51	- 42	12	7		0	0			15.6	SW	24	10	6	15	6.1	52
CHICAGO O HARE	201	990.9	1016.0	6.1	- 2.2	1.8	4.4	14.4	31	-12.8	28	0	21	- 1.7	77	84	38	45	9	0	168	76	2.3	24	19.7	2	24	3	8	20	7.8	
CHICAGO MIDWAY	185	993.2		5.6	- 1.1	2.4	4.0	15.6	31	-10.6	28	0	20	- 2.2	73	112	64	71	11	2	147	76	3.0	23	21.0	NE	24	3	6	22	7.9	25
MOLINE	177	993.9	1016.1	6.1	- 3.3	1.4	4.2	16.1	31+	-16.1	28	0	21	- 2.2	78	72	30	51	8	0	145	102	2.5	24	14.3	NE	24	5	9	17	7.1	34
PEORIA	199	992.6	1017.2	6.1	- 2.8	1.9	3.5	16.1	30	-14.4	28	0	19	- 0.6	82	85	36	67	9	0	107	76	2.0	22	14.3	NW	24	4	9	18	7.3	43
ROCKFORD	221	987.8	1015.5	4.4	- 3.9	0.2	3.7	13.3	31	-17.8	27	0	24	- 2.8	79	77	34	49	8	0	140	102	1.7	24				7	5	19	7.2	
SPRINGFIELD	179	994.9	1017.6	7.8	- 1.1	3.4	3.4	18.3	30	-10.0	28	0	19	0.0	77	63	15	39	10	0	43	25	3.0	21	15.6	N	24	5	9	17	7.1	45
INDIANA																																
EVANSVILLE	116	1005.4	1019.9	10.6	0.0	5.3	3.0	20.0	30	- 9.4	7	0	20	- 1.1	66	38	- 40	10	6	0	T	T	2.1	24	13.0	SW	24	6	6	19	7.1	49
FORT WAYNE	241	986.5	1017.2	6.1	- 1.1	2.6	4.6	16.1	31+	- 9.4	26	0	20	- 0.6	81	77	24	30	10	0	64	51	3.3	23	13.9	SW	31	3	4	24	8.4	27
INDIANAPOLIS	242	988.5	1018.3	8.3	- 0.6	3.7	4.2	19.4	30	- 7.8	28+	0	22	- 1.1	74	75	7	36	9	0	74	76	2.6	23	15.6	SW	31	8	3	20	7.2	35
SOUTH BEND	236	987.8	1016.3	5.6	- 0.6	2.4	4.3	15.6	31+	-12.2	26	0	19	- 1.1	77	140	84	85	14	0	218	102	3.3	23	11.6	22	31+	1	7	23	8.6	
IOWA																																
BURLINGTON	212			7.8	- 2.2	2.7	4.7	17.2	11	-13.3	28+	0	21	0.0	80	78	37		8	0	94		2.0	26	14.3	3	24					

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
IOWA																																
DES MOINES	286	980.7	1016.3	6.7	-3.3	1.8	5.6	17.8	11	-12.8	27	0	25	-2.8	76	42	13	25	6	1	61	51	1.7	26	14.3	SW	30	8	4	19	6.9	50
DUBUQUE	325			3.9	-5.0	-0.5	4.2	14.4	31	-16.1	27	0	27			85	36	38	8		107	76						8	4	19	7.1	
SIOUX CITY	334	975.3	1016.1	6.1	-5.0	0.6	4.4	15.0	11	-16.7	27	0	27	-3.9	74	8	-10	5	4	0	30	25	1.0	29	13.9	NW	30	9	2	20	6.9	47
WATERLOO	265	982.7	1015.3	5.6	-4.4	0.3	5.2	16.1	11	-14.4	27	0	27	-2.8	79	54	25	21	7	0	25	T	1.3	27	13.9	32	5	8	4	19	7.1	
KANSAS																																
CONCORDIA	448	962.4	1016.5	8.9	-2.8	3.2	3.2	20.6	4	-12.2	27	0	25	-1.7	75	27	9	18	6	0	53	25	1.7	24	15.2	S	30	7	4	20	7.1	52
DODGE CITY	787	924.5	1017.3	8.3	-3.3	2.7	1.2	23.3	4	-12.2	27+	0	22	-2.2	74	51	39	20	9	1	231	102	1.7	24	15.2	N	24	6	7	18	7.0	71
GOODLAND	1111	886.9	1016.9	7.8	-7.2	0.4	1.3	23.3	4	-16.1	16	0	30	-6.1	69	14	3	7	6	0	137	76	2.1	24	11.6	15	25+	8	11	12	5.8	
TOPEKA	267	984.8	1017.4	10.0	-1.7	4.4	3.6	20.0	30+	-10.0	27	0	23	-1.7	69	62	27	42	7	0	91	51	1.8	24	15.2	S	30	4	5	22	7.9	45
WICHITA	403	968.8	1017.6	10.6	-0.6	5.1	3.0	18.3	11+	-7.2	27+	0	21	0.6	76	57	33	32	8	0	23	25	1.5	22	15.6	SW	30	4	8	19	7.7	39
KENTUCKY																																
COVINGTON	265	986.8	1019.1	7.8	0.0	3.8	3.1	16.7	31	-6.7	28+	0	19	-2.2	67	30	-40	6	9	0	64	51	3.0	23	12.5	22	25	4	7	20	7.5	
LEXINGTON	294	984.1	1020.3	8.9	0.0	4.2	2.1	18.9	31	-7.8	1	0	21	-1.1	71	15	-72	6	8	0	33	T	3.1	19	13.0	21	25	5	5	21	7.5	
LOUISVILLE	144	1001.7	1019.7	10.0	1.1	5.7	3.3	20.0	24	-6.7	28+	0	17	-1.7	61	29	-53	9	7	0	T	0	2.3	23	15.6	SW	24	6	5	20	7.3	48
LOUISIANA																																
ALEXANDRIA	28	1016.9	1021.1	17.2	3.9	10.7	-0.1	25.0	31	-5.0	8	0	11	6.7	81	199	54	104	11	1	0	0	0.8	7	13.0	29	24	9	7	15	6.4	
BATON ROUGE	20	1018.3	1020.9	18.3	5.6	11.9	-0.1	25.0	31	-2.8	27+	0	6	7.2	77	120	-10	49	9	0	0	0	1.4	7	12.1	30	24	7	10	14	6.5	
LAKE CHARLES	4	1019.3	1020.3	18.9	7.8	13.3	0.7	25.6	12	-0.6	8	0	2	9.4	82	127	-19	52	10	0	0	0	1.9	9	11.2	31	24	5	9	17	7.1	
NEW ORLEANS	1	1019.6	1020.6	17.8	6.7	12.2	-0.8	25.0	31	-2.2	27	0	3	8.3	78	187	83	65	10	1	0	0	1.8	5	9.4	8	18	8	8	15	6.3	
SHREVEPORT	77	1010.8	1020.3	16.7	5.6	11.1	1.3	23.9	5	-1.7	27	0	4	6.1	74	160	34	85	12	1	0	0	1.2	14	16.5	14	23	9	8	14	6.2	53
MAINE																																
CARIBOU	190			-4.4	-13.3	-8.9	0.2	2.8	31	-26.7	12	0	31			40	-22	11	12		452	610						3	4	24	8.4	
PORTLAND	19	1013.9	1016.1	2.8	-7.2	-2.3	1.2	10.0	31	-19.4	20	0	30	-6.1	76	61	-37	24	10	0	231	152	1.3	31	13.0	NW	26	9	4	18	6.7	53
MARYLAND																																
BALTIMORE	45	1013.2	1019.1	9.4	-2.2	3.5	1.4	20.0	31	-9.4	27	0	22	-3.3	63	16	-60	8	2	1	T	T	1.6	28	14.3	N	26	4	7	20	7.4	46
MASSACHUSETTS																																
BLUE HILL OBS R	192			4.4	-3.9	0.3	1.4	16.7	31	-13.9	20	0	27			50	-51	22	10		66	25			18.3	NW	26					51
BOSTON	5	1015.6	1016.7	5.6	-1.1	2.3	1.6	17.2	31	-10.6	20	0	18	-3.3	68	44	-48	25	8	0	58	25	2.5	29	13.9	NW	26	9	7	15	6.3	55
NANTUCKET	13	1016.3	1016.6	6.1	-2.2	1.9	-0.4	10.6	31+	-8.9	20+	0	23	-1.7	78	42	-58	22	8	1	8	T	2.0	29	16.1	N	26	7	9	15	6.6	52
PITTSFIELD	357			2.2	-6.1	-1.8	1.9	13.9	31	-16.1	27	0	30			70	-13	33	17		188	51										
WORCESTER	301	978.7	1016.6	2.8	-5.0	-1.1	1.6	15.6	31	-15.6	20	0	28	-6.1	71	56	-35	30	8	0	58	51	2.6	28	14.3	32	26	8	7	16	6.2	
MICHIGAN																																
ALPENA	210	988.8	1014.7	2.2	-5.6	-1.6	2.8	16.7	31	-18.3	20	0	29	-4.4	80	49	2	20	14	0	165	76	1.0	25	13.9	NE	25	1	5	25	8.8	16
DETROIT	189	992.9	1016.3	5.0	-0.6	2.2	3.3	15.6	31	-7.2	19	0	18	-2.2	72	100	47	62	12	0	41	25	2.8	24	14.8	N	25	3	4	24	8.5	19
DETROIT M WAYNE CO	193	991.5	1016.3	5.0	-1.7	1.7	2.8	15.0	31	-9.4	7	0	23	-2.2	75	152	104	94	10	0	41	25	2.5	23				3	4	24	8.5	
DETROIT WILLOW RUN	217	987.8	1016.7	4.4	-2.8	0.7	2.1	14.4	31	-9.4	19+	0	24	-3.3	74	122	72	72	10	0	30	25	3.0	23	13.4	35	25	4	4	23	8.4	
FLINT	235	987.1	1015.6	5.0	-1.1	1.9	5.3	16.1	31	-8.3	28	0	18	-2.2	73	65	19	34	12	0	183	127	2.7	23	13.9	1	25	2	4	25	8.6	
GRAND RAPIDS	239	985.4	1015.4	4.4	-2.2	0.8	3.6	15.6	31	-13.9	26	0	22	-1.7	83	107	56	36	18	0	244	127	2.1	22	13.9	N	25	2	7	22	8.5	30
HOUGHTON LAKE	351	971.9	1015.1	1.7	-5.0	-1.7		12.8	31	-17.2	26	0	29	-3.3	85	69		20	16	0	300	127	1.8	24	10.3	25	31	1	5	25	8.9	
LANSING	256	983.4	1015.9	4.4	-3.3	0.4	2.9	16.1	31	-15.0	26	0	22	-0.6	91	90	39	38	16	1	216	178	2.8	23	13.9	NE	25	1	6	24	8.5	21
MARQUETTE U	206			1.1	-4.4	-1.7	2.7	9.4	31	-13.9	28	0	27			51	3	19	14		193	127			13.4	SW	31	2	5	24	8.8	19
MUSKEGON	191	991.9	1015.5	3.9	-2.2	0.8	2.0	11.7	31+	-16.1	26	0	21	-1.7	82	94	43	26	14	0	384	152	1.8	24	13.0	20	31	1	7	23	8.7	
SAULT STE MARIE	220	986.5	1013.8	0.0	-6.1	-2.9	3.3	8.9	31	-17.2	26	0	29	-5.0	86	66	8	21	21	0	340	152	0.5	19	11.6	25	31+	3	3	25	8.7	23
MINNESOTA																																
DULUTH	435	961.1	1014.6	-2.2	-10.0	-6.1	3.9	2.8	30+	-22.8	28	0	30	-8.3	82	42	13	12	17	0	218	432	1.1	27	18.3	NE	11	3	3	25	8.6	24
INTERNATIONAL FALLS	359	969.9	1014.8	-3.9	-12.8	-8.3	4.3	2.8	7	-27.2	27	0	31	-10.0	84	41	19	14	11	0	368	635	0.6	24	11.6	15	26	3	5	23	8.2	
MINNEAPOLIS	254	983.7	1015.2	1.1	-5.6	-2.2	5.5	8.3	30	-18.9	27	0	28	-4.4	84	31	9	17	9	2	30	25	0.8	29	15.2	W	31	7	5	19	7.3	36
ROCHESTER	395	966.1	1015.2	1.7	-5.0	-1.9	5.5	9.4	31+	-17.8	27	0	29	-5.0	81	36	11	25	10	1	23	T	1.9	26	15.6	29	31	7	3	21	7.3	
ST CLOUD	315	975.6	1014.9	-0.6	-8.3	-4.4	4.2	6.1	7	-21.7	27	0	31		80	28	10	15	10		43	102						7	5	19	7.3	
MISSISSIPPI																																
JACKSON	94	1009.5	1021.5	16.7	2.2	9.7	0.0	24.4	31	-7.2	8	0	13	4.4	77	93	-42	41	9	1	0	0	0.8	12	13.0	SW	24	8	8	15	6.3	56
MERIDIAN	88	1010.5	1022.0	16.7	1.1	8.8	-0.2	23.3	31	-8.3	8	0	18	3.9	80	109	-26	43	8	0	0	0	0.0		8.0	18	24	9	8	14	6.1	
VICKSBURG U	71			16.7	6.1	11.4	1.2	23.9	31	-2.2	26+	0	3			106	-19	53	9		0	0			11.2	S	24	9	13	9	5.4	60

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm	M.p.s.		M.p.s.							%
MISSOURI																																
COLUMBIA	237	988.5	1017.3	10.6	1.1	5.8	4.8	22.2	30	-6.7	28	0	18	0.0	70	61	12	28	9	1	86	76	2.4	23	13.4	NW	3	4	8	19	7.4	62
KANSAS CITY	226	989.5	1017.0	11.7	1.7	6.7	4.6	21.1	11	-7.2	27	0	17	0.0	66	57	18	39	8	0	64	25	2.3	23	13.4	S	29	4	6	21	7.8	49
SAINT JOSEPH	247			11.1	-0.6	5.0	5.3	21.1	11	-8.9	27	0	21	-1.1	69	46	11	28	6	0	51	25	1.3	23	13.9	33	24	5	7	19	7.2	
ST LOUIS	163	997.6	1018.5	10.6	0.0	5.4	3.8	22.2	30	-8.9	28	0	17	0.0	69	81	30	32	10	0	T	0	2.5	23	13.9	SW	24	3	10	18	7.5	51
SPRINGFIELD	386	972.6	1018.8	12.2	0.0	6.2	3.6	22.2	30	-7.2	28+	0	18	0.6	71	98	42	32	8	1	5	T	2.0	21	13.0	SW	30	6	5	20	7.2	53
MONTANA																																
BILLINGS	1087	887.6	1014.9	3.9	-7.8	-1.9	0.1	15.6	4	-22.8	26	0	28	-9.4	62	19	4	6	7	0	254	178	2.9	25	16.1	NW	2	7	8	16	6.5	53
GLASGOW	696			0.6	-10.6	-5.2	2.8	12.2	4	-26.7	26	0	31			3	-8	2	3		30	25						3	9	19	7.5	
GREAT FALLS	1116	884.2	1015.4	3.3	-6.7	-1.6	1.0	15.6	3	-26.1	27+	0	23	-8.9	62	15		8	6	0	165	76	3.7	23	18.3	SW	20	3	10	18	7.5	55
HAVRE	787			-0.6	-11.1	-5.9	0.3	12.2	4	-27.8	26	0	29			5	-7	3	4		94	102			14.8	W	2	3	6	22	7.9	44
HELENA	1167	877.8	1016.7	3.3	-8.3	-2.5	1.8	15.0	3	-22.2	27+	0	29	-8.3	67	4	-10	1	6	0	36	25	1.7	23	16.1	S	29+	3	7	21	7.6	32
KALISPELL	904	908.6	1016.0	1.1	-7.2	-3.3	0.6	12.2	4	-20.0	25	0	29	-5.0	86	14	-19	6	12	0	203	102	0.5	21	11.6	22	28	2	4	25	8.6	
MILES CITY	801	919.7	1015.6	2.2	-9.4	-3.7	1.2	13.3	4	-27.2	27	0	29	-8.9	69	10	1		8	0	107		1.0	29								
MISSOULA	972	902.5	1017.4	1.1	-6.7	-2.7	2.1	13.9	4	-14.4	17	0	30	-5.6	80	11	-17	3	11	0	163	51	0.2	15	13.0	W	28	0	7	24	8.8	30
NEBRASKA																																
GRAND ISLAND	561	948.9	1016.8	7.2	-5.0	1.1	3.7	21.7	4	-16.1	27	0	29	-4.4	73	13	-1	6	7	0	48	25	1.8	27	11.2	36	24	7	2	22	7.4	
LINCOLN U	351			7.8	-2.8	2.3	3.1	16.1	4	-13.9	27	0	22			35	12	13	8		51	T			17.4	S	26	7	4	20	7.0	50
NORFOLK	471			6.1	-6.1	0.0	3.8	16.7	4	-18.9	27	0	30			11	-7	6	6		43	25						7	4	20	7.1	
NORTH PLATTE	846	915.7	1016.6	5.6	-8.9	-1.7	0.8	17.2	7	-19.4	27	0	31	-6.7	76	26	16	18	5	0	160	76	1.4	31	11.6	SE	25	6	9	16	6.5	49
OMAHA	298	980.4	1016.5	8.3	-2.8	2.7	4.8	18.3	11	-13.3	27	0	23	-1.7	76	36	15	22	6	0	43	25	1.0	28	13.4	N	24	7	5	19	7.0	54
SCOTTSBLUFF	1206	877.4	1016.9	6.7	-7.8	-0.6	1.3	18.3	4	-18.9	27	0	29	-7.2	67	17	6	12	5	0	107	51	1.8	32	17.4	28	30	9	8	14	6.1	
VALENTINE	789			5.6	-7.8	-0.9	2.9	15.6	4	-21.7	27	0	30			7	-1	6	3		33	25			15.6	NW	30	8	7	16	6.6	60
NEVADA																																
ELKO	1539	843.9	1021.4	-0.6	-13.3	-7.1	-4.0	8.9	28	-25.6	18	0	30	-11.1	78	19	-6	7	8	0	363	127	0.3	5	11.2	14	28	7	7	17	6.9	
ELY	1906	806.3	1017.9	3.3	-11.7	-4.2	-1.3	15.0	3	-26.7	18	0	30	-12.2	56	33	15	11	10	0	323	152	3.5	19	19.2	SE	28	6	8	17	7.1	68
LAS VEGAS	659	939.0	1016.6	12.2	2.2	7.2	-0.1	17.8	7+	-2.8	20	0	8	0.0	63	25	15	14	6	0	0	0	1.4	25	16.1	SW	30	11	6	14	5.9	65
RENO	1342	864.2	1017.1	6.1	-8.3	-1.2	-1.1	18.3	4	-17.8	23	0	29	-8.9	61	30	3	15	10	0	249	51	0.7	18	21.5	SW	28	6	11	14	6.5	73
WINNEMUCCA	1310	866.2	1017.9	5.6	-8.9	-1.8	-0.6	13.9	5	-19.4	20	0	30	-7.2	69	15	-9	5	7	0	145	51	0.6	14	21.0	SW	28	6	8	17	6.6	45
NEW HAMPSHIRE																																
CONCORD	104	1003.7	1016.9	2.8	-8.3	-2.6	1.3	16.1	31	-18.9	21	0	31	-6.7	75	39	-44	23	9	0	117	76	1.1	32	16.5	NW	26	9	4	18	6.6	46
MT WASHINGTON OBS	1909			-7.8	-15.0	-11.3	1.6	2.2	31	-26.7	19	0	31			118	-42	22	18	0	739	432			38.9Y	W	22	3	3	25	8.5	21
NEW JERSEY																																
ATLANTIC CITY	20	1016.6	1019.0	7.8	-3.3	2.4	-0.1	18.3	31	-12.8	27	0	23	-2.8	72	28	-54	16	4	0	0	0	2.2	28	11.6	33	26	9	6	16	6.5	56
ATLANTIC CITY U	3			7.8	0.6	4.2	0.7	13.9	31	-8.3	27	0	14			34	-55	15	4						18.3	SSW	25					
NEWARK	3	1017.3	1018.3	7.8	-0.6	3.8	1.9	17.2	31	-7.8	27	0	18	-3.3	63	47	-35	22	6	1	T	T	2.5	27	12.1	30	4	7	7	17	6.6	
TRENTON U	17			7.2	0.0	3.6	1.8	16.1	31	-8.3	27	0	16			45	-27	21	6		0	0			15.6	NW	25	7	11	13	6.2	55
NEW MEXICO																																
ALBUQUERQUE	1618	838.5	1018.8	7.8	-3.9	2.1	-0.7	16.1	5	-12.2	16+	0	26	-3.9	68	36	24	14	9	1	76	51	0.4	36	13.0	E	15	15	6	10	4.7	72
CLAYTON	1515			11.1	-3.3	3.7	1.4	22.8	4	-14.4	16	0	24			18	9	7	4		132	76						13	6	12	5.0	
RATON	1944			10.0	-8.3	0.9	1.4	20.6	4	-17.8	19	0	31			9	3	4	4		71	51						12	10	9	4.4	
ROSWELL	1102			13.9	-2.8	5.6	1.7	23.9	30	-9.4	26	0	24			12	-2	7	7	0	69	51			15.2	SW	23	12	8	11	4.9	66
SILVER CITY	1638			10.6	-1.1	4.7	-0.6	20.0	5	-6.7	19	0	24			73	56	27	12		191	102						9	11	11	5.3	
NEW YORK																																
ALBANY	84	1006.4	1017.6	3.9	-5.0	-0.7	2.4	15.6	31	-17.2	27	0	24	-4.4	74	25	-41	10	10	0	69	25	1.6	25	11.6	NW	19	4	4	23	8.1	29
BINGHAMTON	485	956.3	1016.9	2.2	-3.9	-0.9	2.0	15.0	31	-13.9	26	0	26	-3.9	80	43	-22	15	19	0	137	51	2.4	24	13.0	NW	26	0	7	24	8.9	24
BUFFALO	215	989.8	1016.3	4.4	-1.7	1.3	3.7	15.6	31	-13.3	27	0	21	-1.7	80	66	-10	24	16	0	178	102	3.0	22	14.3	SW	1	1	2	28	9.2	18
NEW YORK U	40	1015.2	1018.4	7.8	1.7	4.7	2.6	17.2	31	-7.8	27	0	10	-1.7	64	44	-39	21	6	0	T	T	2.0	26	11.2	NW	6	9	8	14	6.0	43
J.F. KENNEDY	5	1017.3	1018.1	7.2	0.0	3.7	2.1	13.3	31	-8.9	27	0	15	-1.7	69	56	-26	38	5	0	T	T	2.2	29	13.9	36	26	7	9	15	6.5	
NEW YORK LA GUARDIA	3	1016.3	1018.1	6.7	1.7	4.2	1.8	17.2	31	-6.1	27	0	10	-3.3	60	37	-49	16	7	0	T	T	2.1	29	15.2	N	26	6	6	19	6.8	
ROCHESTER	167	996.6	1017.3	5.0	-1.7	1.4	3.3	16.7	31	-15.0	27+	0	21	-3.3	72	56	-4	22	15	0	152	76	2.5	24	13.9	SW	1	1	3	27	9.1	17
SYRACUSE	125	1001.4	1016.6	3.9	-3.3	0.1	2.4	16.7	31	-17.8	27	0	24	-3.3	77	49	-31	16	18	0	180	51	1.7	25	11.6	W	1	0	5	26	8.8	24
NORTH CAROLINA																																
ASHEVILLE	652	942.8	1020.5	12.2	-2.8	4.6	1.3	20.0	5	-10.0	27+	0	24	-1.7	71	4	-88	2	3	0	T	T	1.7	35	19.7	34	25	12	8	11	5.4	67
CAPE HATTERAS R	2	1019.6	1019.9	13.3	4.4	9.0	0.0	20.6	31	-4.4	23	0	5	3.9	72	57	-59	46	6	1	0	0	1.6	31	13.9	SW	25	7	15	9	5.8	48
CHARLOTTE	224	992.6	1020.5	13.3	0.0	6.7	0.7	20.0	13	-5.6	8+	0	18	0.0	66	11	-81	6	6	0	0	0	1.0	25	12.5	SW	25	11	8	12	5.5	72

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	.25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s							%
NORTH CAROLINA																																
GREENSBORO	273	988.2	1020.4	13.3	- 0.6	6.2	1.8	20.0	13	- 7.8	20	0	19	- 0.6	66	16	- 63	12	3	0	T	T	1.5	25	14.3	NW	25	8	8	15	6.2	64
RALEIGH	132	1004.1	1020.3	13.9	- 0.6	6.6	1.1	20.6	13+	- 7.2	27	0	19	- 0.6	63	6	- 70	6	1	0	0	0	1.5	26	10.7	34	6	10	7	14	5.6	60
WILMINGTON	9	1019.6	1020.8	16.1	2.8	9.3	0.3	23.3	31	- 4.4	8	0	12	2.2	66	21	- 66	10	7	0	0	0	1.1	30	13.0	SW	25	10	9	12	5.3	58
NORTH DAKOTA																																
BISMARCK	502	953.6	1015.6	1.7	-11.1	- 4.7	3.2	16.7	4	-23.3	27	0	31	-10.0	69	7	- 2	5	5	0	58	25	1.4	33	15.2	W	2	7	8	16	6.6	55
FARGO	273	981.4	1015.5	- 1.7	-12.2	- 7.1	2.7	9.4	7	-26.1	27	0	31	- 8.9	83	26	11	13	7	0	155	127	0.7	32	15.2	SE	26	2	6	23	8.3	33
WILLISTON	579			0.0	-12.2	- 6.2	2.6	12.8	4	-28.3	27	0	31			15	3	13	3		170	127			21.0	NW	2	8	10	13	5.9	55
OHIO																																
AKRON	368	972.2	1018.0	6.1	- 1.1	2.4	3.3	16.7	31	- 8.9	20+	0	22	- 2.2	74	44	- 13	18	12	0	46	T	3.4	24	10.3	22	31+	3	6	22	7.9	
CINCINNATI OBS	232			8.3	1.1	4.9	3.1	18.3	31	- 6.7	26	0	16			29	- 41	25	8		30	25			9.4	W	5					46
CLEVELAND	237	987.5	1017.2	6.1	- 0.6	3.0	4.2	16.7	31	- 8.3	27+	0	20	- 0.6	80	53	- 7	19	13	0	30	T	3.8	22	13.0	N	25	4	5	22	8.0	30
COLUMBUS	247	988.2	1019.1	6.7	- 1.1	2.6	2.8	17.2	31	- 8.9	7	0	23	- 1.7	76	31	- 28	20	10	0	28	25	2.3	22	12.5	SW	31	5	4	22	7.7	37
DAYTON	305	981.7	1018.8	6.1	- 1.7	2.3	2.7	16.1	31	-10.0	7	0	22	- 1.7	77	37	- 23	19	11	0	51	51	3.4	21	12.5	SW	25	5	3	23	7.8	37
MANSFIELD	395			5.0	- 1.7	1.8	3.3	14.4	31+	- 9.4	7	0	22			48	- 20	25	11	0	20	T						5	3	23	8.1	
TOLEDO	206	991.5	1017.3	5.0	- 2.8	1.2	3.2	16.1	31	-11.1	7	0	25	- 2.8	76	92	42	38	11	0	23	T	2.9	23	13.0	N	25	4	5	22	8.1	30
YOUNGSTOWN	359	973.9	1017.7	5.0	- 1.1	1.9	3.3	15.0	31+	-10.0	27+	0	21	- 1.7	78	59	- 9	27	13	0	99	25	3.1	23	11.2	22	3	3	5	23	8.2	
OKLAHOMA																																
OKLAHOMA CITY	390	971.2	1018.2	15.0	3.3	9.3	4.7	22.8	4	- 3.3	19	0	9	2.2	68	64	28	57	7	0	T	T	1.5	19	15.2	NW	24	9	4	18	6.7	50
TULSA	198	994.2	1018.8	14.4	2.2	8.2	4.0	23.9	4	- 5.0	26+	0	17	1.7	69	109	68	81	7	1	T	T	2.1	19	15.2	SW	30	7	5	19	7.0	53
OREGON																																
ASTORIA	2	1012.5	1013.2	7.8	1.7	4.6	-1.6	13.3	6+	- 4.4	16+	0	14	2.8	90	299	- 47	47	25	1	86	51	1.8	14	15.6	20	27	2	9	20	8.1	
BURNS U	1265	870.3	1016.7	2.8	- 9.4	- 3.2	-1.6	12.2	5	-22.8	23	0	31	- 7.2	74	21	- 15	7	10		249	203	0.9	33				7	7	17	7.0	
EUGENE	109	1001.4	1014.9	6.7	1.7	4.0	-1.4	15.0	6	- 6.1	20	0	10	2.2	90	195	27	58	13	0	122	51	2.2	18	16.1	18	29	0	3	28	9.3	
MEACHAM	1234			0.6	- 5.0	- 2.2	-0.9	11.1	6	-15.6	23	0	27			40	- 75	12	16		335	305						2	4	25	8.5	
MEDFORD	396	967.8	1016.7	6.1	- 2.2	1.7	-1.1	13.3	3	-11.1	20	0	22	- 1.1	85	94	8	37	12	0	229	51	0.3	14	19.7	14	27	6	3	22	7.6	
PENDLETON	452	960.7	1015.6	6.7	- 1.1	2.7	0.2	17.2	28	- 7.2	23+	0	17	- 1.1	79	7	- 31	3	6	0	T	T	0.9	20	15.6	22	28	2	8	21	8.3	
PORTLAND	6	1013.5	1014.8	7.2	1.1	4.2	-1.0	15.6	3	- 7.2	17	0	17	2.2	88	186	24	48	18	0	T	0	2.4	14	21.5	SW	23	1	3	27	8.8	23
SALEM	60	1007.1	1014.6	6.1	0.0	3.2	-2.1	15.6	6	- 7.8	15	0	14	1.7	88	202	15	49	20	0	188	51	2.7	17	14.3	18	28+	0	6	25	8.9	
SEXTON SUMMIT R	1169	880.1	1015.3	3.3	- 2.2	0.6	-2.1	12.2	3	- 7.2	31	0	22			177	56	81	13		1626	1575			22.8	9	29	7	4	20	7.3	
PACIFIC AREA																																
CANTON ISLAND	2			32.2	26.1	28.9	0.6	33.3	18+	23.3	3	19	0			196	131	113	16		0	0						2	11	18	7.6	
ENIWETOK	4	1009.1	1009.7	30.0	25.0	27.4	-0.3	30.6	24+	23.3	28+	0	0	22.8	76	57	- 10	17	13		0	0	8.4	5								
TAGUAC GUAM R	110			28.9	22.8	25.7	-0.3	29.4	22+	18.9	17	0	0			80	- 76	16	21		0	0			10.3	E	14					66
JOHNSTON	2	1012.5	1013.0	27.2	23.3	25.2	-0.4	28.3	25+	21.1	8	0	0	20.6	75	57	- 19	24	18	1	0	0	6.5	9	21.0	E	1	11	10	10	5.7	44
KOROR R	29	1005.4	1008.9	30.0	24.4	27.2	0.0	31.1	17+	23.3	30+	0	0	23.9	83	322	24	39	26	3	0	0	3.7	7	10.3	NE	18	0	0	31	9.9	35
KWAJALEIN	2	1007.8	1008.6	30.0	25.0	27.4	0.3	30.6	30+	22.8	27	0	0	23.9	81	114	-114	36	20	0	0	0	7.6	6	13.0	4	14	1	12	18	8.2	
MAJURO WB AIRPORT	3	1007.8	1008.3	29.4	25.0	27.1	0.3	30.6	2	23.3	27+	0	0	23.9	84	243	- 40	51	25	0	0	0	6.1	7	13.0	E	3+	0	6	25	8.8	57
MARCUS ISLAND	6			27.2	21.7	24.3	0.0	28.9	2	20.0	30+	0	0			46		11	12		0	0			12.1	W	30	8	15	8	5.4	53
PONAPE R	37	1002.7	1008.2	29.4	24.4	27.0	0.2	31.1	15+	22.8	13+	0	0	23.3	83	361	-105	86	24	1	0	0	4.0	6	9.4	NE	12	0	4	27	9.0	54
TRUK MOEN ISLAND	2	1007.8	1008.2	29.4	25.0	27.4	0.3	31.1	16+	22.8	12	0	0	23.9	81	108	-228	32	20	1	0	0	5.3	7	11.2	SE	12	1	4	26	8.8	57
WAKE	3	1014.6	1015.0	27.2	22.2	24.8	-1.3	28.3	8+	20.6	31+	0	0	18.9	72	13	- 33	5	10	0	0	0	6.8	4	15.6	4	2+	14	10	7	4.7	
YAP R	17	1006.8	1008.8	30.0	25.0	27.3	0.1	31.1	9	22.8	1	0	0	23.9	82	94	-164	44	18	1	0	0	4.8	5	10.7	NE	18	0	4	27	9.3	70
PENNSYLVANIA																																
ALLENTOWN	118	1004.1	1018.5	5.6	- 3.3	1.1	1.4	16.1	31	-10.6	27+	0	26	- 3.3	73	45	- 38	25	7	1	T	0	1.8	29	13.4	32	26	5	6	20	7.3	
ERIE	223	989.8	1017.1	5.0	- 0.6	2.2	2.9	15.0	31+	-11.1	26	0	18	- 2.2	74	68	2	30	14	0	135	254	3.4	22	11.6	1	25	2	1	28	8.8	
HARRISBURG	103	1005.8	1018.9	6.1	- 2.2	2.1	1.5	18.3	31	-10.0	27	0	20	- 4.4	66	22	- 52	11	8	1	T	T	1.3	30	15.2	NW	26	5	5	21	7.6	48
PHILADELPHIA	2	1018.0	1018.9	7.8	- 2.2	2.8	1.7	16.7	31	- 8.3	27+	0	23	- 2.8	67	47	- 28	22	7	0	T	0	2.1	28	13.0	NW	26	7	7	17	6.9	51
PITTSBURGH	347	973.2	1018.3	6.7	- 0.6	3.1	3.8	18.3	12	- 9.4	20	0	17	- 1.7	74	16	- 45	4	16	0	46	25	3.1	23	11.2	24	3	3	6	22	8.2	29
READING U	81			7.2	0.0	3.6	2.1	19.4	31	- 8.9	27	0	17			49	- 30	29	7		T	T			17.4	N	26	5	12	14	6.8	44
SCRANTON	283	983.1	1018.3	4.4	- 2.8	0.8	2.3	17.2	31	-12.2	27	0	24	- 3.9	72	33	- 30	16	9	0	33	T	1.5	24	13.0	NW	26	4	3	24	8.3	35
WILLIAMSPORT	161	998.6	1018.2	5.6	- 2.8	1.5	2.4	14.4	31	-11.1	27	0	23	- 3.9	71	24	- 54	11	11	0	18	T	1.1	27	10.3	32	26+	3	5	23	8.1	
RHODE ISLAND																																
BLOCK ISLAND	34			5.6	- 0.6	2.4	0.3	11.7	4	- 8.9	20	0	13			35	- 57	12	8		T	T						3	15	13	6.5	
PROVIDENCE	16	1014.9	1017.1	6.7	- 2.8	1.9	1.9	20.6	31	-11.1	20	0	22	- 3.9	68	36	- 56	16	9	0	48	25	2.1	28	13.4	34	26	10	6	15	6.1	60

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
SOUTH CAROLINA																																
CHARLESTON	12	1019.3	1021.0	16.7	2.8	9.6	-0.4	23.9	31	-6.1	8	0	13	3.3	70	30	-42	22	7	0	0	0	1.0	32	16.1Y	N	6	9	7	15	6.3	58
CHARLESTON U	3			15.6	6.7	11.2	0.2	22.2	6	0.6	1	0	0			40	-29	27	8		0	0			16.5	N	6					
COLUMBIA	66	1012.5	1020.9	16.1	0.6	8.5	0.5	23.3	31	-6.7	8	0	17	1.7	68	16	-73	7	7	0	0	0	1.1	26	12.5	26	25	12	6	13	5.1	62
GNVLE SPARTANBURG	292	985.4	1020.9	13.9	0.6	7.2	0.6	20.6	13	-5.6	28	0	18	0.0	64	9	-93	7	3	0	0	0	1.3	26	13.9	N	26+	11	6	14	5.5	60
SOUTH DAKOTA																																
ABERDEEN	395	966.8	1015.3	1.7	-8.9	-3.7	4.1	12.8	7	-22.2	27	0	31	-7.8	74	10	-6	9	5	0	18	76	1.0	30	12.5	17	25	6	5	20	7.2	
HURON	391	967.5	1015.4	3.9	-7.8	-2.0	5.3	15.0	7	-20.0	27	0	31	-6.1	77	14	0	13	4	0	5	25	0.9	28	16.1	SE	25	8	3	20	7.0	56
RAPID CITY	965	901.5	1014.8	7.8	-6.1	0.7	3.4	23.9	4	-18.9	27	0	29	-7.2	62	3	-5	3	2	0	18	T	2.2	31	18.8	N	26	8	6	17	6.6	54
SIOUX FALLS	432	962.8	1015.6	2.8	-6.7	-2.0	4.1	11.7	7	-18.9	27	0	30	-5.6	79	15	-4	8	5	0	T	25	1.3	28	17.9	28	30	7	5	19	7.1	
TENNESSEE																																
BRISTOL	459	965.8	1021.5	10.6	-2.8	3.8	0.3	18.3	12	-10.0	1	0	23	-2.8	66	5	-76	5	3	0	T	T	1.0	26	11.2	27	25	4	9	18	7.2	
CHATTANOOGA	204	996.3	1021.6	12.2	-1.7	5.3	-0.6	19.4	31	-8.3	8+	0	21	0.0	75	22	-110	9	6	0	0	0	0.4	28	11.2	S	24+	9	3	19	6.4	50
KNOXVILLE	299	985.8	1021.9	12.2	0.6	6.1	0.8	21.1	31	-6.7	1	0	19	-0.6	66	11	-96	7	5	0	T	T	0.8	27	14.3	SW	25	6	7	18	6.8	47
MEMPHIS	78	1010.8	1021.3	13.3	2.2	7.7	1.8	21.7	10	-8.3	1	0	14	1.7	66	30	-96	20	7	0	0	0	1.4	20	14.8	SE	24	9	7	15	6.2	55
NASHVILLE	180	998.6	1020.9	12.8	1.1	7.1	1.9	21.1	30	-8.9	1	0	16	0.6	67	26	-81	16	4	0	0	0	1.6	21	15.6	S	24	8	6	17	6.6	50
OAK RIDGE	276			11.1	-1.1	5.2	0.7	17.8	31+	-8.3	1	0	18			17	-133	12	5		T	T			10.7Y		24	7	6	18	6.5	
TEXAS																																
ABILENE	537	956.0	1018.2	16.1	5.6	10.8	2.9	23.9	11+	-2.2	25	0	3	4.4	68	25	-7	10	6	1	0	0	2.3	19	24.1	W	23	10	5	16	6.4	45
AMARILLO	1098	891.0	1016.0	13.3	-1.1	6.1	2.0	24.4	4	-8.3	19	0	22	-3.9	56	10	-10	3	6	0	36	25	2.8	23	18.8	SW	22	15	5	11	4.8	63
AUSTIN	182	997.3	1019.4	18.3	8.3	13.3	1.8	24.4	31+	0.0	26+	0	2	7.8	75	109	44	66	12	2	0	0	0.4	4	17.0	NW	24	8	4	19	7.1	34
BROWNSVILLE	5	1016.9	1017.6	22.2	14.4	18.3	1.1	26.1	13	5.6	20	0	0	15.6	86	101	57	38	11	2	0	0	1.5	10	16.1	SW	24	3	7	21	7.7	46
CORPUS CHRISTI	12	1016.9	1018.3	21.7	12.2	17.0	1.9	27.8	14	2.8	20	0	0	13.3	82	80	27	29	10	2	0	0	1.9	9	16.1	N	24+	5	4	22	7.6	32
DALLAS	147	1002.0	1019.6	16.1	6.1	11.2	2.2	25.6	11	-0.6	25	0	3	5.6	72	40	-28	20	8	0	0	0	1.7	17	15.2	W	24	9	4	18	6.6	49
DEL RIO	313	981.7	1018.3	18.3	8.3	13.6	2.3	25.6	11	0.0	20	0	1	8.3	75	28	7	24	4	0	0	0	1.3	12	10.7	32	24	7	5	19	7.0	
EL PASO	1194	883.2	1016.9	13.9	1.1	7.6	0.9	20.6	30	-3.9	25+	0	13	-0.6	61	19	6	8	10	0	T	0	0.5	30	20.1	W	23	10	8	13	5.4	68
FORT WORTH	164	999.0	1019.9	17.2	6.1	11.6	2.8	25.6	11	-0.6	25	0	2	5.6	72	44	-16	17	10	0	0	0	1.3	18	15.6	24	24	9	5	17	6.6	
GALVESTON U	2			18.9	13.3	15.9	1.9	23.9	12	6.1	25	0	0			229	130	97	8		0	0			13.0	E	3					51
HOUSTON U	12			19.4	11.7	15.5	1.9	25.6	31	4.4	28+	0	0			154	50	55	10		0	0										
HOUSTON	15	1017.6	1019.7	20.0	10.0	14.9	1.8	26.1	31+	2.8	20	0	0	10.0	77	156	45	55	11	2	0	0	1.5	8	13.9	31	24	5	6	20	7.4	56
LUBBOCK	992	904.2	1016.7	15.6	1.7	8.3	3.3	23.9	5	-5.6	19	0	17	0.0	62	13	-4	8	5	1	18	T	2.0	23	13.4	26	11	14	4	13	5.1	
MIDLAND	869	917.4	1016.5	16.7	3.3	9.8	2.1	23.9	30	-3.3	25	0	8	3.3	74	7	-9	3	5	0	T	0	1.7	19	14.3	25	11	11	4	16	5.9	
PORT ARTHUR	5	1019.3	1020.1	19.4	8.9	14.1	1.4	26.1	12	1.1	28+	0	0	10.6	83	147	18	56	10	0	0	0	2.2	9	15.6	NW	24	5	5	21	7.2	55
SAN ANGELO	580	950.6	1018.0	16.7	5.0	10.8	2.1	24.4	5	-3.9	25	0	7	5.6	75	16	-6	6	8	0	0	0	1.7	21	19.2	30	23	9	4	18	6.5	
SAN ANTONIO	240	990.9	1019.3	18.3	7.8	13.1	1.0	24.4	31+	-1.1	26+	0	4	8.9	81	115	70	71	12	1	0	0	1.2	5	12.1	NW	24	5	8	18	7.2	39
VICTORIA	32	1014.9	1019.0	20.0	10.0	15.2	1.2	25.6	30	3.3	20	0	0	11.1	82	125	58	46	11	0	0	0	1.3	6	17.4Y	NNW	24	4	3	24	7.8	
WACO	152	1001.4	1019.6	16.7	6.1	11.3	1.2	25.6	11	-2.2	26	0	3	6.7	76	59	-11	26	8	0	0	0	0.9	18	15.6	27	24	10	3	18	6.5	
WICHITA FALLS	303	981.4	1018.4	16.1	2.8	9.4	2.4	23.3	30+	-4.4	26	0	12	4.4	77	16	-21	9	6	0	T	0	2.1	20	16.5	30	24	9	7	15	6.2	
UTAH																																
MILFORD	1533			4.4	-7.8	-1.6	0.5	16.7	5	-24.4	24	0	29			42	24	12	13		335	127						6	5	20	7.4	
SALT LAKE CITY	1286	871.3	1019.0	3.3	-5.6	-1.0	0.1	11.7	28	-12.8	23	0	29	-4.4	79	46	14	11	12	0	325	102	0.8	18	15.2	S	29+	2	10	19	8.0	48
WENDOVER	1291			1.1	-6.7	-2.8	-1.6	8.3	29+	-15.0	20	0	28			15	8	11	7		69	51						10	6	15	6.4	
VERMONT																																
BURLINGTON	101	1003.7	1016.5	1.7	-5.0	-1.9	3.9	13.3	31	-15.6	20	0	24	-5.0	79	37	-17	8	14	0	302	76	1.3	20	12.1	N	26	0	5	26	9.1	22
VIRGINIA																																
LYNCHBURG	279			12.2	-1.1	5.3	1.7	21.1	31	-8.9	27	0	19			8	-71	5	5	0	T	T			11.6	SW	25	9	7	15	6.1	67
NORFOLK	8	1018.6	1019.8	11.7	1.1	6.4	0.6	21.7	31	-5.0	29+	0	16	-1.1	60	27	-42	19	3	0	T	0	1.3	25	15.2	S	25	4	13	14	6.6	49
RICHMOND	49	1013.9	1019.9	11.7	-1.1	5.2	0.9	20.6	31	-7.8	8	0	20	-2.8	61	18	-57	10	2	1	T	T	0.8	24	12.1	N	26	6	10	15	6.6	61
ROANOKE	350	976.6	1019.5	11.7	-1.1	5.3	1.7	20.0	31+	-8.3	29+	0	16	-2.8	58	5	-71	3	4	0	8	T	1.8	29	13.0	29	25	7	10	14	6.4	
WASHINGTON																																
OLYMPIA	59	1006.1	1013.5	6.7	0.6	3.5	-1.3	14.4	6+	-5.0	14	0	13	2.2	93	198	-31	39	22	0	356	102	2.2	20	13.0	20	3	1	1	29	9.3	
SEATTLE TACOMA	122	996.6	1013.3	7.2	2.2	4.7	-0.2	15.6	3	-3.9	15	0	11	1.1	81	180	21	34	21	0	389	203	1.7	18	13.9	20	20	1	4	26	8.8	18
SPOKANE	718	929.2	1014.9	2.2	-3.9	-1.1	-0.1	8.9	6	-12.2	25	0	28	-2.8	86	41	-20	9	14	0	391	254	1.6	17	17.9	S	28	2	4	25	8.7	14
STAMPEDE PASS R	1206			-1.7	-5.6	-3.6	-0.8	5.0	6	-10.0	25+	0	31			157	-254	27	19		1082	1194						1	4	26	9.2	
TATOOSH ISLAND R	31	1007.5	1010.7	7.8	4.4	6.1	-0.8	12.2	6+	0.6	31+	0	0	3.9	84	337	28	44	26	2	183	25	3.7	14	29.1	E	27	3	4	24	8.4	16
WALLA WALLA U	289			7.2	0.0	3.6	0.4	19.4	3	-7.2	15	0	13			7	-40	2	8		T	T			13.9	SE	24	2	4	25	8.9	13
YAKIMA	321	976.3	1015.8	4.4	-5.0	-0.6	-0.3	12.8	4	-12.8	31+	0	30	-3.9	80	35	7	24	8	0	356	330	1.3	26	11.2	22	30	4	8	19	7.6	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, Sleet				Fastest mile (1.6 kilometers)							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M.	Mb.	Mb.	C	C.	C.	C	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
WEST INDIES																																
SAN JUAN P.R.	5	1012.5	1014.8	28.9	21.7	25.2	0.7	32.2	21	19.4	1	1	0	21.1	79	128	- 10	63	14	3	0	0	2.1	8	15.6	NE	10	11	8	12	5.7	54
SWAN ISLAND	9			27.8	23.9	25.8	-0.1	29.4	6+	21.7	8	0	0			102	- 41	38	14	1	0	0						7	15	9	5.9	
WEST VIRGINIA																																
BECKLEY	763	929.6	1020.6	7.8	- 2.2	2.8		16.7	12	-11.1	1	0	21	- 3.3	67	14		6	9	0	175	76	2.8	24	12.5	29	25	4	6	21	7.8	
CHARLESTON	286	984.8	1019.7	10.0	- 1.1	4.3	1.5	20.6	31	- 9.4	27+	0	22	- 1.7	69	11	- 71	4	8	0	69	51	1.9	23	11.2	23	25	5	6	20	7.7	
ELKINS	600	946.8	1019.8	7.8	- 3.3	2.2	1.7	20.0	12	-14.4	27	0	23	- 2.2	77	23	- 55	8	12	0	117	51	1.9	27	13.9	29	25	2	6	23	8.3	
HUNTINGTON	252	989.2	1019.8	10.0	0.6	5.3	2.3	20.0	31+	- 8.3	27	0	19	- 1.1	68	8	- 64	3	6	0	25	25	2.1	21	9.8	27	25	5	7	19	7.3	
PARKERSBURG U	187			8.9	0.6	4.8	2.7	20.0	31	- 7.8	27	0	18			12	- 60	3	9		8	T			13.9	W	25					30
WISCONSIN																																
GREEN BAY	208	988.5	1015.0	1.7	- 5.0	- 1.8	3.7	10.6	31	-15.6	28	0	27	- 4.4	81	59	29	28	12	0	71	25	1.8	27	13.4Y	SW	31	3	7	21	7.9	22
LA CROSSE	198	990.5	1016.0	3.3	- 4.4	- 0.8	4.8	15.0	31	-13.3	27	0	27	- 3.9	79	51	22	24	8	1	33	25	0.9	24	10.3	24	31+	7	1	23	7.6	
MADISON	262	983.1	1015.3	3.3	- 5.6	- 1.2	4.3	12.8	31	-16.1	28	0	29	- 3.3	83	64	30	29	9	0	145	51	1.8	27	12.5	NE	25	5	3	23	7.8	37
MILWAUKEE	205	989.8	1015.7	3.9	- 2.8	0.5	4.6	12.8	31	-14.4	28	0	24	- 2.2	81	95	53	46	11	0	368	102	2.1	26	18.8	N	25	3	7	21	8.1	30
WYOMING																																
CASPER	1627	834.4	1015.7	3.9	- 7.2	- 1.6	1.0	15.0	4	-22.8	15	0	27	-10.0	56	22	10	9	7	0	254	127	5.8	24	17.4	24	28	7	8	16	6.5	
CHEYENNE	1867	808.7	1016.0	6.7	- 6.7	0.1	1.4	17.2	4	-22.2	15	0	27	-11.7	48	6	- 6	4	5	0	61	51	3.8	29	23.2	NW	2	6	8	17	6.7	63
LANDER	1696	825.6	1017.1	2.8	- 9.4	- 3.4	1.5	13.3	4	-22.8	16	0	31	-10.6	63	11	1	4	7	0	305	178	1.6	23	25.0	SW	28	7	7	17	6.6	68
SHERIDAN	1208	875.7	1016.2	6.1	-10.0	- 1.8	1.4	21.1	4	-23.9	26	0	29	-10.6	56	6	- 10	2	9	0	135	51	1.8	28	21.0	SW	29	7	8	16	6.5	62

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.
A Maximum hourly average.
B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

Z Sun continuously below horizon.

HEATING DEGREE DAYS

(Base 65°F.)

DECEMBER 1965

State and station	Current season		Normals
	This month	Period July through this month	July through this month
ALABAMA			
BIRMINGHAM	583	1072	1017
HUNTSVILLE	585	1003	1228
MOBILE	345	488	592
MONTGOMERY	501	817	925
ALASKA			
ANCHORAGE	1603	4758	
ANNETTE	985	3002	2981
BARROW	2408	8407	8511
BARTER ISLAND	2425	8636	8260
BETHEL	1944	5821	5667
COLD BAY	1126	4285	4236
FAIRBANKS	2455	6890	6435
JUNEAU	1182	3905	3903
KING SALMON	1852	5552	4952
KOTZEBUE	2191	6738	6654
MC GRATH	2445	6890	6386
NOME	1958	6339	6039
ST. PAUL ISLAND	1153	4796	4778
SHEMYA	980	4199	4255
YAKUTAT	1348	4703	3955
ARIZONA			
FLAGSTAFF	1071	2708	2813
PHOENIX	370	497	671
TUCSON	396	547	662
WINSLOW	890	1735	1970
YUMA	321	386	372
ARKANSAS			
FORT SMITH	576	1022	1293
LITTLE ROCK	561	974	1317
TEXARKANA	437	681	984
CALIFORNIA			
BAKERSFIELD	681	931	821
BISHOP	872	1656	1663
BLUE CANYON	897	2025	1896
BURBANK	334	510	527
EUREKA U	551	1957	2027
FRESNO	707	1062	975
LONG BEACH	320	456	496
LOS ANGELES	304	453	559
LOS ANGLES U	264	363	398
MT SHASTA R	966	2199	2186
OAKLAND	567	1008	1065
RED BLUFF	721	1130	926
SACRAMENTO	738	1092	1033
SANDBERG U	824	1609	1403
SAN DIEGO	303	433	432
SAN FRANCISCO	617	1321	1130
SAN FRANCISCO U	509	1254	1205
SANTA CATALINA	344	723	519
SANTA MARIA	495	1072	1095
STOCKTON	754	1135	1029
COLORADO			
ALAMOSA	1316	3329	3567
COLORADO SPRINGS	931	2274	2479
DENVER	924	2180	2414
GRAND JUNCTION	960	1803	2242
PUEBLO	889	1911	2116
CONNECTICUT			
BRIDGEPORT	827	1783	1974
HARTFORD	961	2286	2307
NEW HAVEN	920	2072	2105
DELAWARE			
WILMINGTON	839	1833	1836
DIST.OF COLUMBIA			
WASH NATL AP	723	1436	1603
FLORIDA			
APALACHICOLA U	307	419	488
DAYTONA BEACH	173	240	286
FORT MYERS	52	59	133
JACKSONVILLE	293	412	466
KEY WEST	1	8	28
LAKELAND U	124	154	221
MIAMI	16	16	65
ORLANDO	112	132	270
PENSACOLA	350	504	567
TALLAHASSEE	338	489	586
TAMPA	160	202	231
WEST PALM BEACH	31	34	71
GEORGIA			
ATHENS	579	1074	1164
ATLANTA	619	1130	1185
AUGUSTA	543	938	963
COLUMBUS	518	842	963
MACON	538	950	870
ROME	686	1276	1360
SAVANNAH	454	750	730
IDAHO			
BOISE	1075	2225	2356
IDAHO FALLS 42NW R	1396	3525	3525
IDAHO FALLS 46W R	1349	3384	3369
LEWISTON	879	1969	2215
POCATELLO	1216	2850	2731
ILLINOIS			
CAIRO U	608	1175	1504
CHICAGO O HARE	915	2193	2483
CHICAGO MIDWAY	879	2037	2273
MOLINE	939	2160	2398
PEORIA	914	2130	2291
ROCKFORD	1005	2320	2587
SPRINGFIELD	822	1785	2082
INDIANA			
EVANSVILLE	727	1554	1788
FORT WAYNE	872	2044	2410
INDIANAPOLIS	811	1853	2180
SOUTH BEND	879	2197	2391
IOWA			
BURLINGTON	865	1957	2318
DES MOINES	915	2108	2539
DUBUQUE	1044	2522	2842
SIOUX CITY	983	2346	2593
WATERLOO	999	2475	2802
KANSAS			
CONCORDIA	838	1766	2061
DODGE CITY	862	1640	1889
GOODLAND	992	2252	2351
TOPEKA	770	1669	1979
WICHITA	733	1414	1785
KENTUCKY			
COVINGTON	803	1860	2018
LEXINGTON	777	1742	1804
LOUISVILLE	697	1574	1801
LOUISIANA			
ALEXANDRIA	420	659	760
BATON ROUGE	355	506	616
LAKE CHARLES	283	389	570
NEW ORLEANS	339	477	535
SHREVEPORT	400	584	821
MAINE			
CARIBOU	1514	4069	3790
PORTLAND	1145	2866	2790
MARYLAND			
BALTIMORE	819	1770	1802
MASSACHUSETTS			
BLUE HILL OBS R	998	2379	2286
BOSTON	888	2114	1971
NANTUCKET	909	2241	1928
PITTSFIELD	1117	2937	2889
WORCESTER	1076	2643	2583
MICHIGAN			
ALPENA	1104	3194	3206
DETROIT	894	2095	2273
DETROIT M WAYNE CO	927	2360	2275
DETROIT WILLOW RUN	979	2484	2301
FLINT	911	2348	2735
GRAND RAPIDS	968	2373	2614
HOUGHTON LAKE	1114	3088	
LANSING	988	2489	2573
MARQUETTE U	1113	3180	3111
MUSKEGON	969	2275	2410
SAULT STE MARIE	1177	3516	3378
MINNESOTA			
DULUTH	1355	3872	3854
INTERNATIONAL FALLS	1479	4100	4207
MINNEAPOLIS	1140	2952	3215
ROCHESTER	1123	2990	3162
ST CLOUD	1260	3319	3414
MISSISSIPPI			
JACKSON	481	792	851
MERIDIAN	524	871	938
VICKSBURG U	385	574	794
MISSOURI			
COLUMBIA	692	1465	1923
KANSAS CITY	646	1362	1776
ST JOSEPH	735	1504	2099
ST LOUIS	717	1548	1874
SPRINGFIELD	667	1445	1745
MONTANA			
BILLINGS	1125	2827	2746
GLASGOW	1305	3385	3526
GREAT FALLS	1106	3020	2972
HAVRE	1348	3620	3414
HELENA	1153	3195	3252
KALISPELL	1201	3485	3384
MILES CITY	1224	3101	2956
MISSOULA	1165	3210	3384
NEBRASKA			
GRAND ISLAND	956	2227	2501
LINCOLN U	988	1970	2174
NORFOLK	1016	2503	2624
NORTH PLATTE	1113	2522	2620
OMAHA	864	1965	2346
SCOTTSBLUFF	1050	2471	2601
VALENTINE	1068	2713	2858
NEVADA			
ELKO	1416	3090	2950
ELY	1248	3079	3020
LAS VEGAS	615	913	1082
RENO	1079	2519	2651
WINNEMUCCA	1116	2619	2747
NEW HAMPSHIRE			
CONCORD	1163	2973	2800
MT WASHINGTON OBS	1649	6135	5889
NEW JERSEY			
ATLANTIC CITY	879	1940	1719
ATLANTIC CITY U	783	1626	1597
NEWARK	807	1817	1772
TRENTON U	813	1798	1821
NEW MEXICO			
ALBUQUERQUE	895	1660	1751
CLAYTON	812	1775	1980
RATON	964	2223	2467
ROSWELL	708	1314	1599
SILVER CITY	754	1379	1443
NEW YORK			
ALBANY	1051	2469	2568
BINGHAMTON	1063	2758	2753
BUFFALO	942	2400	2570
NEW YORK U	755	1599	1705
J.F. KENNEDY	810	1755	1781
NEW YORK LA GUARDIA	780	1656	1665
ROCHESTER	937	2380	2453
SYRACUSE	1011	2535	2478
NORTH CAROLINA			
ASHEVILLE	759	1699	1821
CAPE HATTERAS R	514	916	872
CHARLOTTE	643	1247	1259
GREENSBORO	670	1359	1516
RALEIGH	650	1286	1351
WILMINGTON	494	813	886
NORTH DAKOTA			
BISMARCK	1279	3425	3407
FARGO	1415	3675	3534
WILLISTON	1358	3639	3571
OHIO			
AKRON	878	2125	2282
CINCINNATI OBS	742	1648	1835
CLEVELAND	852	2081	2349
COLUMBUS	873	1933	2190
DAYTON	886	2015	2135
MANSFIELD	921	2346	2420
TOLEDO	953	2411	2469
YOUNGSTOWN	908	2273	2432
OKLAHOMA			
OKLAHOMA CITY	496	915	1443
TULSA	556	976	1485
OREGON			
ASTORIA	760	2008	2101
BURNS U	1194	2919	2754
EUGENE	791	1720	1867
MEACHAM	1138	3033	3085
MEDFORD	923	1815	1999
PENDLETON	865	1880	2056
PORTLAND	785	1640	1834
SALEM	836	1872	1840
SEXTON SUMMIT R	982	2404	2316
PENNSYLVANIA			
ALLENTOWN	957	2198	2181
ERIE	892	2152	2295
HARRISBURG	900	1985	2031
PHILADELPHIA	862	1877	1936
PITTSBURGH	848	2216	2278
PITTSBURGH U	780	1832	1836
READING U	816	1789	1847
SCRANTON	971	2314	2451
WILLIAMSPORT	937	2302	2265
RHODE ISLAND			
BLOCK ISLAND	877	2056	1897
PROVIDENCE	907	2144	2147
SOUTH CAROLINA			
CHARLESTON	481	801	812
CHARLESTON U	394	603	669
COLUMBIA	543	986	1046
GNVLE-SPARTANBUR	615	1182	1213
SOUTH DAKOTA			
ABERDEEN	1217	3232	3261
HURON	1127	2994	3147
RAPID CITY	978	2578	2740
SIOUX FALLS	1129	2945	3007
TENNESSEE			
BRISTOL	803	1637	1688
CHATTANOOGA	721	1350	1327
KNOXVILLE	674	1280	1415
MEMPHIS	590	1049	1293
NASHVILLE	618	1228	1415
OAK RIDGE	726	1487	1544
TEXAS			
ABILENE	424	612	1051
AMARILLO	676	1316	1590
AUSTIN	288	424	644
BROWNSVILLE	76	92	215
CORPUS CHRISTI	125	161	340
DALLAS	403	607	907
DEL RIO	263	323	643
EL PASO	592	943	1146
FORT WORTH	376	541	926
GALVESTON U	152	164	[illegible]
HOUSTON U	188	225	[illegible]
HOUSTON	212	257	496
LUBBOCK	551	902	1449
MIDLAND	468	807	1060
PORT ARTHUR	250	327	558
SAN ANGELO	416	[illegible]	[illegible]
SAN ANTONIO	301	429	598
VICTORIA	202	257	426
WACO	393	567	769
WICHITA FALLS	494	868	1112
UTAH			
MILFORD	1103	2443	2550
SALT LAKE CITY	1069	2209	2431
WENDOVER	1172	2361	2332
VERMONT			
BURLINGTON	1125	2998	3079
VIRGINIA			
LYNCHBURG	718	1599	1636
NORFOLK	657	1257	1242
RICHMOND	726	1530	1529
ROANOKE	722	1576	1654
WASHINGTON			
OLYMPIA	820	2174	2149
SEATTLE TACOMA	754	1733	2054
SPOKANE	1078	2682	2656
STAMPEDE PASS R	1219	3695	3844
TATOOSH ISLAND R	682	2431	2459
WALLA WALLA U	818	1735	1921
YAKIMA	1048	2371	2473
WEST VIRGINIA			
BECKLEY	855	2068	
CHARLESTON	776	1792	1773
ELKINS	893	2221	2290
HUNTINGTON	719	1635	1761
PARKERSBURG U	752	1696	1835
WISCONSIN			
GREEN BAY	1118	2810	2993
LA CROSSE	1061	2726	2884
MADISON	1086	2777	2973
MILWAUKEE	987	2443	2863
WYOMING			
CASPER	1108	2843	2849
CHEYENNE	1016	2627	2828
LANDER	1208	2936	3104
SHERIDAN	1116	2862	2962

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

DECEMBER 1965

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				∅ ALL OTHER			
								†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS
Alabama *																													
Alaska																		1	1	3									
Arizona																										0	0	7	6
Arkansas *																													
California										0	0	4	0	0	0	3	0									0	0	5	0
Colorado *																													
Connecticut *																													
Delaware *																													
Florida *																													
Georgia *																													
Hawaii *																													
Idaho *																													
Illinois																		0	0	?	0	0	0	?	0	0	0	?	0
Indiana																										0	0	4	0
Iowa *																													
Kansas *																													
Kentucky *																													
Louisiana	3	1	0	4	4																								
Maine																						0	0	3	0				
Maryland *																													
Massachusetts										0	0	3	0									0	0	3	0				
Michigan *																													
Minnesota																						0	?	5	0				
Mississippi	1	1	0	0	2																								
Missouri														0	0	4	0												
Montana *																													
Nebraska *																													
Nevada *																													
New Hampshire																						0	0	3	0				
New Jersey *																													
New Mexico																										0	0	°6	C
New York *																													
North Carolina *																													
North Dakota																						0	M	6	0				
Ohio *																													
Oklahoma *																													
Oregon										0	Few	5	3													0	H 5-10	5	4
Pacific Area *																													
Pennsylvania *																													
Puerto Rico																										3	0	5	6
Rhode Island *																													
South Carolina *																													
South Dakota																						0	0	6	0				
Tennessee *																													
Texas	3	2	0	2	2					0	3	5	0													D 1	0	?	?
Utah *																													
Vermont																						0	0	3	0				
U. S. Virgin Is. *																													
Virginia *																													
Washington												4																	
West Virginia										0	0	2	0																
Wisconsin														0	0	4	0	0	0	5	0					0	0	F 3	0
Wyoming *																													

° Includes crop damage
C Crop damage
M Many minor injuries
H Heavy rains, floods
D Flashflood drowning
F Flooding

* No occurrence of storms or unusual weather phenomena.
‡ Includes heavy sleet storm.
# Freezing drizzle and freezing rain, commonly known as glaze.
∅ For breakdown of "All Others", and for detailed listing of other storms, see the U. S. Weather Bureau monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:

1	Less than $50
2	$50 to $500
3	$500 to $5,000
4	$5,000 to $50,000
5	$50,000 to $500,000
6	$500,000 to $5,000,000
7	$5,000,000 to $50,000,000
8	$50,000,000 to $500,000,000
9	$500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

DECEMBER 1965

The most damaging flooding in continental United States during December occurred in the Colorado Basin. The Upper Gila River near Cliff, N. Mex., crested 0.1 foot below the flood of January 1949. Extensive damage resulted from tributary flooding of the Gila River in southern Arizona. Flooding reported elsewhere in the 48 conterminous states was mostly minor.

Heavy rains on December 9 caused extensive flooding over the interior and north coast of Puerto Rico on December 10-11. The rain abated during the night but became heavy again shortly after dawn on the 10th. Rainfall decreased by nightfall, but became heavy again at daybreak on the 11th. The center of greatest rainfall occurred on the northern slopes of the western Cordilleras in a triangular area between Dos Bocas, Manati, and Morovis. The largest 72-hour total was 18.75 inches at Dos Bocas. A new 24-hour total rainfall amount was set for this station on the 9th, when a total of 9.63 inches was received. Heavy rains also occurred over the Luquillo Range but not as heavy as in the western Cordilleras. Since most of the discharge was into rivers of the north coast drainage basins almost all of these rivers, including the northwest and northeast corners, were in flood stage at one time or another during the 3-day period. The heaviest flooding occurred in the lower Manati and Cibuco Rivers. The Bayamon, Arecibo, La Plata, Loiza, Fajardo, and Guanajibo Rivers also reached high levels. A bridge on the Cibuco was destroyed and one of the main bridges over the Arecibo was damaged. Many major highways were closed to traffic due to flooding, landslides, or damaged bridges. Three deaths resulted from the flooding.

ST. LAWRENCE DRAINAGE

Lake Erie.--Minor flooding occurred along the St. Joseph River at Montpelier, Ohio, on the 25th to the 31st. Farm ground and park areas in and near Montpelier were affected. Heavy rains (over 3 inches) on the 24th-25th caused some flooding of county roads and farm ground along Cedar Creek (a tributary of the St. Joseph River) in northeastern Indiana. At Auburn, Ind., an industrial plant was inundated to a depth of several inches. Only minor damage was reported to roads and farmland.

ATLANTIC SLOPE DRAINAGE

The Connecticut River at Hartford, Conn., had the lowest stage during 1965 in 60 years of record. The average stage was below normal every month during 1965. This has occurred only one other time since 1905 and that was in 1944. The highest stage at Hartford during 1965, was 10.6 feet (flood stage 16 ft.). This was the lowest annual crest since 1843 and the fifth consecutive year with a below normal annual average stage. Such a record of below normal years has occurred only one other time, and that was during the years 1929 through 1933. In the past 10 years from 1956 through 1965, the average annual stage at Hartford has been below normal 9 out of 10 years, which is unprecedented. This low stage record at Hartford, Conn., reflects not only the runoff conditions in the largest river basin in New England, but is also representative of the whole region of New England and eastern New York.

Drought conditions became more severe in all areas of New Jersey during December. Precipitation averaged 43 percent of normal along the coast to 57 percent of normal in northern New Jersey. In the southern interior of the State, precipitation averaged 50 percent of normal. A preliminary recapitulation shows that for the State as a whole, New Jersey had only 29.6 inches of precipitation during 1965. This is an alltime record since these statistics were begun in 1885. The previous low record was 34.7 inches in 1963. This is more than 5 inches greater than in 1965.

This was the driest December on record at many localities in eastern North Carolina. Precipitation averaged 0.4 inch compared to a normal of 3.2 inches. This was the 5th consecutive month in which precipitation was below normal. A new low water record of 2.0 feet was established on the Cape Fear River at Fayetteville, N. C., on the 6th. The previous low record was 2.8 feet in 1963. The Tar River at Greenville, N. C., reached a new low record of 1.0 feet on the 26th. The previous record low was 2.0 feet in 1915. The Haw River at Haw River, N. C., reached a new low record of 1.6 feet on the 26th. The previous record low was 1.8 feet in 1961. A number of other stations approached low water records while some gages, located in pools, remained at or near pool stage during the entire month.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--The month of December was characterized by recurring warm spells and mid-month rains which produced record-breaking flows for December, particularly for the Wisconsin tributaries and along the Mississippi River from the Winona-LaCrosse area downstream to Guttenberg, Iowa. Precipitation over Wisconsin averaged 1 to 2 inches above normal. The Wisconsin River at Portage , Wis., crested at 16.7 feet on December 16 (flood stage, 17 feet). The Black River at Galesville, Wis., crested on the 16th, 1.2 feet below flood stage. This near flooding was due to 1 to 2 1/2 inches of rain from the 11th to the 13th.

Heavy precipitation on the 23 and 24th produced flooding along the Illinois River beginning on the 25th at Morris, Ill. Crests of 16.5 feet and 23.2 feet occurred at Morris and La Salle, Ill., on the 26th. These crests averaged near 3.5 feet above flood stage. Flooding spread downstream to Meredosia, Ill., by the 28th. The stream was still above flood stage in the reach at and below La Salle, Ill., by the end of the month.

The Mississippi River at La Crosse, Wis., reached the highest December stage of record (7.9 feet) since the locks and dams were completed in 1937 (flood stage, 12 feet). The previous highest stage during December was 7.1 feet on December 15 and 16, 1951. The Mississippi River at Guttenberg, Iowa, crested at 10.1 feet with a flow of 81,500 cubic feet per second on December 21. Normal flow during December is 26,000 cubic feet per second.

Navigation on the Mississippi River ended at St. Paul, Minn., on December 3, at La Crosse, Wis., on December 5, and at Guttenberg, Iowa, on December 6.

Missouri Basin.--The Missouri River overflowed its banks in the reach between Bismarck and Fort Rice, N. Dak., during the latter part of December. The area flooded is lowlands and subject to a certain degree of flooding each winter. Such flooding is aggravated when intervening warm weather results in the breakup of ice, causing the head of ice to move upstream and retreat. This December, some of the ice during a warm period worked under the downstream ice cover for a distance of 15 to 20 miles, causing overflow into old river channels. Approximately 3,000 acres were affected. Very little damage resulted.

WEST GULF OF MEXICO DRAINAGE

Minor flooding occurred on the Calcasieu River at Hineston, La., from the 20th to the 25th. This flooding was due to heavy rains on the 18th and 19th over the middle and upper portions. Runoff was heavy as the soil was saturated from the light to heavy rains on the 11th and 12th and the light rains on the 14th through 17th. No damage was reported.

Two minor floods occurred on the lower Trinity River in Texas during December. The flooding on the 5th to 7th at Moss Bluff, Tex., was due to excessive rains of 4 to 5 inches on the 3d. A sharp rise of about 18 feet occurred at Riverside. The second period of flooding was due to 3 to 5 inches of rain from the 14th to the 19th in the triangle from Crockett to Madisonville to Livingston. The Trinity rose sharply at Riverside and below, beginning on the 18th. The Trinity crested 1.4 feet above flood stage at Liberty on the 21st and 2.5 feet above flood stage at Moss Bluff, Tex., on the 23d-24th.

Heavy rainfall over the San Antonio and Guadalupe Basins on the 2d-4th resulted in flash flooding on small tributaries and low water crossings. Minor flooding occurred on the Guadalupe at Gonzales, Tex., on the 4th to 6th and at Victoria, Tex., from the 6th to the 9th. Principal damage was to flooded low pastureland along the Guadalupe River. Flooded low water crossings in the San Antonio area caused the loss of two lives on December 3.

GULF OF CALIFORNIA DRAINAGE

Colorado Basin.--Precipitation amounts were much above normal over the Colorado Basin in Arizona during December. The snow cover was unusually heavy with high water content. Snow melt and warm rain on the 22d produced heavy runoff. Flooding resulted on the Verde and Tonto, major tributaries of the Salt River. Flooding also occurred on the Gila River and tributaries above Painted Rock Dam in Arizona and New Mexico. The upper Gila near Cliff, N. Mex., crested at a stage of 12.5 feet (4.5 feet above flood stage) during the night of the 22d. The river remained above flood stage until early morning of the 24th. The floods of 1941 and 1949 were higher with crests of 14.0 feet on September 29, 1941, and 12.6 feet on January 14, 1949. The Gila River crested above flood stage (stage not available) downstream in the Safford, Ariz., area on the 23d at 2 p.m. Flooding occurred on the San Francisco River and other small tributaries of the Gila River. Flooding also occurred on the Santa Cruz River and tributaries. Considerable street and road damage resulted. A large number of people were evacuated from their homes. Crossings were flooded along the Salt River, east and south of Phoenix, Ariz., and the Agua Fria and New Rivers, northwest of Phoenix. The overflowing Rillito River washed out bridges and roadways in the Tucson area. Many families were evacuated. Extensive damage was done to Sanitary District #1 sewage lines in Tucson area. Damage, including that done to private property, in Pima County is estimated at $4 million.

PACIFIC SLOPE DRAINAGE

Coquille, Umpqua, and Southern Oregon Coastal Basins.--Heavy rainfall during the night of the 28th and the morning of the 29th caused widespread flooding in the Coquille Basin and local flooding in the Umpqua and southern Oregon Coastal Basins. Light rainfall preceded this storm on the 27th. The total 3-day rainfall in the upper drainage of the South and Middle Forks of the Coquille River was in excess of 7 inches. In the Umpqua drainage, the rainfall was particularly heavy along the South Deer Creek with one station reporting 5.69 inches in 24 hours.

The South Fork of the Coquille River crested 6.5 feet above flood stage at Myrtle Point, Oreg., during the early afternoon of the 28th. The North Fork of the Coquille crested over 4.5 feet above flood stage near Myrtle Point during the evening of the 28th. The lower Coquille River crested approximately 1 foot over flood stage. Damages to roads and bridges were estimated at around $100,000.

The flooding in the Umpqua Basin was limited to local stream flooding along Myrtle and South Deer Creeks. There was also heavy concentrations of surface water in the areas of heavy, short duration rainfall. Damage to bridge approaches, roads, and personal property was estimated at $50,000.

Columbia Basin.--Minor flooding occurred on the lower Willamette tributaries in Oregon between the 28th and the end of the month. This flooding was due to heavy rainfall during the period from the 23d to the 28th. Stations on the Coast Range side of the Willamette Basin received 4-inch rainfall amounts from the 23d to the 26th. In the valley proper, 2-inch amounts were recorded and in the northern Cascades, 3- to 6-inch amounts were reported during this period. The freezing level from the 23d to the 26th ranged from 2,000 to 3,000 feet. Only the low elevation coast range tributaries showed substantial rises during this period. By the 27th the freezing level had increased to 3,500 to 4,000 feet. Heavy rain began moving across western Oregon on the 27th, depositing 2 to 4 inches in the coastal sections by the morning of the 28th. The Cascade Range stations received 1 to 2 inches. All Coast Range tributaries rose sharply and the more flashy ones crested just below, or slightly above flood stage late on the afternoon of the 28th. Cascade Range tributaries experienced a similar sharp rise, but crests were several feet below flood stage. Negligible or minor damage resulted from the tributary flooding in the lower Willamette Basin.

FLOOD STAGE DATA

(All dates in December unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
	Ft.			*Ft.*	
ST. LAWRENCE DRAINAGE					
Lake Erie					
St. Joseph: Montpelier, Ohio	10	25	31	14.0	26
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Illinois: Morris, Ill.	13	25	27	16.5	26
La Salle, Ill.	20	26	1/	23.2	26
Havana, Ill.	14	29	1/		
Meredosia, Ill.	10	28	1/		
WEST GULF OF MEXICO DRAINAGE					
Calcasieu: Hineston, La.	12	20	25	14.45	21
Trinity: Liberty, Tex.	24	20	22	#25.4	21
Moss Bluff, Tex.	4	5 19	7 27	#5.2 6.5	6 23-24
Guadalupe: Gonzales, Tex.	21	4	6	25.1	4
Victoria, Tex.	21	6	9	22.05	7

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
	Ft			*Ft*	
GULF OF CALIFORNIA DRAINAGE					
Colorado Basin					
Salt: Phoenix, Ariz.	5	31	31	5.0	31
Gila: Cliff, N. Mex.	8	22 31	24 Jan. 1	12.5 10.5	23 31
PACIFIC SLOPE DRAINAGE					
Coquille Basin					
South Fork: Myrtle Point, Oreg.	35	28	21	41.65	28
North Fork: Myrtle Point(nr),Oreg.	E28	28	31	32.6	28
Coquille: Coquille, Oreg.	21	29	31	21.9	29
Columbia Basin					
South Yamhill: Whiteson, Oreg.	38	28	31	41.7	28
Pudding: Aurora, Oreg.	20	29	1/	E22.1	31
Tualatin: Dilley, Oreg.	13	28	29	13.4	28
Johnson Creek: Sycamore, Oreg.	8	27	28	9.9	28

* Provisional
# Highest Stage Observed
1/ Continued at End of Month
E Estimated

RAWINSONDE DATA

Average monthly values

DECEMBER 1965

ALBANY, N. Y.
1007 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	86	-2.3	8[illegible]	221	3.3
1000	31	14[illegible]			224	3.1
950	31	550	-2.0	76	263	8.7
900	31	977	-3.7	79	286	14.4
850	31	1,428	-4.8	74	290	19.2
800	31	1,904	-6.2	68	290	22.3
750	31	2,406	-7.4	60	290	26.2
700	31	2,944	-9.8	57	289	28.2
650	31	3,511	-12.5	54	286	32.8
600	31	4,121	-16.0	49	284	36.5
550	31	4,770	-20.4	47	283	38.9
500	31	5,471	-25.1	48	283	42.5
450	31	6,224	-30.6	47	283	46.4
400	31	7,056	-36.0	46	285	48.4
350	31	7,971	-41.9	45	285	55.9
300	30	9,001	-47.7		286	60.2
250	30	10,192	-52.5		285	62.9
200	30	11,624	-54.4		284	58.1
175	30	12,480	-54.4		283	53.0
150	30	13,466	-54.8		281	47.2
125	30	14,630	-55.8		281	39.8
100	30	16,046	-57.5		282	30.9
80	30	17,451	-58.2		286	25.1
70	30	18,291	-57.9		286	21.2
60	30	19,262	-58.4		293	14.2
50	30	20,407	-59.2		291	13.2
40	29	21,803	-59.1		318	6.2
30	26	23,614	-59.2		27	8.9
25	25	24,770	-58.6		37	10.3
20	24	26,168	-58.4		49	13.6
15	15	27,984	-58.5		40	17.9
10						

ALBUQUERQUE, N. MEX.
838 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,619	-1.1	76	50	2.1
1000	31	188				
950	31	605				
900	31	1,047				
850	31	1,507				
800	31	1,995	1.9	52	260	2.5
750	31	2,512	.6	53	261	8.7
700	31	3,066	-1.9	53	263	13.2
650	31	3,648	-4.9	51	259	18.8
600	31	4,278	-8.6	44	261	23.3
550	31	4,944	-13.0	42	259	25.4
500	31	5,667	-17.8	40	255	26.2
450	31	6,440	-23.5	39	260	28.7
400	31	7,297	-30.0	35	260	32.1
350	31	8,235	-36.7	34	255	36.3
300	31	9,285	-43.9	36	258	44.9
250	31	10,490	-51.1		260	49.7
200	31	11,922	-56.1		264	59.4
175	31	12,768	-57.6		264	61.6
150	30	13,736	-59.5		263	55.2
125	29	14,868	-62.3		262	49.1
100	29	16,236	-65.1		266	40.8
80	29	17,590	-66.0		269	27.4
70	29	18,402	-65.1		268	19.8
60	29	19,341	-64.5		269	12.2
50	28	20,461	-62.5		277	7.4
40	27	21,838	-61.8		302	4.5
30	24	23,626	-60.8		321	3.3
25	22	24,757	-60.8		335	5.4
20	18	26,146	-59.5		351	5.2
15	10	27,993	-57.4			
10						

AMARILLO, TEXAS
891 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,095	1.1	68	239	6.2
1000	31	158				
950	31	579				
900	31	1,023				
850	31	1,482	6.2	50	245	14.2
800	31	1,978	5.6	41	244	15.7
750	31	2,504	3.2	39	244	17.1
700	31	3,060	.0	37	247	18.1
650	31	3,647	-3.4	39	254	19.0
600	31	4,279	-7.4	41	255	22.5
550	31	4,947	-12.1	39	251	25.1
500	31	5,674	-17.2	38	253	25.6
450	31	6,452	-22.7	38	256	28.6
400	31	7,309	-28.8	38	257	34.6
350	31	8,252	-35.5	37	255	42.2
300	31	9,308	-43.0	32	252	48.2
250	31	10,514	-51.1		257	59.1
200	31	11,942	-57.8		263	62.5
175	31	12,780	-59.8		267	63.9
150	31	13,741	-61.0		268	57.3
125	31	14,867	-63.5		266	50.3
100	30	16,227	-65.8		267	43.7
80	29	17,575	-65.9		270	32.2
70	29	18,384	-66.3		269	23.5
60	27	19,322	-64.8		271	16.5
50	25	20,433	-63.2		278	8.4
40	22	21,809	-62.2		291	4.1
30	20	23,605	-60.5		303	5.8
25	18	24,739	-60.2		305	7.2
20	15	26,128	-60.4		282	11.5
15	10	27,898	-59.1			
10	6	30,402	-56.2			

ANCHORAGE, ALASKA
1000 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	29	-9.8	68	356	2.1
1000	31	43			7	6.6
950	31	443	-8.3	69	20	7.0
900	31	859	-8.6	64	22	6.4
850	31	1,301	-10.5	65	38	4.5
800	31	1,765	-13.0	66	71	1.7
750	31	2,255	-15.4	64	245	2.7
700	31	2,773	-18.4	66	266	5.1
650	31	3,322	-21.7	60	268	8.2
600	31	3,908	-25.3	59	273	10.5
550	31	4,534	-29.6	54	278	13.4
500	31	5,208	-33.8	46	280	19.4
450	31	5,936	-39.0	46	269	18.5
400	31	6,737	-44.4		265	19.4
350	31	7,622	-49.1		274	22.1
300	31	8,626	-51.7		279	24.3
250	31	9,808	-51.5		252	20.8
200	31	11,261	-49.8		256	22.9
175	31	12,136	-49.1		252	22.7
150	31	13,148	-48.7		245	21.8
125	31	14,347	-48.1		238	20.4
100	31	15,822	-47.4		239	19.8
80	31	17,295	-47.7		234	16.3
70	30	18,180	-48.1		236	14.8
60	30	19,195	-48.8		220	13.6
50	30	20,391	-49.3		218	13.8
40	30	21,855	-49.1		192	14.4
30	29	23,744	-50.0		177	16.5
25	27	24,939	-50.7		167	18.6
20	25	26,380	-51.9		156	24.7
15	19	28,227	-54.4		144	23.9
10						

* ANNETTE, ALASKA
1003 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	37	.6	75	121	4.7
1000	31	56			133	6.2
950	31	467	-1.6	73	147	11.7
900	31	895	-4.6	78	166	13.4
850	31	1,343	-7.3	82	180	13.8
800	31	1,814	-9.8	80	191	13.4
750	31	2,307	-12.5	75	198	12.2
700	31	2,835	-15.4	63	203	12.6
650	31	3,387	-18.7	61	210	13.4
600	31	3,984	-22.4	59	211	14.4
550	31	4,615	-26.7	55	218	14.8
500	31	5,301	-31.4	52	231	15.7
450	31	6,033	-36.5	50	243	18.3
400	31	6,849	-41.9	48	248	20.4
350	31	7,741	-48.1		250	23.1
300	31	8,746	-52.2		259	28.0
250	31	9,922	-52.7		259	28.0
200	30	11,370	-50.8		270	25.8
175	30	12,241	-50.3		269	22.5
150	30	13,249	-49.7		270	21.6
125	29	14,435	-49.3		272	20.0
100	29	15,898	-49.1		274	18.3
80	29	17,362	-49.2		277	12.4
70	29	18,235	-49.8		277	10.9
60	29	19,244	-50.2		284	8.4
50	29	20,432	-51.0		315	5.8
40	29	21,884	-51.2		34	6.2
30	29	23,751	-52.0		62	9.7
25	29	24,930	-52.6		67	12.2
20	28	26,365	-53.9		65	13.6
15	24	28,211	-56.0		85	16.7
10	14	30,794	-58.8			

ATHENS, GA.
992 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	246	3.3	82	295	2.9
1000	31	180				
950	31	602	7.2	54	280	8.0
900	31	1,045	6.3	46	283	9.7
850	31	1,513	5.1	40	280	14.2
800	31	2,008	4.2	33	280	17.7
750	31	2,526	2.2	32	278	20.8
700	31	3,086	-.4	31	279	24.5
650	31	3,670	-3.2	33	281	27.8
600	31	4,305	-7.4	40	279	32.1
550	31	4,971	-11.7	40	279	37.1
500	31	5,702	-16.4	39	280	43.3
450	31	6,480	-21.7	40	281	48.8
400	30	7,343	-27.6	42	283	53.0
350	30	8,290	-34.4	46	280	58.7
300	30	9,349	-42.5	57	278	66.0
250	30	10,557	-51.3		280	72.3
200	30	11,979	-59.1		282	78.9
175	30	12,811	-61.4		283	74.2
150	30	13,764	-62.3		281	69.2
125	28	14,882	-64.6		283	55.4
100	28	16,238	-66.3		279	45.8
80	27	17,591	-67.1		281	32.2
70	26	18,393	-66.7		282	24.5
60	26	19,328	-65.5		287	17.3
50	26	20,441	-63.5		287	14.6
40	26	21,817	-62.1		284	11.3
30	25	23,602	-60.8		287	13.6
25	23	24,744	-59.9		281	15.3
20	21	26,149	-58.4		272	20.0
15	17	27,971	-56.4		278	30.3
10	7	30,572	-54.1			

■ BARROW, ALASKA
1013 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	8	-24.1	71	78	1.6
1000	31	100	-23.3	69	52	2.7
950	31	481	-22.7	82	34	3.1
900	31	874	-22.5	83	46	3.3
850	31	1,294	-21.3	85	45	3.1
800	31	1,741	-21.6	80	5	1.6
750	31	2,215	-23.2	73	347	1.9
700	31	2,718	-25.4	68	299	2.9
650	31	3,251	-28.1	66	271	5.2
600	31	3,824	-31.5	64	262	7.4
550	31	4,432	-35.2	57	266	9.1
500	31	5,094	-39.4	53	255	10.9
450	31	5,806	-44.0		246	13.2
400	31	6,592	-48.7		248	14.6
350	31	7,462	-52.4		253	15.9
300	31	8,453	-54.1		262	19.2
250	31	9,627	-52.5		262	21.6
200	31	11,075	-50.6		253	20.8
175	30	11,950	-50.1		248	21.4
150	29	12,954	-49.1		241	22.0
125	29	14,153	-48.0		241	23.3
100	29	15,626	-47.5		236	26.0
80	29	17,099	-47.9		234	25.1
70	29	17,979	-48.2		232	27.4
60	29	18,992	-48.6		233	27.6
50	29	20,189	-48.7		229	30.1
40	27	21,664	-48.9		221	30.9
30	27	23,550	-49.3		221	34.0
25	27	24,743	-50.0		213	34.2
20	27	26,196	-51.3		214	36.1
15	26	28,085	-53.4		206	35.2
10	21	30,691	-57.3		187	35.7

BARTER IS., ALASKA
1012 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	15	-23.5	76	274	2.9
1000	31	99			277	4.9
950	31	476	-22.6	86	289	4.1
900	31	874	-20.8	87	273	2.9
850	31	1,297	-19.9	81	292	1.4
800	31	1,746	-20.4	77	259	1.6
750	31	2,224	-21.7	75	264	2.7
700	31	2,729	-23.7	72	280	4.7
650	31	3,266	-26.3	72	272	7.0
600	31	3,844	-29.7	69	271	9.1
550	31	4,455	-33.5	65	266	10.3
500	31	5,122	-37.8	62	262	12.0
450	31	5,839	-42.3	61	256	13.0
400	31	6,631	-47.1		250	15.3
350	30	7,509	-52.3		251	15.9
300	30	8,499	-54.6		252	18.3
250	30	9,671	-52.0		265	18.5
200	30	11,126	-49.4		260	21.4
175	30	12,003	-48.6		256	21.2
150	29	13,014	-47.5		255	23.3
125	29	14,220	-46.9		257	20.6
100	29	15,700	-46.8		253	22.5
80	29	17,177	-47.2		247	22.7
70	28	18,062	-47.4		249	21.6
60	28	19,081	-47.2		244	22.0
50	28	20,286	-47.6		245	21.4
40	28	21,759	-48.3		243	22.5
30	28	23,651	-49.0		237	24.9
25	25	24,873	-49.5		245	23.9
20	25	26,331	-51.0		244	25.3
15	21	28,224	-52.9		233	27.2
10	5	30,887	-53.3			

BETHEL, ALASKA
1005 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	39	-16.2	77	304	1.4
1000	31	75			282	7.8
950	31	467	-12.5	74	318	3.7
900	31	879	-12.1	69	303	4.5
850	31	1,316	-12.6	62	278	6.2
800	31	1,777	-14.4	61	278	8.0
750	31	2,263	-16.6	62	281	8.9
700	31	2,781	-18.8	59	281	11.7
650	31	3,329	-21.6	57	279	14.4
600	31	3,917	-25.2	57	284	15.7
550	31	4,541	-28.9	53	283	18.6
500	31	5,220	-32.8	55	284	22.7
450	31	5,952	-37.3	57	282	25.6
400	31	6,760	-42.3	52	281	28.9
350	31	7,652	-47.8		280	33.2
300	31	8,658	-52.2		276	34.2
250	31	9,834	-53.5		270	33.2
200	31	11,271	-52.6		263	28.4
175	29	12,131	-51.1		263	26.8
150	29	13,136	-49.7		255	27.2
125	29	14,330	-49.1		254	25.1
100	29	15,795	-48.8		248	24.1
80	29	17,261	-48.8		243	23.5
70	29	18,138	-48.8		242	21.8
60	29	19,149	-49.4		241	21.2
50	29	20,343	-49.8		234	18.8
40	28	21,805	-50.5		227	17.7
30	28	23,676	-51.2		213	15.9
25	28	24,859	-52.1		206	17.5
20	28	26,302	-52.6		200	17.7
15	21	28,193	-53.3		184	15.7
10	12	30,812	-57.0			

BISMARCK, N. DAK.
954 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	505	-7.0	74	339	2.5
1000	31	133				
950	31	537			338	3.5
900	31	960	-2.8	60	297	10.7
850	31	1,415	-1.5	50	301	14.8
800	31	1,897	-2.6	40	302	17.3
750	31	2,404	-4.9	38	297	19.6
700	31	2,946	-7.9	39	295	21.2
650	31	3,512	-11.4	43	290	24.3
600	31	4,130	-14.8	43	286	26.8
550	31	4,777	-18.9	41	282	29.9
500	31	5,487	-23.6	41	284	35.4
450	31	6,241	-29.0	40	287	39.2
400	31	7,082	-35.0	38	287	43.5
350	31	8,000	-41.6	39	287	46.2
300	31	9,028	-49.0		285	49.7
250	31	10,208	-55.0		283	55.4
200	31	11,626	-56.5		279	50.7
175	31	12,474	-55.8		275	46.8
150	31	13,458	-54.5		277	42.7
125	31	14,624	-55.3		277	35.9
100	31	16,043	-56.6		279	27.6
80	31	17,457	-57.7		281	20.6
70	31	18,299	-57.7		283	13.8
60	29	19,287	-57.4		299	10.5
50	29	20,440	-57.0		324	6.4
40	28	21,853	-57.1		30	7.8
30	27	23,674	-57.3		52	15.5
25	23	24,836	-56.8		61	21.6
20	21	26,268	-56.9		70	28.6
15	14	28,081	-58.3		73	30.7
10	7	30,632	-60.6			

BOISE, IDAHO
916 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	868	-2.8	85	135	2.1
1000	31	166				
950	31	575				
900	31	1,008	-.9	73	129	3.5
850	31	1,465	-.1	60	160	6.6
800	31	1,949	-1.8	56	212	7.4
750	31	2,460	-4.3	55	244	11.5
700	31	3,001	-7.5	57	250	14.8
650	31	3,572	-10.8	56	252	18.6
600	31	4,186	-14.3	52	253	20.6
550	31	4,840	-18.5	50	253	24.7
500	31	5,546	-23.3	47	251	28.0
450	31	6,306	-28.6	47	250	32.1
400	31	7,143	-35.1	45	253	30.5
350	31	8,061	-41.6	48	255	35.5
300	31	9,091	-48.7		260	39.0
250	31	10,273	-54.6		262	43.5
200	31	11,689	-57.0		270	37.5
175	31	12,535	-56.4		266	36.3
150	31	13,515	-56.1		263	32.2
125	31	14,674	-56.3		266	28.9
100	31	16,090	-57.0		265	23.1
80	31	17,498	-58.2		275	15.0
70	31	18,337	-58.6		286	9.3
60	30	19,301	-58.5		311	3.7
50	29	20,448	-58.4		55	1.9
40	29	21,853	-58.1		63	8.5
30	26	23,660	-58.1		80	19.2
25	21	24,816	-57.6		80	22.7
20	19	26,228	-57.7		82	28.2
15	9	28,041	-58.6			
10						
7						
5						
4						

* BROWNSVILLE, TEXAS
1017 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	7	15.9	93	68	1.4
1000	31	146	17.7	80	99	3.5
950	31	582	15.6	78	135	7.4
900	31	1,042	13.4	76	157	8.2
850	31	1,523	12.0	63	185	5.8
800	31	2,030	10.5	56	226	8.0
750	31	2,564	8.9	47	229	10.7
700	31	3,134	6.0	47	225	11.8
650	31	3,734	2.2	51	229	13.2
600	31	4,380	-1.8	46	235	16.5
550	31	5,061	-5.8	46	243	22.7
500	31	5,809	-10.2	43	246	27.8
450	31	6,607	-15.6	44	248	33.4
400	31	7,493	-21.6	44	249	38.5
350	31	8,463	-28.7	43	253	44.9
300	31	9,546	-37.2	42	262	51.7
250	31	10,782	-46.3		261	61.6
200	31	12,228	-57.0		264	69.2
175	31	13,062	-62.4		267	65.9
150	31	14,003	-66.4		267	58.7
125	30	15,090	-71.1		263	54.0
100	30	16,398	-74.4		265	39.4
80	30	17,692	-75.0		263	28.0
70	29	18,470	-73.2		265	18.6
60	27	19,376	-69.9		269	11.3
50	27	20,470	-66.0		262	13.4
40	24	21,836	-62.3		265	15.2
30	23	23,624	-59.2		265	20.4
25	22	24,766	-58.5		265	25.8
20	22	26,172	-57.2		270	29.5
15	19	27,993	-55.6		267	31.9
10	13	30,596	-50.3		263	51.7
7	9	33,005	-41.4			
5	6	35,291	-34.9			
4	6	36,855	-32.3			

BUFFALO, N. Y.
990 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	218	.7	83	219	5.8
1000	31	135				
950	31	546	-.3	78	245	14.8
900	31	977	-2.6	80	256	20.4
850	31	1,430	-4.0	77	261	22.9
800	31	1,907	-5.4	68	266	25.6
750	31	2,413	-6.9	62	275	28.2
700	31	2,949	-9.6	62	280	30.7
650	31	3,517	-12.5	55	281	32.8
600	31	4,126	-16.3	54	283	35.9
550	31	4,775	-20.5	47	283	39.0
500	31	5,474	-25.3	48	285	43.1
450	31	6,230	-30.2	46	285	44.1
400	31	7,061	-35.8	44	284	49.7
350	31	7,977	-42.0	48	281	54.8
300	31	9,007	-47.7		282	62.7
250	31	10,196	-52.9		282	63.7
200	31	11,626	-54.8		285	60.6
175	31	12,480	-54.8		286	55.9
150	31	13,465	-55.0		285	49.9
125	31	14,626	-56.2		286	44.5
100	30	16,034	-57.3		286	35.9
80	30	17,440	-58.7		287	26.4
70	30	18,276	-59.2		288	21.0
60	30	19,239	-59.7		291	18.8
50	30	20,378	-59.9		304	11.7
40	29	21,770	-60.2		317	8.5
30	28	23,565	-60.0		349	6.8
25	28	24,703	-59.9		7	8.5
20	25	26,095	-59.5		27	10.7
15	22	27,917	-58.3		43	12.8
10	12	30,519	-57.3			

*CANTON IS., PACIFIC AREA
+ 1006 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	4	30.7	69	80	7.8
1000	30	61	29.3	67	80	8.5
950	30	507	23.7	68	78	11.1
900	30	985	21.0	62	81	9.9
850	30	1,479	18.7	55	79	9.5
800	30	1,997	16.0	51	80	8.2
750	30	2,540	13.5	45	80	6.8
700	30	3,122	10.7	40	81	6.0
650	30	3,735	7.4	38	80	6.2
600	30	4,391	3.5	37	69	7.4
550	30	5,086	-.4	34	70	6.2
500	30	5,848	-4.9	31	55	4.1
450	30	6,667	-9.8	33	308	1.4
400	30	7,569	-15.2	27	303	3.7
350	30	8,565	-22.0	27	291	4.7
300	30	9,680	-30.4	27	271	7.4
250	30	10,948	-40.8	27	258	10.3
200	30	12,426	-53.2		254	12.0
175	30	13,273	-59.9		266	14.2
150	30	14,218	-67.3		276	15.3
125	30	15,295	-75.0		277	16.3
100	30	16,566	-81.6		266	12.4
80	30	17,814	-80.8		98	9.1
70	30	18,572	-76.9		92	16.5
60	29	19,466	-73.4		90	27.8
50	28	20,547	-68.4		90	45.5
40	27	21,901	-62.9		89	56.1
30	24	23,701	-56.8		89	65.1
25	24	24,868	-52.1		88	56.7
20	24	26,335	-46.2		87	26.2
15	21	28,268	-42.8		283	4.7
10	20	31,018	-40.7		19	6.8
7	13	33,474	-35.7		44	19.4
5	5	35,810	-32.9			
4						

* CAPE HATTERAS, N. C.
1019 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	4	6.8	79	321	3.7
1000	31	160	8.5	64	319	6.4
950	31	579	6.7	58	309	8.7
900	31	1,026	5.2	58	294	10.3
850	31	1,492	3.7	50	281	13.6
800	31	1,983	1.8	44	279	17.1
750	31	2,501	.2	35	279	20.8
700	31	3,053	-2.0	37	276	24.3
650	31	3,635	-5.3	42	275	28.0
600	30	4,264	-9.0	42	280	31.5
550	30	4,928	-12.8	40	278	35.5
500	30	5,654	-17.5	42	279	40.2
450	30	6,432	-23.1	42	280	46.0
400	30	7,289	-28.8	41	278	50.7
350	30	8,231	-35.3	41	278	59.6
300	29	9,281	-42.8	46	279	66.8
250	29	10,489	-51.1		280	72.5
200	28	11,921	-58.0		286	69.7
175	28	12,759	-59.5		284	63.1
150	28	13,721	-60.6		283	55.4
125	27	14,854	-61.9		281	48.4
100	26	16,229	-64.2		279	39.2
80	26	17,594	-64.2		277	30.1
70	26	18,411	-63.5		278	26.4
60	26	19,358	-62.9		282	20.6
50	26	20,484	-61.6		280	16.7
40	26	21,871	-60.5		271	11.7
30	25	23,665	-59.3		279	11.5
25	25	24,808	-59.1		280	14.4
20	24	26,209	-57.8		273	20.8
15	22	28,039	-54.5		269	27.6
10	17	30,658	-51.0		262	44.3

See reference note at end of table

RAWINSONDE DATA

Average monthly values

DECEMBER 1965

Standard pressure surface (mb.)	* CARIBOU, ME. 991 MB						CHARLESTON, S. C. 1020 MB						* COLD BAY, ALASKA 1005 MB						COLUMBIA, MO. 989 MB						CORPUS CHRISTI, TEXAS 1017 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind		Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed					Direction	Speed					Direction	Speed					Direction	Speed					Direction	Speed
SURFACE	31	191	-10.5	83	274	2.5	31	13	4.8	84	335	2.3	31	30	- 1.8	82	297	2.1	31	238	3.4	78	226	5.1	27	6	17.0	84	48	3.9
1000	31	123					31	172	9.6	68	344	3.1	31	63			331	11.3	31	143					27	148	16.7	83	95	5.8
950	31	521	- 9.0	83	279	8.0	31	596	9.2	58	295	4.7	31	472	- 3.0	71	316	6.4	31	558	3.9	73	247	14.2	27	581	14.7	81	133	7.8
900	31	938	- 9.4	82	296	13.0	31	1,046	7.8	55	267	8.0	31	897	- 5.1	78	306	8.5	31	999	3.1	68	260	20.0	27	1,041	12.4	80	177	4.5
850	31	1,379	- 9.7	76	295	15.3	31	1,516	5.9	48	274	11.1	31	1,345	- 6.9	70	297	11.5	31	1,462	2.5	59	268	22.5	27	1,520	10.8	75	204	5.2
800	31	1,847	-10.6	71	294	16.9	31	2,012	4.8	46	282	14.4	31	1,817	- 8.6	59	282	14.8	31	1,952	1.7	47	271	24.1	27	2,024	9.2	68	222	8.0
750	31	2,343	-12.3	67	287	18.8	31	2,534	2.8	39	285	18.5	31	2,315	-10.9	54	278	16.3	31	2,468	- .3	46	272	25.3	27	2,562	8.1	65	219	9.5
700	31	2,867	-14.7	67	284	22.3	31	3,092	.2	35	284	21.2	31	2,843	-13.5	56	273	17.3	31	3,021	- 3.3	48	272	27.2	27	3,127	5.6	61	225	12.2
650	31	3,424	-17.4	66	281	26.4	31	3,682	- 2.8	35	280	24.7	31	3,400	-16.4	60	270	20.2	31	3,596	- 6.5	48	274	29.9	27	3,723	2.0	58	228	14.4
600	31	4,022	-20.5	66	279	28.7	31	4,315	- 6.5	36	284	28.4	31	4,002	-19.7	60	273	23.3	31	4,226	-10.1	46	273	35.2	27	4,372	- 2.4	61	232	17.1
550	31	4,658	-24.4	62	278	30.7	31	4,988	-10.8	36	284	31.7	31	4,637	-23.7	55	268	24.7	31	4,885	-14.3	44	273	39.0	27	5,052	- 6.5	58	238	20.2
500	31	5,350	-28.7	58	278	34.0	31	5,717	-15.9	35	281	37.5	31	5,332	-28.3	56	272	27.6	31	5,609	-19.0	40	275	43.3	27	5,797	-10.7	57	245	23.7
450	31	6,094	-33.7	56	280	35.7	31	6,500	-20.8	36	279	42.2	31	6,078	-33.3	50	275	29.3	31	6,375	-24.5	33	277	46.6	27	6,592	-15.8	63	252	27.4
400	31	6,915	-39.6	56	281	38.5	31	7,367	-26.9	43	278	48.0	31	6,899	-38.9	50	275	31.1	31	7,234	-30.8	33	280	52.3	27	7,478	-21.8	64	253	28.7
350	31	7,816	-45.4		279	42.2	31	8,317	-33.6	45	278	54.0	31	7,803	-44.9	52	278	36.7	31	8,169	-37.6	32	279	58.9	27	8,447	-29.3	63	256	20.2
300	31	8,832	-50.2		278	45.6	31	9,381	-41.4	50	279	62.0	31	[illegible],820	-50.5		277	39.8	31	9,217	-44.7		277	64.7	27	9,529	-37.7	55	259	34.4
250	30	10,019	-52.6		273	45.8	31	10,596	-50.2		279	65.5	31	9,999	-53.7		266	40.8	31	10,416	-52.7		274	71.1	26	10,759	-47.6		263	43.7
200	30	11,460	-52.2		275	44.3	31	12,024	-58.7		278	69.0	31	11,430	-53.7		269	37.7	31	11,835	-59.2		277	69.2	26	12,200	-57.4			
175	30	12,324	-51.8		274	39.4	31	12,858	-61.0		282	68.8	31	12,291	-51.9		268	37.1	31	12,670	-60.1		278	64.7	25	13,031	-61.7			
150	30	13,325	-51.4		272	36.5	31	13,813	-62.4		282	61.6	31	13,294	-50.3		264	32.6	31	13,632	-60.5		278	58.1	22	13,970	-65.1			
125	30	14,504	-52.8		273	31.7	31	14,932	-64.9		278	54.4	30	14,484	-50.2		259	31.1	30	14,767	-61.3		280	47.6	20	15,068	-69.3			
100	30	15,939	-54.4		274	27.8	31	16,287	-66.7		280	43.5	30	15,942	-49.6		256	28.2	30	16,150	-62.2		282	37.3	19	16,391	-72.4			
80	29	17,369	-55.0		274	22.3	31	17,634	-66.7		278	30.1	30	17,400	-50.2		249	26.6	30	17,521	-63.9		279	25.6	17	17,696	-72.7			
70	29	18,220	-55.6		276	17.3	31	18,441	-66.0		280	26.8	30	18,272	-50.0		252	24.3	30	18,338	-63.9		284	17.7	14	18,493	-71.3			
60	29	19,199	-56.7		279	14.2	30	19,377	-64.7		279	19.8	30	19,278	-50.3		242	22.3	28	19,290	-62.9		296	14.4	13	19,416	-68.7			
50	28	20,356	-57.2		292	8.5	30	20,493	-62.9		278	15.3	30	20,466	-50.7		243	17.7	27	20,415	-62.0		300	9.7	11	20,522	-64.3			
40	28	21,764	-57.7		310	5.2	30	21,871	-61.2		273	12.6	30	21,916	-51.7		233	15.0	25	21,797	-61.6		325	8.5	9	21,900	-60.8			
30	28	23,576	-58.2		42	7.4	30	23,665	-59.1		273	13.6	30	23,776	-53.2		198	9.5	21	23,583	-61.0		356	8.5	9	23,703	-58.5			
25	27	24,723	-58.4		57	12.6	30	24,810	-58.0		271	17.9	30	24,949	-53.7		175	9.3	18	24,724	-60.9		47	7.0	8	24,853	-58.1			
20	27	26,124	-58.9		54	17.3	30	26,219	-56.6		274	24.1	28	26,378	-54.9		150	10.5	11	26,117	-60.4				7	26,252	-57.2			
15	24	27,926	-58.0		49	14.4	27	28,042	-54.1		272	31.3	26	28,228	-56.1		140	18.8							7	28,077	-55.1			
10	13	30,444	-56.9				14	30,653	-50.1				23	30,801	-59.1		126	17.3							5	30,711	-46.4			
7													8	32,988	-58.5															

	DAYTON, OHIO 982 MB						DEL RIO, TEXAS 981 MB						DENVER, COLO. 835 MB						DODGE CITY, KANS. 924 MB						EL PASO, TEXAS 884 MB					
SURFACE	31	297	1.0	80	228	4.3	31	314	10.6	85	100	2.5	31	1,611	- 2.7	66	198	3.9	31	792	- .6	82	251	3.1	31	1,193	3.4	69	265	1.2
1000	31	153					31	156					31	158					31	155					31	175				
950	31	567	1.4	71	237	15.0	31	581	11.9	74	142	5.8	31	571					31	570					31	598				
900	31	1,001	.9	62	254	22.0	31	1,038	10.6	67	176	9.5	31	1,011					31	1,005	4.4	55	250	6.4	31	1,047				
850	31	1,460	- .3	58	265	22.5	31	1,513	9.2	60	204	9.5	31	1,468					31	1,472	5.7	42	260	12.4	31	1,510	6.9	51	240	2.1
800	31	1,944	- 1.9	53	268	22.5	31	2,015	8.1	48	230	11.8	31	1,956	3.1	44	245	5.6	31	1,967	4.3	40	263	12.8	31	2,008	5.7	48	248	8.0
750	31	2,457	- 3.7	46	267	24.1	31	2,542	6.8	37	244	12.6	31	2,476	1.3	39	282	7.0	31	2,493	2.3	39	264	17.5	31	2,532	3.3	46	249	12.2
700	31	3,000	- 5.8	42	269	29.1	31	3,111	3.8	33	246	14.6	31	3,030	- 1.8	37	285	12.0	31	3,044	- .9	39	266	18.5	31	3,092	.2	47	246	16.1
650	31	3,576	- 8.8	40	271	32.2	31	3,702	.1	31	249	16.3	31	3,611	- 5.6	39	282	15.5	31	3,631	- 4.1	34	259	21.8	31	3,678	- 3.3	51	247	19.2
600	31	4,194	-12.3	41	274	35.5	31	4,346	- 4.0	33	247	22.7	31	4,238	- 9.8	40	278	19.6	31	4,259	- 8.1	31	264	25.1	31	4,313	- 7.0	44	249	19.2
550	31	4,851	-16.6	43	273	39.2	31	5,016	- 8.4	34	248	26.2	31	4,898	-14.1	40	278	23.9	31	4,925	-13.0	33	265	26.8	31	4,980	-11.3	35	250	22.9
500	31	5,564	-21.5	40	272	44.3	31	5,760	-13.1	38	248	33.2	31	5,622	-19.0	42	276	26.0	31	5,650	-18.3	38	264	28.2	31	5,713	-16.2	33	252	27.0
450	31	6,329	-26.6	R39	274	49.3	31	6,549	-18.1	40	247	36.9	31	6,394	-24.7	41	271	27.8	31	6,423	-24.4	37	263	31.9	31	6,492	-21.6	34	250	32.2
400	31	7,175	-32.3	37	277	54.0	31	7,428	-23.8	41	250	44.7	31	7,244	-31.1	42	269	29.5	31	7,276	-30.7	40	265	35.2	31	7,358	-27.1	32	253	40.0
350	31	8,104	-38.6	R37	279	61.4	31	8,390	-30.7	45	249	51.3	31	8,175	-38.7	44	265	33.2	31	8,211	-37.6	39	263	41.6	31	8,309	-33.8	35	255	48.8
300	31	9,147	-45.6		279	70.9	31	9,466	-38.9	43	250	60.8	31	9,216	-46.3		266	38.3	31	9,258	-44.9		261	49.3	31	9,374	-41.4	35	259	53.4
250	31	10,343	-52.6		277	75.4	31	10,692	-48.0		253	71.3	31	10,407	-53.3		267	45.8	30	10,452	-52.8		262	56.7	31	10,592	-49.0		259	58.1
200	31	11,766	-57.8		280	73.2	31	12,133	-56.9		259	73.2	31	11,826	-58.1		267	49.3	30	11,870	-58.6		266	61.8	31	12,032	-56.2		264	68.6
175	30	12,609	-58.3		279	65.1	31	12,972	-60.3		262	74.6	31	12,665	-59.0		269	51.3	29	12,711	-59.5		267	57.7	31	12,875	-58.8		267	69.0
150	30	13,578	-58.7		278	57.3	30	13,921	-63.6		264	69.5	31	13,632	-58.6		269	49.9	29	13,674	-60.6		269	52.4	31	13,837	-61.6		267	56.5
125	30	14,721	-59.7		279	46.8	30	15,028	-67.9		265	54.6	30	14,775	-59.5		264	45.3	29	14,804	-61.6		269	47.8	31	14,958	-65.1		259	50.1
100	30	16,110	-61.3		282	36.5	29	16,361	-71.3		267	44.1	29	16,168	-59.7		267	31.9	29	16,181	-63.7		268	37.5	30	16,309	-67.9		266	40.6
80	30	17,491	-62.2		276	27.2	23	17,677	-71.0		267	34.6	28	17,550	-61.7		265	22.9	29	17,546	-64.4		271	24.5	30	17,644	-69.2		274	28.4
70	29	18,311	-62.4		280	21.8	21	18,467	-70.3		275	20.2	28	18,375	-61.8		268	17.5	29	18,362	-64.4		274	16.7	30	18,442	-68.2		273	22.0
60	29	19,261	-62.3		291	16.3	15	19,385	-67.7		272	15.2	27	19,330	-61.1		276	12.4	28	19,311	-63.5		279	11.7	28	19,368	-66.5		275	14.4
50	29	20,387	-61.8		299	12.8	15	20,489	-64.3		268	15.5	27	20,463	-60.7		284	5.1	28	20,432	-62.8		298	6.2	27	20,478	-64.4		271	13.2
40	28	21,766	-61.5		303	9.9	15	21,861	-61.8		271	13.8	26	21,852	-60.0		10	2.7	28	21,811	-61.4		358	3.5	24	21,858	-62.5		292	7.0
30	26	23,549	-61.3		319	5.6	13	23,654	-59.6		263	14.6	25	23,644	-59.9		52	7.0	28	23,597	-61.0		6	6.6	22	23,638	-61.1		297	9.3
25	25	24,678	-61.3		320	6.8	12	24,800	-59.2		270	18.6	23	24,793	-59.9		57	10.3	26	24,729	-60.6		16	7.0	21	24,778	-60.5		284	9.3
20	24	26,062	-61.4		335	5.6	[illegible]	26,201	-57.9				17	26,179	-59.4		69	15.3	22	26,115	-60.5		22	7.6	19	26,181	-59.4		274	13.8
15	17	27,847	-60.2		319	7.4	6	28,030	-56.2				11	27,968	-59.5		66	18.5	11	27,919	-60.5				16	28,001	-57.6		289	16.3
10																									9	30,639	-52.4			
7																									6	32,991	-45.5			

	ELY, NEV. 806 MB						EMPALME, MEXICO 1014 MB						FLINT, MICH. 987 MB						FORT WORTH, TEXAS 999 MB						GLASGOW, MONT. 931 MB					
SURFACE	31	1,908	- 7.6	58	189	8.7	31	12	14.4	75	331	4.1	31	234	.9	76	220	4.9	31	180	7.7	84	170	1.4	31	696	- 6.9	76	102	.6
1000	31	202					31	126	17.0	56	338	5.4	31	127					31	167			134	1.4	31	134				
950	31	616					31	559	16.8	46	358	1.7	31	539	- 1.1	84	247	12.8	31	597	10.0	61	203	7.8	31	535				
900	31	1,046					31	1,022	14.4	47	226	3.5	31	970	- 2.0	81	268	17.3	31	1,043	9.4	57	224	10.3	31	963	- 2.7	65	277	9.7
850	31	1,494					31	1,502	11.5	50	215	6.0	31	1,424	- 2.9	75	273	18.6	31	1,515	8.0	53	235	12.0	31	1,418	- 1.1	58	286	15.3
800	31	1,972			182	8.7	31	2,006	8.6	47	225	8.5	31	1,904	- 3.7	66	272	21.6	31	2,015	6.9	41	244	12.4	31	1,900	- 2.7	55	284	17.5
750	31	2,484	- 2.3	52	189	8.2	31	2,535	5.8	45	222	10.5	31	2,411	- 5.4	62	271	23.3	31	2,547	4.9	40	247	13.8	31	2,405	- 5.7	54	284	18.1
700	31	3,028	- 4.7	49	234	13.6	31	3,099	2.9	38	234	14.4	31	2,952	- 8.1	60	274	26.8	31	3,104	2.1	42	244	15.9	31	2,947	- 8.9	48	286	22.1
650	31	3,605	- 8.0	49	246	18.1	31	3,692	- .4	36	246	20.4	31	3,520	-11.1	54	276	29.1	31	3,695	- 1.4	40	246	18.5	31	3,513	-12.3	51	283	22.9
600	31	4,226	-11.9	45	250	20.0	31	4,331	- 4.4	36	244	24.1	31	4,136	-15.1	52	276	30.7	31	4,332	- 5.7	36	248	21.4	31	4,124	-15.9	52	284	28.2
550	31	4,882	-16.3	43	256	22.5	31	5,006	- 8.6	36	246	28.6	31	4,785	-19.5	55	278	35.2	31	5,001	-10.0	35	249	26.4	31	4,769	-19.6	47	287	32.4
500	31	5,596	-21.3	40	256	24.3	31	5,743	-13.4	34	251	31.9	31	5,492	-24.1	54	278	40.2	31	5,738	-14.7	34	253	33.0	31	5,477	-24.5	47	287	36.5
450	31	[illegible],361	-27.0	R39	252	25.3	31	6,532	-18.5	32	252	37.9	31	6,250	-29.2	53	280	48.2	31	6,521	-20.0	35	255	36.1	31	6,225	-30.0	49	284	42.2
400	31	7,202	-33.1	R36	255	29.5	31	7,407	-24.0	36	253	47.2	31	7,086	-34.8	49	282	51.9	31	7,393	-26.1	38	255	41.4	31	7,065	-36.1	51	281	48.6
350	31	8,128	-39.8	R39	259	31.9	31	8,368	-30.6	39	256	50.3	31	[illegible],006	-40.7	51	283	56.9	31	8,345	-32.9	40	254	49.5	31	7,979	-43.0	48	280	50.9
300	31	9,164	-47.0		260	34.8	31	9,445	-38.5	39	256	61.0	31	9,041	-47.1		283	61.6	31	9,413	-40.8	39	257	56.1	31	9,002	-49.9		278	53.8
250	31	10,353	-53.8		261	39.4	31	10,675	-46.7		258	69.7	31	10,232	-52.7		286	65.9	31	10,629	-50.1		264	63.3	31	10,176	-56.1		278	55.9
200	31	11,770	-57.6		261	42.0	31	12,125	-55.6		257	71.3	31	11,660	-55.5		285	59.8	31	12,058	-58.5		271	63.3	31	11,588	-57.2		278	49.7
175	31	12,613	-57.8		261	42.0	31	12,967	-59.8		259	71.1	31	12,511	-55.5		286	57.3	31	12,892	-60.9		274	62.5	31	12,435	-55.6		277	44.3
150	31	13,584	-58.3		261	42.5	31	13,923	-63.2		261	64.1	31	13,492	-55.6		284	49.9	29	13,839	-62.9		274	58.9	31	13,420	-54.5		278	39.0
125	31	14,729	-59.5		263	35.9	31	15,032	-67.0		260	54.8	31	14,651	-56.6		285	40.2	29	14,954	-65.6		274	55.0	31	14,587	-54.5		277	29.9
100	30	16,126	-60.3		265	25.3	28	16,365	-69.5		264	39.8	31	16,060	-58.2		286	34.8	29	16,301	-68.0		276	45.6	30	16,023	-55.4		275	23.3
80	29	17,508	-61.5		268	16.3	27	17,688	-70.3		263	31.1	31	17,462	-59.1		288	24.1	28	17,639	-68.4		278	32.1	30	17,444	-56.0		278	16.1
70	29	18,333	-62.1		281	12.4	24	18,483	-70.0		260	22.3	29	18,290	-59.5		292	20.4	28	18,438	-67.7		273	22.3	30	18,290	-56.7		288	11.5
60	29	19,284	-62.0		296	9.1	23	19,408	-67.2		264	13.0	28	19,261	-59.5		302	15.2	28	19,371	-65.6		275	16.3	30	19,267	-56.8		296	8.0
50	28	20,411	-61.6		347	3.7	20	20,511	-65.2		272	12.4	27	20,402	-59.4		315	9.1	28	20,483	-63.8		278	10.5	30	20,424	-56.1		347	5.6
40	28	21,796	-60.8		39	4.5	19	21,882	-62.2		277	14.4	27	21,798	-59.6		347	8.9	24	21,861	-62.1		292	9.7	29	21,844	-56.1		46	8.0
30	25	23,586	-60.7		56	10.3	17	23,672	-59.9		272	17.5	25	23,598	-59.6		349	7.8	23	23,646	-60.3		290	10.5	25	23,687	-55.9		73	19.0
25	25	24,721	-60.5		68	13.6	15	24,810	-59.7		267	21.2	23	24,737	-59.3		23	9.5	22	24,784	-59.6		282	13.6	23	24,878	-55.4		79	26.6
20	20	26,116	-60.2		65	18.5	11	26,206	-58.9		275	24.3	22	26,132	-59.4		24	10.3	20	26,181	-58.9		283	19.4	21	26,308	-55.4		80	33.4
15	14	27,933	-59.6		65	14.4							20	27,941	-58.5		15	8.9	9	28,015	-57.0				14	28,106	-57.2		72	34.6
10	7	30,487	-56.7										13	30,525	-57.2										8	30,666	-57.9			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

* GRAND JUNCTION, COLO.
853 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,474	- 2.3	80	117	2.1
1000	31	188				
950	31	602				
900	31	1,038				
850	31	1,497			112	3.5
800	31	1,982	- 1.0	62	154	5.6
750	31	2,495	- 1.8	59	198	8.4
700	31	3,044	- 4.5	58	233	9.1
650	31	3,622	- 7.6	59	245	12.2
600	31	4,244	-10.9	57	252	16.3
550	31	4,904	-15.2	58	256	19.8
500	31	5,621	-20.2	56	258	22.0
450	31	6,389	-25.7	51	257	25.3
400	31	7,237	-32.1	47	258	27.4
350	31	8,165	-39.3	46	257	30.5
300	31	9,203	-46.7		259	32.1
250	30	10,397	-53.5		266	33.6
200	30	11,813	-58.1		268	38.5
175	30	12,653	-58.1		267	37.1
150	30	13,624	-58.2		266	36.9
125	29	14,762	-60.0		263	33.2
100	28	16,149	-61.6		263	25.4
80	27	17,529	-62.7		264	18.8
70	27	18,351	-62.4		272	15.5
60	26	19,300	-62.3		276	9.1
50	26	20,429	-61.3		280	6.0
40	26	21,814	-60.8		348	1.6
30	26	23,605	-60.5		36	4.7
25	23	24,734	-60.8		53	7.4
20	21	26,123	-61.0		67	12.0
15	12	27,919	-59.5		62	15.5
10	6	30,417	-58.7			
7						

* GREAT FALLS, MONT.
883 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,123	- 3.1	67	234	9.1
1000	31	125				
950	31	539				
900	31	975				
850	31	1,426	- 1.1	53	240	18.1
800	31	1,908	- 2.8	56	254	20.4
750	31	2,415	- 5.3	57	262	22.0
700	31	2,957	- 8.3	57	266	22.9
650	31	3,527	-11.4	52	267	26.4
600	31	4,139	-15.0	50	269	28.0
550	31	4,786	-19.6	51	266	32.4
500	31	5,493	-24.5	52	265	37.9
450	31	6,246	-30.1	55	264	39.4
400	31	7,081	-36.2	55	264	42.3
350	31	7,994	-42.9	57	262	47.2
300	31	9,018	-49.7		264	53.2
250	31	10,194	-55.7		265	54.4
200	31	11,608	-56.9		266	49.7
175	29	12,452	-55.7		262	44.3
150	28	13,426	-55.0		262	39.2
125	27	14,593	-53.8		262	36.1
100	26	16,022	-54.8		257	25.6
80	25	17,456	-55.8		261	20.0
70	25	18,306	-55.8		272	15.2
60	25	19,286	-55.7		282	7.8
50	24	20,446	-55.7		311	3.9
40	24	21,868	-55.7		38	7.4
30	23	23,699	-56.3		58	15.2
25	22	24,862	-56.8		66	21.4
20	20	26,291	-56.5		71	32.1
15	9	28,143	-57.1			
10	5	30,677	-56.5			
7						

GREEN BAY, WIS.
988 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	210	- 2.6	84	283	3.7
1000	31	116				
950	31	522	- 3.2	87	270	9.1
900	31	951	- 3.4	84	276	12.4
850	31	1,404	- 2.5	66	279	14.8
800	31	1,884	- 3.9	57	285	17.5
750	31	2,386	- 6.0	54	285	21.2
700	31	2,929	- 8.8	53	284	22.5
650	31	3,496	-11.7	51	284	26.2
600	31	4,109	-15.1	54	289	30.5
550	31	4,759	-19.0	54	290	35.2
500	31	5,465	-23.7	57	290	41.8
450	31	6,220	-28.6	55	286	47.4
400	31	7,061	-34.6	55	286	50.1
350	31	7,982	-41.0	47	286	58.5
300	31	9,015	-48.0		276	62.2
250	31	10,201	-53.3		278	68.4
200	31	11,628	-55.7		281	67.8
175	31	12,479	-55.4		284	61.6
150	31	13,462	-55.4		285	54.8
125	31	14,622	-56.3		287	44.3
100	31	16,036	-57.3		286	34.8
80	31	17,443	-58.5		294	25.4
70	31	18,280	-59.3		299	18.3
60	31	19,246	-59.0		308	12.6
50	30	20,398	-59.0		345	7.0
40	29	21,801	-59.2		57	12.4
30	28	23,603	-59.1		61	16.5
25	25	24,740	-58.8		73	19.4
20	24	26,142	-59.2		77	26.4
15	16	27,972	-58.8		79	43.5
10	5	30,538	-59.7			
7						

GREENSBORO, N. C.
988 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	273	1.5	82	248	2.9
1000	31	173				
950	31	592	5.7	52	272	9.9
900	31	1,032	4.6	46	276	13.2
850	31	1,497	3.3	39	279	15.3
800	31	1,988	1.9	34	281	16.9
750	31	2,508	.2	36	280	20.8
700	31	3,058	- 2.5	35	277	23.9
650	31	3,640	- 5.9	36	277	27.4
600	31	4,267	- 9.5	37	279	32.4
550	31	4,933	-14.0	36	281	37.3
500	31	5,653	-18.3	41	285	41.4
450	31	6,427	-23.9	45	284	47.6
400	31	7,283	-29.9	48	281	52.8
350	31	8,222	-36.3	50	282	58.7
300	31	9,276	-43.5	55	283	69.3
250	31	10,481	-52.1		286	70.9
200	31	11,903	-58.5		292	67.6
175	31	12,739	-60.0		290	59.6
150	31	13,701	-60.5		287	52.6
125	30	14,833	-62.3		283	47.8
100	30	16,206	-64.0		285	36.1
80	30	17,571	-64.5		282	28.4
70	30	18,387	-64.1		286	23.5
60	30	19,331	-63.9		288	17.5
50	30	20,452	-62.3		287	13.0
40	29	21,834	-61.2		295	11.7
30	29	23,623	-60.3		281	13.6
25	29	24,760	-59.9		281	16.9
20	27	26,155	-58.6		278	19.2
15	22	27,974	-56.6		278	26.4
10	10	30,568	-51.3			
7						

GUAM, MARIANA IS.
999 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	111	24.8	86	80	9.1
1000	31	105				
950	31	555	22.1	84	77	22.5
900	31	1,023	19.1	80	81	23.3
850	31	1,514	17.3	65	81	21.2
800	31	2,031	15.5	53	83	17.9
750	31	2,577	13.2	41	86	18.6
700	31	3,154	10.8	33	86	19.8
650	31	3,770	7.4	29	89	18.6
600	31	4,422	3.8	25	92	19.8
550	31	5,127	.2	20	91	19.8
500	31	5,882	- 4.3	19	91	20.4
450	31	6,699	- 9.8	19	92	22.9
400	31	7,602	-15.9	20	92	20.6
350	31	8,595	-22.9	19	85	17.1
300	31	9,706	-31.3	21	68	12.0
250	31	10,970	-41.3		54	7.8
200	31	12,445	-53.2		77	5.6
175	31	13,292	-59.9		106	4.1
150	31	14,238	-67.3		121	3.5
125	30	15,316	-75.4		104	6.8
100	29	16,581	-82.8		101	14.0
80	26	17,826	-82.1		93	19.0
70	26	18,581	-77.6		94	18.1
60	26	19,481	-70.9		93	19.4
50	26	20,572	-66.6		93	24.1
40	26	21,939	-61.6		94	30.9
30	26	23,744	-56.5		88	30.3
25	26	24,908	-54.3		93	27.0
20	25	26,344	-52.8		83	14.0
15	23	28,220	-47.5		311	8.5
10	13	30,948	-40.4		292	7.0
7	6	33,404	-37.4			

HILO, HAWAII
1017 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	11	19.3	88	261	3.3
1000	31	152	19.9	82	279	1.0
950	31	595	16.6	87	83	6.8
900	31	1,053	13.6	90	84	8.4
850	31	1,534	10.9	89	85	7.2
800	31	2,039	8.4	82	79	7.0
750	31	2,580	7.4	51	63	8.0
700	31	3,138	5.9	38	67	5.4
650	31	3,743	3.6	34	110	.8
600	31	4,389	- .5	31	264	2.5
550	31	5,075	- 5.1	30	265	8.0
500	31	5,821	-10.4	34	275	10.9
450	31	6,624	-15.7	36	271	19.6
400	31	7,506	-21.2	35	265	29.1
350	31	8,478	-27.8	34	268	41.2
300	31	9,570	-34.7	33	259	56.3
250	31	10,820	-43.6		258	66.4
200	31	12,285	-54.6		263	71.3
175	31	13,127	-60.9		264	69.9
150	31	14,072	-66.7		268	61.2
125	31	15,160	-72.1		268	49.0
100	30	16,464	-75.6		274	33.8
80	29	17,756	-74.7		279	12.6
70	29	18,537	-71.6		306	4.3
60	28	19,453	-68.7		57	6.4
50	27	20,554	-65.0		82	9.3
40	25	21,927	-61.7		87	8.7
30	23	23,718	-58.7		116	2.9
25	22	24,870	-56.4		351	3.5
20	21	26,297	-53.6		358	7.2
15	17	28,166	-50.6		348	7.4
10	7	30,855	-43.6			
7						

HUNTINGTON, W. VA.
990 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	246	2.6	74	206	4.5
1000	31	166				
950	31	584	3.5	60	243	13.8
900	31	1,019	2.0	60	257	20.6
850	31	1,479	.3	58	263	21.0
800	31	1,965	- 1.1	51	268	22.1
750	31	2,477	- 2.3	39	269	24.9
700	31	3,025	- 4.5	36	271	29.1
650	31	3,602	- 7.6	36	274	31.7
600	31	4,224	-11.4	39	276	36.1
550	31	4,882	-15.4	39	277	39.8
500	31	5,600	-20.1	38	277	42.7
450	31	6,370	-25.2	40	275	50.1
400	31	7,220	-30.9	42	277	55.4
350	31	8,155	-37.3	41	279	62.0
300	31	9,204	-44.3	37	278	69.9
250	31	10,405	-52.1		278	80.2
200	30	11,827	-57.5		283	75.2
175	30	12,668	-58.8		283	67.2
150	29	13,633	-58.8		281	57.1
125	28	14,777	-60.8		282	50.5
100	28	16,162	-61.6		284	37.3
80	28	17,539	-63.0		284	28.2
70	28	18,361	-62.2		284	24.1
60	28	19,315	-61.8		290	18.5
50	28	20,445	-61.2		288	12.0
40	27	21,834	-61.0		301	6.4
30	25	23,623	-60.1		307	7.2
25	22	24,767	-59.7		308	9.7
20	22	26,164	-58.8		293	8.0
15	22	27,975	-57.8		280	13.2
10	20	30,554	-53.3		267	17.9
7	6	32,902	-51.4			

* INTERNAT. FALLS, MINN.
970 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	360	- 8.3	83	226	1.0
1000	31	121				
950	31	519	- 8.4	87	216	2.1
900	31	940	- 7.3	81	274	5.2
850	31	1,388	- 4.6	62	285	7.6
800	31	1,865	- 5.3	60	291	11.3
750	31	2,367	- 7.1	56	301	14.6
700	31	2,905	-10.0	58	298	17.1
650	31	3,469	-13.2	59	289	20.8
600	31	4,080	-16.7	64	287	25.6
550	31	4,725	-21.0	63	289	30.3
500	31	5,426	-25.6	61	287	32.8
450	31	6,176	-30.8	60	286	37.7
400	31	7,010	-36.7	54	287	42.2
350	31	7,921	-43.5	51	284	46.0
300	31	8,943	-49.9		283	51.5
250	31	10,120	-55.0		283	54.2
200	31	11,542	-55.0		283	52.6
175	31	12,398	-53.6		282	48.2
150	30	13,398	-53.6		285	41.6
125	29	14,568	-54.3		287	38.1
100	29	15,996	-55.2		287	29.5
80	28	17,417	-56.4		293	21.0
70	28	18,263	-56.5		297	18.3
60	28	19,242	-56.5		307	13.2
50	28	20,398	-56.8		323	10.1
40	26	21,798	-57.0		342	8.5
30	24	23,613	-57.2		41	14.4
25	23	24,760	-57.5		51	20.0
20	19	26,182	-57.9		50	28.4
15	10	27,956	-59.0			
10	6	30,430	-58.9			
7						

JACKSON, MISS.
1010 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	94	5.7	89	109	1.4
1000	31	174	8.0	77	125	2.5
950	31	597	8.9	64	211	2.1
900	31	1,048	9.6	54	268	6.0
850	31	1,522	8.7	45	270	10.1
800	31	2,021	6.4	47	271	12.2
750	31	2,550	4.5	39	268	14.6
700	31	3,108	1.9	40	271	17.9
650	31	3,697	- 1.3	42	270	20.0
600	31	4,336	- 5.3	46	270	26.0
550	31	5,008	- 9.5	50	270	30.3
500	31	5,745	-14.3	48	270	35.9
450	31	6,526	-19.6	46	272	40.2
400	31	7,402	-25.5	44	271	46.2
350	31	8,358	-32.1	43	274	50.9
300	31	9,428	-40.3	45	274	59.2
250	31	10,646	-50.0		272	69.5
200	31	12,071	-59.3		275	75.6
175	31	12,902	-62.3		278	72.8
150	30	13,851	-64.3		277	69.0
125	30	14,960	-66.8		276	60.6
100	29	16,297	-68.7		280	45.6
80	29	17,630	-69.1		279	31.1
70	28	18,426	-68.0		280	22.5
60	28	19,357	-66.3		278	16.9
50	26	20,464	-64.4		284	14.2
40	26	21,834	-62.4		269	9.9
30	25	23,617	-60.4		276	17.3
25	24	24,755	-59.5		274	20.4
20	24	26,155	-58.2		272	25.6
15	20	27,981	-56.0		265	32.2
10	15	30,561	-52.9			
7						

* JACKSONVILLE, FLA.
1021 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	5	8.4	87	344	4.1
1000	31	180	11.8	75	22	8.0
950	31	611	11.1	69	58	5.8
900	31	1,060	9.8	62	283	2.1
850	31	1,533	8.1	56	278	7.0
800	31	2,032	6.1	50	290	11.3
750	31	2,560	4.9	41	292	14.6
700	31	3,120	2.6	34	291	17.7
650	31	3,715	- .5	35	289	23.3
600	31	4,351	- 4.4	34	287	27.0
550	31	5,022	- 9.0	37	286	31.5
500	31	5,761	-13.8	38	284	37.5
450	31	6,548	-19.3	42	279	43.3
400	31	7,419	-25.1	41	280	51.5
350	31	8,375	-32.0	41	283	58.9
300	31	9,445	-40.3	51	279	67.2
250	31	10,663	-49.6		281	72.1
200	30	12,093	-58.5		283	79.3
175	29	12,924	-62.1		283	80.6
150	27	13,871	-64.3		286	72.7
125	27	14,977	-67.4		285	60.2
100	25	16,307	-69.6		284	46.2
80	25	17,636	-69.4		284	33.4
70	24	18,436	-68.6		285	26.0
60	24	19,365	-66.6		280	19.6
50	24	20,474	-64.2		281	20.0
40	24	21,848	-61.4		276	17.9
30	24	23,644	-58.5		277	24.7
25	24	24,794	-56.8		271	29.9
20	24	26,213	-55.3		271	30.9
15	23	28,061	-52.9		264	42.9
10	12	30,696	-48.4			
7						

JOHN F. KENNEDY INT. ARPT.NY
1018 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	5	2.0	69	299	5.4
1000	31	151	1.9	63	292	8.0
950	31	564	.7	64	290	11.8
900	31	997	- 1.1	66	290	14.4
850	31	1,452	- 2.7	66	286	17.5
800	31	1,931	- 4.1	63	284	21.4
750	31	2,442	- 5.5	51	282	25.1
700	31	2,978	- 7.8	43	283	28.4
650	31	3,551	-10.6	44	285	33.0
600	31	4,163	-14.5	44	285	36.1
550	31	4,815	-18.9	49	284	40.4
500	31	5,520	-23.5	46	283	44.7
450	31	6,280	-28.5	44	282	49.9
400	31	7,117	-34.3	44	281	55.0
350	31	8,038	-40.8	43	282	63.7
300	31	9,073	-46.7		282	72.7
250	31	10,266	-52.8		284	71.3
200	31	11,691	-56.1		283	62.7
175	30	12,544	-56.2		281	59.4
150	30	13,522	-56.9		282	53.0
125	30	14,673	-58.0		281	48.4
100	30	16,076	-58.8		281	39.8
80	29	17,475	-59.3		280	27.6
70	29	18,310	-59.5		281	22.0
60	29	19,275	-59.9		280	17.1
50	28	20,417	-60.1		292	12.0
40	26	21,814	-60.4		300	8.2
30	26	23,608	-59.9		307	7.6
25	25	24,746	-59.5		320	5.8
20	23	26,141	-59.2		329	5.1
15	15	27,971	-58.1		56	5.2
10	9	30,578	-54.4			
7						

JOHNSTON IS., PACIFIC AREA
1013 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	3	24.6	77	92	13.4
1000	31	118	23.7	78	87	15.3
950	31	564	20.2	81	82	18.8
900	31	1,031	17.0	81	86	17.1
850	31	1,518	14.2	77	85	15.9
800	31	2,030	12.8	58	86	12.8
750	31	2,570	10.6	46	86	10.3
700	31	3,142	7.7	39	87	7.8
650	31	3,750	4.5	31	83	5.8
600	31	4,398	.6	32	60	2.1
550	31	5,081	- 3.8	28	312	2.7
500	31	5,838	- 8.5	21	282	8.4
450	31	6,644	-13.7	22	281	14.0
400	31	7,536	-19.3	24	268	25.6
350	31	8,517	-25.6	25	264	35.2
300	31	9,617	-33.4	27	261	46.2
250	31	10,873	-42.6		259	51.5
200	31	12,342	-54.3		259	52.8
175	30	13,186	-60.8		261	51.3
150	30	14,130	-67.1		267	45.3
125	29	15,211	-73.7		271	35.4
100	26	16,501	-78.5		270	22.1
80	26	17,772	-77.1		279	7.2
70	26	18,546	-72.9		314	1.4
60	25	19,455	-68.9		81	6.4
50	24	20,553	-65.9		90	14.0
40	24	21,918	-62.5		83	16.7
30	23	23,715	-57.7		78	17.5
25	23	24,875	-54.4		76	16.1
20	22	26,309	-52.5		62	10.9
15	19	28,173	-49.8		203	5.2
10	12	30,860	-44.4			
7						

KEY WEST, FLORIDA
1018 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	29	3	19.9	75	47	6.8
1000	29	154	19.2	73	54	9.7
950	29	590	16.3	73	70	9.7
900	29	1,053	13.6	70	79	6.0
850	29	1,533	11.8	60	68	3.3
800	29	2,039	10.4	44	26	1.2
750	29	2,579	9.5	26	310	5.4
700	29	3,146	7.2	22	293	7.4
650	29	3,749	3.8	23	288	9.7
600	29	4,398	- .1	20	287	13.2
550	29	5,083	- 4.4	21	280	17.5
500	29	5,835	- 9.3	23	283	22.0
450	29	6,636	-15.0	26	282	25.6
400	29	7,523	-21.4	27	275	32.1
350	29	8,494	-28.6	24	278	36.1
300	29	9,579	-37.3	28	280	41.4
250	27	10,810	-47.4		282	47.0
200	27	12,252	-57.8		285	52.3
175	27	13,085	-62.4		284	53.8
150	27	14,026	-67.7		276	51.1
125	26	15,109	-72.3		277	46.8
100	26	16,413	-74.9		282	38.5
80	26	17,708	-74.2		280	27.0
70	26	18,490	-71.5		279	20.4
60	26	19,408	-67.6		279	19.0
50	25	20,516	-63.8		273	18.1
40	25	21,893	-61.2		270	13.4
30	25	23,692	-58.2		279	12.0
25	23	24,844	-56.4		282	11.7
20	22	26,270	-54.4		271	18.8
15	22	28,122	-51.8		263	27.8
10	20	30,793	-44.0		257	44.7
7	11	33,186	-40.5			

KING SALMON, ALASKA
1005 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	15	-14.8	79	62	1.0
1000	30	51			8	7.0
950	30	450	- 9.8	74	346	6.4
900	30	864	- 9.4	69	322	5.1
850	30	1,305	-10.8	67	304	5.6
800	30	1,770	-12.2	60	302	8.9
750	30	2,260	-14.3	57	303	11.1
700	30	2,782	-16.8	62	296	12.6
650	30	3,337	-19.5	61	293	16.3
600	30	3,926	-23.1	59	290	18.1
550	30	4,556	-27.1	57	287	20.4
500	30	5,239	-31.5	56	290	24.1
450	30	5,975	-36.3	54	293	28.0
400	30	6,785	-41.7	52	297	31.5
350	30	7,679	-47.2		291	31.9
300	30	8,689	-50.9		292	34.4
250	30	9,871	-52.4		285	35.5
200	30	11,314	-51.6		283	31.9
175	30	12,183	-50.4		275	29.3
150	30	13,190	-49.9		267	27.0
125	30	14,384	-49.2		265	24.9
100	30	15,849	-48.7		261	22.7
80	29	17,308	-48.5		256	19.0
70	29	18,185	-49.2		250	17.7
60	29	19,195	-49.4		244	15.5
50	29	20,387	-50.3		245	13.6
40	28	21,843	-50.6		232	14.6
30	28	23,710	-52.0		204	9.7
25	23	24,897	-51.9		199	8.5
20	20	26,345	-53.5		178	15.0
15	8	28,206	-53.6			
10						
7						

KOROR, CAROLINE IS.
+ 1007 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	30	27.5	81	62	8.4
1000	30	87	26.9	78	65	10.1
950	30	536	23.3	76	70	19.6
900	30	1,011	20.4	72	76	21.4
850	30	1,504	17.8	67	81	21.0
800	30	2,021	15.7	55	86	18.3
750	30	2,566	13.1	47	87	17.9
700	30	3,145	10.1	40	87	16.5
650	30	3,757	6.7	36	88	14.8
600	30	4,411	3.0	35	88	17.1
550	30	5,108	- .9	35	94	18.1
500	30	5,866	- 5.0	32	96	20.8
450	30	6,684	- 9.7	28	96	23.1
400	30	7,588	-15.3	23	94	22.3
350	30	8,584	-22.1	22	83	21.2
300	30	9,698	-30.6	21	88	16.1
250	30	10,966	-41.0		94	13.8
200	30	12,444	-53.2		97	12.4
175	29	13,290	-60.3		102	11.1
150	29	14,233	-67.9		104	14.0
125	29	15,307	-75.9		98	19.2
100	28	16,570	-83.3		94	23.9
80	28	17,809	-82.0		91	20.4
70	28	18,565	-77.1		82	18.1
60	28	19,462	-71.4		89	27.2
50	28	20,552	-66.8		95	40.0
40	27	21,911	-62.5		92	48.4
30	25	23,718	-55.9		92	57.7
25	21	24,894	-52.3		90	48.8
20	16	26,340	-47.9		101	19.2
15	9	28,278	-44.3			
10	5	31,029	-42.8			
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb.)	KOTZEBUE, ALASKA 1010 MB						KWAJALEIN, MARSHALL IS. 1009 MB						LAKE CHARLES, LA. 1019 MB						LANDER, WYO. 826 MB						LAS VEGAS, NEV. 940 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	5	-20.5	75	7	2.1	21	4	26.9	82	61	15.5	31	5	9.6	91	63	3.9	31	1,696	- 6.3	65	220	3.1	31	660	4.2	70	243	3.1
1000	31	79			300	1.6	21	84	26.2	82	63	17.9	31	165	12.5	77	95	6.6	31	174					31	149				
950	31	464	-17.6	78	297	3.9	21	535	22.7	85	67	21.4	31	595	12.0	68	151	6.4	31	583					31	571			234	6.6
900	31	867	-18.2	79	292	5.2	21	1,005	19.8	86	74	20.8	31	1,049	11.4	58	198	7.4	31	1,016					31	1,013	6.4	48	12	1.2
850	31	1,294	-18.0	77	295	6.6	21	1,498	17.5	81	79	20.2	31	1,526	9.3	55	229	7.4	31	1,469					31	1,480	4.6	46	332	1.4
800	31	1,747	-18.8	71	301	8.0	21	2,013	15.7	68	81	15.9	31	2,028	8.4	R36	243	8.5	31	1,947	- 1.3	53	232	3.3	31	1,972	2.7	43	240	3.9
750	31	2,227	-20.5	69	299	8.5	21	2,558	12.8	63	88	14.2	31	2,557	6.4	R34	252	10.9	31	2,462	- 2.3	46	256	8.4	31	2,491	.2	45	235	8.4
700	31	2,734	-23.0	61	293	9.7	21	3,139	9.8	54	87	11.3	31	3,124	3.7	R32	264	12.2	31	3,007	- 4.9	45	269	16.3	31	3,043	- 2.6	42	236	10.9
650	31	3,275	-26.0	57	288	9.5	21	3,750	6.8	40	77	11.7	31	3,718	.3	R33	258	15.2	31	3,582	- 8.3	46	273	21.8	31	3,623	- 5.9	41	234	12.2
600	31	3,850	-29.4	54	279	12.6	21	4,403	3.3	44	75	13.2	31	4,360	- 3.5	R36	253	19.2	31	4,204	-12.1	47	273	26.2	31	4,250	-10.0	39	238	13.8
550	31	4,465	-33.4	53	275	15.9	21	5,105	- .7	38	74	13.2	31	5,034	- 8.0	R39	253	22.9	31	4,858	-16.3	47	269	28.4	31	4,910	-14.6	36	243	17.7
500	31	5,129	-37.5	52	276	18.6	21	5,863	- 4.7	33	68	15.0	31	5,777	-12.5	R36	257	29.1	31	5,575	-21.5	46	268	32.6	31	5,630	-19.8	36	246	20.8
450	31	5,849	-41.8	58	277	21.4	21	6,680	-10.0	26	55	13.0	31	6,568	-17.6	R32	260	36.1	31	6,336	-27.1	48	266	33.8	31	6,401	-25.4	36	249	23.3
400	31	6,641	-46.3		274	24.9	21	7,583	-15.5	19	48	11.5	31	7,448	-23.5	R33	259	42.2	31	7,183	-33.5	46	265	37.5	31	7,249	-31.5	35	254	27.2
350	31	7,519	-50.9		275	29.5	21	8,572	-22.3	25	35	5.6	31	8,411	-30.6	R35	262	48.0	31	8,106	-40.6	40	263	39.8	31	8,181	-38.2	34	256	30.5
300	31	8,514	-53.8		276	28.0	21	9,691	-30.6	27	305	2.5	31	9,487	-39.2	37	264	53.8	31	9,139	-48.3		263	44.3	31	9,226	-45.1	R30	258	35.7
250	31	9,686	-53.3		272	28.7	21	10,959	-41.0		262	7.6	31	10,711	-48.8		265	61.8	31	10,321	-54.7		266	49.1	31	10,424	-52.0		260	35.7
200	31	11,126	-52.3		262	25.8	21	12,435	-53.3		236	10.9	31	12,145	-58.3		269	75.0	31	11,735	-58.1		262	50.7	31	11,852	-56.3		261	43.5
175	31	11,993	-50.6		253	24.7	21	13,275	-60.0		241	9.3	31	12,979	-61.6		271	72.8	31	12,577	-57.6		262	44.3	31	12,699	-56.4		261	47.0
150	31	12,999	-50.0		247	24.3	21	14,225	-68.3		259	6.6	31	13,927	-64.8		270	63.9	31	13,551	-57.3		263	41.4	31	13,674	-58.0		261	45.8
125	31	14,193	-49.2		238	24.7	20	15,293	-75.8		271	2.3	28	15,030	-68.0		275	56.3	31	14,701	-58.1		261	37.7	31	14,817	-60.2		262	39.8
100	31	15,661	-47.9		237	26.6	19	16,560	-82.8		37	6.8	28	16,364	-70.2		279	42.7	31	16,103	-59.1		262	28.9	29	16,204	-62.6		264	32.8
80	30	17,125	-48.6		235	26.8	18	17,795	-81.9		89	13.6	27	17,686	-71.2		282	27.6	30	17,500	-60.4		265	20.4	29	17,576	-63.4		265	21.8
70	30	18,002	-48.7		236	28.6	17	18,550	-77.0		85	18.8	26	18,475	-70.0		280	22.0	29	18,335	-60.0		272	15.2	29	18,395	-63.1		273	16.3
60	30	19,016	-48.7		237	27.8	17	19,447	-71.9		89	24.1	26	19,398	-67.5		275	17.3	29	19,297	-60.2		275	9.5	29	19,342	-63.0		277	11.7
50	29	20,216	-49.0		229	26.6	17	20,538	-67.5		87	40.0	25	20,507	-64.2		279	12.2	29	20,433	-60.0		327	3.7	28	20,462	-62.2		291	6.8
40	29	21,679	-49.6		224	28.0	16	21,900	-61.2		90	44.3	24	21,880	-61.9		273	11.3	29	21,829	-59.3		58	8.5	28	21,843	-61.3		358	4.1
30	29	23,559	-50.5		221	28.4	15	23,716	-55.3		88	45.8	21	23,670	-60.1		269	23.1	26	23,637	-59.2		73	20.0	27	23,631	-60.3		29	4.7
25	28	24,747	-51.3		203	30.5	15	24,877	-53.1		95	37.5	20	24,812	-58.3		266	25.6	22	24,770	-59.4		73	24.3	25	24,769	-59.8		37	6.6
20	25	26,223	-51.9		188	31.5	14	26,319	-49.0		101	15.3	19	26,222	-57.2		270	31.7	18	26,169	-59.3		72	30.9	24	26,168	-59.2		45	6.8
15	17	28,161	-51.4		165	45.1	14	28,218	-46.2		274	24.5	17	28,039	-56.2		263	37.9	12	27,984	-59.5		77	34.0	23	27,974	-58.1		51	10.1
10							12	30,930	-40.7		258	43.5	7	30,684	-49.1										12	30,537	-55.2			
7							7	33,355	-37.2																					

Standard pressure surface (mb.)	* LIHUE, HAWAII 1014 MB						LITTLE ROCK, ARK. 1011 MB						MCGRATH, ALASKA 998 MB						+ MAJURO, MARSHALL IS. 1009 MB						+ MARCUS IS., N. PACIFIC 1016 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	36	20.9	82	57	9.1	31	79	4.2	85	241	1.6	31	103	-25.5	67	200	1.0	31	3	28.2	81	67	12.4	31	9	25.0	72	124	3.3
1000	31	158	21.1	75	61	12.6	31	169	6.1	68	228	1.9	31	83			184	2.5	31	79	26.9	76	65	14.0	31	146	23.4	67	121	4.7
950	31	598	17.6	79	70	17.7	31	590	6.9	63	243	8.0	31	470	-17.2	85	348	3.7	31	525	22.9	72	66	19.4	31	591	19.2	67	131	5.4
900	31	1,061	14.0	84	75	15.9	31	1,036	7.1	55	254	11.3	31	871	-15.0	84	17	1.7	31	1,001	20.1	71	74	19.0	31	1,054	15.7	68	150	3.9
850	31	1,542	10.7	86	78	14.2	31	1,506	6.4	50	256	15.0	31	1,305	-13.9	75	284	3.5	31	1,494	17.7	66	79	17.5	31	1,538	13.1	62	170	4.5
800	31	2,046	9.0	59	80	12.8	31	2,002	4.5	47	261	18.6	31	1,765	-15.1	70	273	6.8	31	2,012	15.6	61	82	15.9	31	2,048	12.2	46	217	3.5
750	31	2,582	8.0	39	85	10.1	31	2,528	2.3	43	266	20.0	31	2,250	-17.2	67	271	7.8	31	2,556	13.1	54	86	15.5	31	2,588	10.8	33	257	6.2
700	31	3,147	5.7	37	84	6.6	31	3,082	.0	41	273	22.3	31	2,765	-20.0	68	287	10.7	31	3,136	10.0	52	88	13.6	31	3,160	8.4	27	268	10.9
650	31	3,744	2.4	34	95	1.4	31	3,667	- 3.0	39	276	25.4	31	3,308	-22.7	64	291	12.2	31	3,747	6.8	46	88	12.0	31	3,768	5.5	26	266	15.3
600	31	4,392	- 1.9	33	266	2.9	31	4,302	- 6.8	38	276	30.1	31	3,895	-26.2	59	294	16.1	31	4,403	3.1	41	81	11.3	31	4,421	2.3	24	264	18.3
550	31	5,071	- 6.8	31	258	5.1	31	4,969	-11.0	36	274	33.4	31	4,516	-30.2	55	287	18.8	31	5,101	- .4	35	75	11.3	31	5,114	- 1.9	22	269	21.8
500	31	5,818	-11.5	33	258	10.3	31	5,703	-16.0	32	275	37.1	31	5,193	-34.3	55	283	22.1	31	5,861	- 4.5	30	67	10.5	31	5,869	- 6.9	22	268	26.2
450	31	6,612	-17.1	32	261	13.8	31	6,485	-21.2	34	276	42.3	31	5,922	-38.8	55	282	25.3	31	6,685	- 9.1	24	54	8.9	31	6,676	-12.4	22	271	30.5
400	31	7,491	-23.0	34	259	21.0	31	7,349	-27.1	35	275	46.8	31	6,725	-43.7	51	281	29.5	31	7,588	-14.8	23	37	7.2	31	7,573	-18.6	23	273	36.7
350	31	8,457	-29.7	31	261	30.5	31	8,298	-33.8	40	274	53.8	31	7,613	-48.2		279	32.1	31	8,587	-21.4	24	15	3.9	31	8,555	-25.4	22	274	40.8
300	31	9,539	-37.5	29	261	44.5	31	9,361	-41.8	47	273	62.5	31	8,620	-51.6		267	29.1	31	9,706	-29.6	23	288	6.0	31	9,656	-33.4	23	282	46.0
250	31	10,776	-45.5		261	59.2	31	10,572	-51.0		273	73.2	31	9,803	-51.2		266	28.4	31	10,980	-39.9	22	252	7.4	31	10,911	-42.9		286	50.3
200	31	12,234	-54.7		257	68.8	31	11,994	-59.5		275	82.4	31	11,257	-50.1		264	25.6	31	12,465	-52.4		246	11.1	31	12,382	-53.4		287	51.9
175	31	13,079	-59.8		260	65.9	31	12,823	-61.8		279	78.7	31	12,132	-49.1		252	25.1	31	13,314	-59.6		263	12.8	31	13,230	-59.5		283	53.2
150	31	14,029	-65.2		264	56.1	31	13,774	-63.2		278	67.6	31	13,146	-48.0		251	25.8	31	14,262	-67.2		285	11.8	31	14,180	-66.0		281	50.7
125	31	15,126	-70.0		266	43.1	31	14,891	-64.7		275	59.1	31	14,350	-47.4		248	23.7	31	15,340	-75.1		307	9.7	31	15,268	-72.4		280	46.8
100	31	16,440	-74.0		270	25.8	30	16,244	-66.6		277	44.3	31	15,827	-46.8		246	25.1	31	16,612	-81.8		20	8.4	31	16,565	-76.9		270	35.5
80	29	17,744	-73.1		274	12.0	29	17,589	-66.8		281	29.7	31	17,303	-47.4		241	23.1	30	17,859	-80.8		74	14.4	29	17,848	-76.2		264	19.2
70	29	18,530	-70.8		316	3.7	29	18,395	-66.7		278	22.7	31	18,185	-47.5		237	22.9	30	18,620	-75.5		84	16.1	29	18,621	-73.9		264	11.8
60	28	19,450	-67.7		76	4.5	29	19,331	-64.9		282	17.3	31	19,202	-47.9		234	22.3	29	19,522	-71.3		92	23.9	29	19,531	-68.9		306	5.1
50	27	20,558	-64.8		82	6.6	26	20,451	-63.7		290	12.6	31	20,402	-48.5		229	19.0	29	20,611	-67.3		94	38.5	29	20,633	-64.7		80	4.3
40	27	21,927	-62.3		87	5.8	24	21,826	-62.4		299	10.1	31	21,870	-48.6		221	18.6	29	21,974	-61.9		90	47.2	28	22,013	-59.7		84	2.9
30	27	23,717	-59.2		347	1.4	21	23,612	-61.2		295	10.7	31	23,757	-49.6		204	18.8	27	23,786	-55.6		90	51.3	27	23,836	-55.0		245	1.9
25	25	24,860	-57.1		334	4.9	18	24,752	-60.4		294	11.1	31	24,947	-50.4		195	20.2	24	24,960	-51.8		93	46.0	26	25,004	-54.3		248	6.6
20	25	26,286	-53.5		14	6.4	16	26,148	-59.9		294	14.6	30	26,410	-51.4		192	20.4	15	26,421	-47.7		100	22.0	25	26,437	-54.0		259	8.5
15	23	28,145	-52.1		314	4.9	7	27,978	-59.0				26	28,264	-53.0		171	25.6	9	28,352	-45.2				18	28,291	-49.8		315	1.2
10	19	30,808	-45.7		261	28.9							16	30,894	-55.8		139	31.3							11	30,980	-39.7			
7	[illegible]	33,234	-39.5										7	33,228	-57.5															

Standard pressure surface (mb.)	* MEDFORD, OREG. 969 MB						MERIDA, MEXICO 1017 MB						* MIAMI, FLA. 1018 MB						* MIDLAND, TEXAS 917 MB						MONTGOMERY, ALA. 1015 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	401	- .2	86	170	1.0	31	11	18.2	95	76	4.5	31	4	17.5	82	14	3.1	31	874	4.9	83	194	2.7	31	61	4.2	86	22	1.6
1000	31	143					31	155	20.9	84	79	8.2	31	156	19.1	69	44	5.2	31	159					31	180	7.8	72	87	2.1
950	31	559	.9	86	217	.6	31	591	18.7	81	91	11.1	31	594	16.5	68	72	7.4	31	580					31	609	8.9	58	105	.4
900	31	991	1.8	71	177	4.5	31	1,062	16.1	77	98	8.9	31	1,055	13.6	66	78	5.2	31	1,027	7.2	66	206	5.4	31	1,053	9.0	46	294	6.[illegible]
850	31	1,452	.2	70	198	7.4	31	1,547	13.8	71	124	5.4	31	1,534	10.8	63	63	2.1	31	1,499	8.5	55	234	12.0	31	1,526	7.8	38	286	10.1
800	31	1,936	- 2.1	67	215	13.2	31	2,056	12.3	52	141	4.5	31	2,039	9.0	56	317	2.7	31	1,999	7.4	44	249	13.8	31	2,024	6.2	33	284	12.2
750	31	2,445	- 4.5	65	224	18.3	31	2,589	10.5	41	144	3.5	31	2,573	8.7	39	286	7.8	31	2,525	4.9	46	245	15.7	31	2,551	4.5	31	281	15.7
700	31	2,989	- 7.2	63	232	20.2	31	3,168	8.2	31	104	1.7	31	3,142	6.4	33	287	9.7	31	3,088	1.6	46	240	19.2	31	3,112	1.9	30	280	18.6
650	31	3,556	-10.6	58	239	22.1	31	3,769	5.0	30	206	2.5	31	3,743	2.9	32	289	14.4	31	3,676	- 2.2	44	241	20.8	31	3,706	- 1.4	34	277	22.3
600	31	4,173	-14.3	52	241	25.1	31	4,426	1.3	30	230	4.5	31	4,390	- 1.0	30	285	18.1	31	4,313	- 6.2	41	244	23.5	31	4,340	- 5.2	39	277	28.4
550	31	4,824	-18.7	47	245	29.5	31	5,108	- 2.9	30	250	7.0	31	5,074	- 5.3	32	282	20.8	31	4,984	-10.3	40	251	26.2	31	5,017	- 9.6	38	276	33.0
500	31	5,532	-23.5	45	248	32.4	31	5,871	- 7.3	30	256	11.1	31	5,820	-10.3	31	280	24.7	31	5,717	-15.0	40	255	32.2	31	5,749	-14.1	38	276	35.9
450	31	6,289	-28.8	44	253	34.0	31	6,674	-12.7	28	256	14.0	31	6,615	-16.0	32	283	31.1	31	6,500	-20.3	40	254	35.7	31	6,539	-19.4	37	276	41.8
400	31	7,127	-34.9	44	257	34.2	31	7,574	-19.3	30	262	16.3	31	7,500	-22.2	34	281	35.2	31	7,368	-26.3	41	254	42.7	31	7,407	-25.5	38	275	47.6
350	31	8,046	-41.3	52	264	39.0	31	8,552	-26.3	26	268	22.7	31	8,468	-29.2	32	280	41.2	31	8,321	-33.0	39	251	50.7	31	8,362	-32.6	38	275	54.8
300	31	9,078	-47.9		266	44.3	31	9,648	-34.7	26	276	26.8	31	9,550	-37.7	32	281	48.6	31	9,388	-40.6	42	251	59.6	31	9,429	-40.9	47	278	60.8
250	31	10,265	-53.5		265	45.5	31	10,893	-44.6		284	33.4	31	10,781	-47.6		284	56.1	31	10,607	-49.1		259	65.9	31	10,644	-50.2		276	70.3
200	30	11,690	-56.0		269	36.3	31	12,346	-56.1		284	37.5	31	12,220	-58.1		289	60.0	31	12,044	-56.7		268	58.7	31	12,067	-59.5		275	74.8
175	30	12,541	-55.4		265	34.4	31	13,181	-62.0		281	38.3	30	13,055	-62.7		285	59.6	30	12,887	-59.6		272	61.2	31	12,897	-62.3		278	75.0
150	30	13,523	-55.4		269	32.4	31	14,121	-67.8		275	36.5	30	13,994	-67.3		278	57.9	29	13,839	-62.5		274	54.2	31	13,846	-63.5		279	69.2
125	27	14,688	-55.9		270	28.0	31	15,202	-72.6		274	31.3	30	15,082	-71.2		282	51.9	29	14,955	-65.7		274	49.7	31	14,958	-66.2		278	55.9
100	27	16,104	-57.2		271	21.8	30	16,497	-76.3		279	23.7	30	16,391	-74.3		282	39.2	29	16,302	-68.1		275	41.2	31	16,302	-68.7		277	45.6
80	26	17,519	-57.6		265	14.4	28	17,779	-77.1		295	14.8	30	17,687	-74.2		279	27.8	29	17,639	-68.9		275	26.4	30	17,639	-68.6		278	32.1
70	24	18,361	-58.3		285	8.2	28	18,550	-73.9		291	8.5	30	18,470	-71.3		283	21.6	29	18,438	-68.3		276	19.4	30	18,439	-67.6		278	25.3
60	24	19,329	-58.8		308	3.1	28	19,464	-67.3		302	5.8	27	19,383	-68.6		280	16.9	29	19,368	-66.8		274	15.0	29	19,371	-65.9		277	17.9
50	24	20,472	-59.0		69	2.9	28	20,576	-63.5		259	3.7	27	20,488	-64.1		276	17.7	28	20,478	-64.4		279	8.9	29	20,483	-64.0		283	12.6
40	23	21,872	-58.5		66	6.4	28	21,960	-59.7		256	4.5	25	21,859	-61.7		275	15.3	26	21,850	-62.5		283	8.9	29	21,858	-61.7		278	10.1
30	18	23,676	-58.4		79	15.0	25	23,779	-56.4		275	3.3	25	23,656	-58.0		278	20.0	25	23,632	-61.0		282	9.1	29	23,648	-59.6		281	13.2
25	14	24,824	-58.2		83	24.5	25	24,944	-54.0		321	3.3	24	24,812	-56.0		275	20.6	24	24,768	-60.2		279	11.3	28	24,788	-58.2		277	18.6
20	11	26,249	-58.2		91	30.3	24	26,373	-52.8		284	10.1	23	26,242	-53.9		271	21.8	20	26,169	-59.5		273	13.4	27	26,197	-56.9		273	23.7
15	5	28,063	-58.1				15	28,254	-50.7		263	20.4	20	28,097	-50.8		265	30.7	17	27,984	-57.8		275	15.9	25	28,024	-54.8		266	28.7
10							5	30,851	-43.2				15	30,753	-45.2		260	55.2	10	30,558	-53.6				24	30,636	-50.7		262	42.0
7													6	33,186	-40.9										22	32,989	-45.7		260	66.4
5																									16	35,238	-42.2			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb.)	* NANTUCKET, MASS. 1015 MB						* NASHVILLE, TENN. 1000 MB						NOME, ALASKA 1010 MB						* NORTH PLATTE, NEBR. 916 MB						* OAKLAND, CALIF. 1016 MB					
					Wind						Wind						Wind						Wind						Wind	
	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Direction	Speed
SURFACE	31	14	.3	83	317	4.3	31	177	3.5	77	201	1.7	31	7	-16.2	75	7	4.5	31	848	- 6.1	85	319	4.7	31	6	6.6	79	132	2.5
1000	31	136	1.5	74	279	5.6	31	177			148	2.5	31	79			311	2.3	31	152					31	135	6.8	73	139	2.3
950	31	544	- .7	71	284	11.8	31	593	4.3	61	236	11.3	31	469	-15.0	64	11	5.1	31	562					31	557	7.1	58	146	.8
900	31	979	- 1.8	65	278	15.5	31	1,034	3.4	56	254	16.7	31	876	-15.4	65	14	3.9	31	985	- 1.2	75	312	7.0	31	1,001	5.9	57	249	2.5
850	31	1,432	- 3.6	66	271	19.0	31	1,497	2.9	47	268	17.9	31	1,308	-15.4	60	335	4.9	31	1,445	2.6	57	305	12.0	31	1,467	3.5	56	233	6.8
800	31	1,910	- 5.2	62	274	22.9	31	1,987	2.0	39	273	21.6	31	1,765	-16.6	59	317	6.8	31	1,934	1.5	50	295	14.4	31	1,958	1.3	50	233	9.7
750	31	2,415	- 7.0	56	273	26.4	31	2,507	.3	37	273	25.4	31	2,244	-18.4	55	300	7.8	31	2,453	- .4	46	290	17.9	31	2,473	- .9	42	237	12.2
700	31	2,952	- 9.1	52	275	28.9	31	3,058	- 2.2	42	273	28.0	31	2,761	-20.8	50	295	8.9	31	3,002	- 3.5	46	286	20.6	31	3,024	- 3.8	41	242	13.4
650	31	3,518	-11.7	48	276	31.9	31	3,640	- 5.2	42	274	31.1	31	3,303	-23.8	46	286	12.0	31	3,583	- 7.0	46	281	21.8	31	3,602	- 7.2	39	252	16.1
600	31	4,132	-15.4	50	276	37.9	31	4,268	- 9.0	39	277	34.4	31	3,886	-27.3	46	284	13.6	31	4,204	-10.8	46	282	24.3	31	4,225	-11.2	35	258	20.0
550	31	4,778	-19.6	50	277	37.9	31	4,930	-13.0	42	279	38.1	31	4,501	-30.8	45	283	16.7	31	4,866	-15.1	41	282	27.8	31	4,883	-15.6	33	260	21.6
500	31	5,484	-24.5	46	277	42.0	31	5,656	-17.8	46	277	44.7	31	5,179	-35.1	43	287	18.3	31	5,581	-19.9	38	280	31.9	31	5,602	-20.7	36	260	24.7
450	31	6,235	-29.6	47	276	46.8	31	6,433	-22.9	45	276	46.6	31	5,898	-39.8	42	287	20.6	31	6,350	-25.5	38	275	37.1	31	6,365	-26.3	40	263	22.0
400	31	7,075	-35.3	44	274	52.6	31	7,291	-28.7	41	275	54.6	31	6,704	-44.2	62	286	25.3	31	7,197	-32.2	40	274	40.6	31	7,215	-32.5	37	272	25.3
350	31	7,994	-41.3	45	273	59.8	31	8,233	-35.6	42	277	61.2	31	7,590	-48.9		282	25.1	31	8,125	-39.4	41	272	45.5	31	8,143	-39.0	42	279	29.5
300	31	9,027	-47.2		273	63.1	31	9,289	-43.2	51	277	67.4	31	8,593	-53.0		281	26.6	31	9,164	-46.7		271	48.8	31	9,185	-46.1		278	34.8
250	31	10,218	-52.8		275	66.8	31	10,492	-52.1		276	74.8	31	9,765	-53.4		267	24.1	31	10,352	-54.0		271	54.0	31	10,377	-53.4		276	37.5
200	31	11,646	-55.3		279	59.8	31	11,910	-59.1		279	78.5	31	11,202	-52.4		241	22.5	31	11,765	-58.3		269	57.1	31	11,797	-57.1		267	39.6
175	31	12,499	-55.1		276	55.6	31	12,743	-60.8		280	73.4	31	12,067	-51.4		240	22.9	31	12,605	-58.2		273	50.1	31	12,643	-56.7		267	41.0
150	31	13,482	-56.0		276	49.9	31	13,701	-61.1		280	62.4	31	13,072	-50.0		230	24.3	31	13,576	-58.1		272	44.9	31	13,620	-57.1		267	41.0
125	31	14,640	-56.5		274	43.9	30	14,829	-62.8		280	52.8	31	14,268	-48.5		227	23.3	31	14,721	-59.4		274	40.0	31	14,770	-58.5		265	33.0
100	30	16,048	-57.8		275	38.7	30	16,199	-64.4		278	40.8	31	15,737	-47.9		223	24.3	31	16,114	-60.2		274	31.1	31	16,167	-60.0		264	25.3
80	30	17,453	-58.7		276	30.1	30	17,558	-65.1		279	28.6	30	17,199	-47.7		215	27.6	31	17,499	-61.8		276	22.0	31	17,554	-61.2		266	18.5
70	30	18,290	-59.2		279	23.9	29	18,373	-64.6		276	22.7	30	18,079	-48.0		213	25.1	31	18,324	-61.9		274	16.9	31	18,382	-61.4		273	14.4
60	30	19,255	-59.4		278	19.2	29	19,314	-64.3		280	16.9	30	19,096	-48.3		211	23.7	31	19,281	-61.4		281	10.7	31	19,337	-61.5		290	9.5
50	30	20,395	-59.8		283	14.6	29	20,434	-62.5		287	11.5	30	20,295	-48.7		208	22.5	31	20,413	-60.9		295	8.4	31	20,466	-61.7		324	5.2
40	30	21,787	-60.2		291	11.3	28	21,813	-61.6		287	8.4	30	21,759	-49.4		196	22.9	30	21,805	-60.2		20	4.5	31	21,849	-61.0		5	3.9
30	30	23,582	-60.1		288	7.4	28	23,599	-60.4		281	8.7	29	23,652	-50.1		189	24.7	29	23,601	-60.5		38	9.5	28	23,645	-60.0		55	7.0
25	28	24,715	-60.2		309	6.6	28	24,737	-59.9		282	9.9	28	24,854	-50.2		165	24.3	28	24,738	-60.3		58	13.4	27	24,783	-59.8		61	9.1
20	27	26,106	-59.6		322	6.6	28	26,132	-59.4		279	10.3	27	26,322	-51.3		158	31.9	22	26,152	-59.7		68	19.2	26	26,179	-59.3		65	12.2
15	23	27,911	-58.0		305	9.1	27	27,938	-57.0		272	16.1	22	28,207	-53.0		156	34.6	16	27,960	-59.7		74	28.7	23	27,990	-58.0		72	11.8
10	18	30,503	-55.9		295	11.7	21	30,520	-54.6		265	19.4	9	30,836	-55.1				7	30,536	-59.5				18	30,529	-55.6		45	6.0
7							7	32,811	-50.8																8	32,835	-52.0			

	OKLAHOMA CITY, OKLA. 971 MB						OMAHA, NEBR. 967 MB						* PEORIA, ILL. 992 MB						* PITTSBURGH, PA. 975 MB						PONAPE, CAROLINE IS. + 1004 MB					
SURFACE	31	392	4.9	81	203	2.1	31	403	- .9	84	274	3.5	31	200	.6	86	221	3.7	31	353	1.0	75	237	5.8	31	39	27.5	81	65	8.9
1000	31	150					31	133					31	137					31	153					31	73	27.1	80	67	10.9
950	31	573	6.9	68	208	7.2	31	546	.8	76	272	5.8	31	550	2.0	74	255	14.4	31	565	.9	71	246	13.2	31	518	23.2	77	71	18.6
900	31	1,016	6.9	65	240	15.2	31	980	1.4	68	281	12.0	31	986	1.3	71	262	19.2	31	1,000	- .8	75	261	19.4	31	997	20.2	74	76	22.0
850	31	1,486	6.6	56	246	16.9	31	1,441	2.0	53	279	15.2	31	1,446	.4	64	268	20.6	31	1,455	- 2.0	71	268	22.5	31	1,490	18.0	67	80	20.8
800	31	1,983	5.2	46	252	17.9	31	1,929	.9	48	283	19.6	31	1,932	- .4	54	269	23.7	31	1,936	- 3.5	63	271	23.1	31	2,009	16.4	56	77	17.1
750	31	2,505	3.1	40	261	19.8	31	2,443	- .9	41	281	20.8	31	2,444	- 2.2	49	272	26.2	31	2,447	- 4.8	52	274	27.8	31	2,554	13.8	54	85	14.0
700	31	3,065	.3	36	259	22.7	31	2,994	- 3.7	40	283	23.3	31	2,992	- 5.0	51	279	28.9	31	2,986	- 7.3	54	277	30.5	31	3,135	10.4	51	86	13.8
650	31	3,652	- 3.1	35	257	25.8	31	3,569	- 7.2	43	279	25.8	31	3,569	- 8.2	50	280	33.4	31	3,559	-10.1	50	281	32.6	31	3,747	7.0	46	89	15.7
600	31	4,286	- 6.9	33	259	27.8	31	4,196	-11.1	40	276	29.5	31	4,189	-11.8	49	284	36.9	31	4,173	-14.2	47	281	36.5	31	4,403	3.3	43	86	18.1
550	31	4,953	-11.4	33	258	31.7	31	4,853	-15.2	37	275	32.6	31	4,847	-15.6	50	283	41.4	31	4,826	-18.3	45	282	40.4	31	5,101	- .2	36	84	19.2
500	31	5,684	-16.6	33	257	33.6	31	5,572	-20.0	37	278	38.1	31	5,562	-20.4	49	282	44.5	31	5,533	-22.9	43	281	43.5	31	5,862	- 4.6	31	84	21.2
450	31	6,461	-22.0	31	259	35.4	31	6,338	-25.6	42	280	41.8	31	6,329	-26.1	45	281	47.2	31	6,293	-28.0	45	281	47.4	31	6,682	- 9.7	30	78	21.4
400	31	7,325	-27.9	32	260	41.4	31	7,190	-31.9	42	278	46.4	31	7,174	-32.3	41	280	49.5	31	7,134	-33.8	44	283	53.8	31	7,586	-15.1	30	83	16.7
350	31	8,270	-35.1	37	260	50.1	31	8,120	-39.0	38	279	51.1	31	8,102	-39.1	39	281	54.2	31	[illegible],058	-39.9	43	282	61.2	31	8,583	-21.4	28	88	9.9
300	31	9,328	-42.5	40	258	59.6	31	9,161	-46.0		279	57.7	31	9,143	-46.0		281	62.7	31	9,098	-46.0		282	67.6	31	9,701	-29.5	26	127	4.9
250	31	10,537	-51.2		258	70.1	31	10,354	-53.0		277	64.5	31	10,335	-53.0		278	74.0	31	10,292	-52.8		282	73.2	31	10,975	-39.9	27	172	5.8
200	31	11,960	-58.8		265	75.6	31	11,776	-57.7		277	62.2	31	11,757	-57.7		279	68.4	31	11,717	-56.7		282	67.6	31	12,460	-52.3		182	7.2
175	31	12,794	-60.3		268	70.3	31	12,616	-58.6		275	57.1	31	12,597	-58.4		281	64.7	31	12,562	-57.3		284	58.9	31	13,309	-59.4		178	5.1
150	31	13,753	-61.8		266	66.2	31	13,586	-58.3		273	53.6	31	13,567	-58.0		279	55.0	31	13,536	-57.7		283	53.0	31	14,257	-67.0		43	1.2
125	31	14,875	-63.8		269	54.8	31	14,733	-58.9		277	43.1	31	14,711	-59.6		282	46.4	31	14,683	-58.9		283	45.6	31	15,336	-75.0		45	8.9
100	31	16,238	-65.6		275	42.0	31	16,127	-60.5		279	34.4	31	16,103	-60.7		283	34.0	30	16,077	-59.8		284	36.7	31	16,607	-82.3		73	15.0
80	31	17,591	-66.1		274	25.6	31	17,515	-61.0		281	26.6	31	17,487	-61.7		283	26.4	29	17,469	-60.4		285	24.9	31	17,847	-81.4		86	18.3
70	30	18,399	-65.5		273	16.5	31	18,342	-61.8		280	19.0	31	18,313	-61.8		287	18.8	29	18,298	-61.2		289	20.6	31	18,606	-76.5		87	18.1
60	28	19,339	-64.2		277	13.8	31	19,295	-61.6		288	13.2	31	19,269	-61.4		293	13.4	29	19,254	-60.8		286	16.3	31	19,502	-72.2		91	26.4
50	27	20,454	-63.1		287	9.5	31	20,427	-60.8		306	8.5	30	20,399	-61.1		310	7.6	29	20,387	-60.7		289	12.8	31	20,590	-66.7		91	39.6
40	26	21,830	-61.9		312	7.8	31	21,816	-60.7		342	5.2	30	21,785	-61.1		330	6.6	29	21,775	-60.7		299	9.1	31	21,952	-62.0		91	47.2
30	22	23,616	-60.6		322	4.1	28	23,610	-60.7		21	6.2	30	23,573	-60.8		1	8.0	29	23,563	-60.4		319	6.4	29	23,753	-56.5		90	53.2
25	22	24,752	-60.3		319	6.2	24	24,752	-60.1		48	8.9	30	24,709	-60.3		18	7.4	29	24,699	-60.0		318	6.0	27	24,918	-52.7		93	48.4
20	15	26,149	-60.1		348	8.7	22	26,141	-60.4		56	10.5	29	26,106	-59.9		43	7.6	29	26,092	-59.5		347	5.1	24	26,370	-49.1		96	24.3
15	9	27,986	-58.1				15	27,923	-60.1		9	6.2	24	27,915	-58.8		49	11.8	28	27,899	-58.1		25	2.1	19	28,267	-45.6		258	14.2
10													21	30,493	-55.6		53	12.2	27	30,467	-55.1		280	11.1	9	30,979	-40.6			
7													10	32,796	-53.8				19	32,755	-51.2		271	44.1						
5																			14	34,943	-47.5									
4																			[illegible]	36,394	-45.5									
3																			5	48,357	-39.2									

	PORTLAND, ME. 1015 MB						RAPID CITY, S. DAK. 901 MB						ST. CLOUD, MINN. 976 MB						ST. PAUL IS., ALASKA 1007 MB						SALEM, OREG. 1007 MB					
SURFACE	31	20	- 4.8	80	300	2.9	31	966	- 2.0	64	318	5.2	31	316	- 5.0	82	283	2.3	31	10	- 1.8	86	147	3.5	31	61	2.5	89	163	4.1
1000	31	135	- 3.6	69	291	4.3	31	132					31	121					31	59			166	3.3	31	119			152	4.1
950	31	541	- 3.5	69	285	7.4	31	544					31	528	- 5.2	80	290	3.3	31	463	- 4.4	78	184	3.9	31	533	2.9	76	200	10.9
900	31	968	- 4.9	72	278	9.3	31	977			315	4.7	31	951	- 3.1	69	289	8.5	31	889	- 6.9	83	201	6.0	31	972	1.1	70	216	13.4
850	31	1,416	- 6.0	72	280	13.4	31	1,438	2.0	46	301	13.8	31	1,405	- 1.8	54	284	12.4	31	1,333	- 9.0	75	236	8.7	31	1,430	- 1.2	64	226	14.8
800	31	1,890	- 7.3	69	281	18.3	31	1,925	- .4	45	301	17.9	31	1,887	- 2.7	43	290	15.0	31	1,802	-10.6	67	259	9.7	31	1,911	- 3.3	56	233	16.3
750	31	2,392	- 9.2	58	273	20.6	31	2,436	- 2.8	44	298	19.4	31	2,395	- 4.3	40	293	17.1	31	2,295	-12.9	65	259	11.3	31	2,416	- 5.9	54	238	17.3
700	31	2,923	-11.1	58	273	24.9	31	2,984	- 5.6	43	287	21.0	31	2,940	- 7.2	41	292	20.2	31	2,820	-15.1	61	259	14.4	31	2,958	- 8.5	54	244	17.9
650	31	3,488	-13.8	59	276	28.9	31	3,553	- 9.3	44	282	23.3	31	3,511	-10.4	42	293	22.7	31	3,373	-18.1	55	261	17.3	31	3,522	-12.1	51	243	20.6
600	31	4,095	-17.4	59	276	32.8	31	4,175	-12.8	41	285	26.2	31	4,127	-14.2	43	295	25.1	31	3,970	-21.7	57	260	19.2	31	4,137	-16.1	51	244	23.7
550	31	4,736	-21.6	56	276	36.3	31	4,828	-16.8	40	283	30.3	31	4,778	-18.3	45	290	28.7	31	4,597	-25.5	55	257	19.8	31	4,784	-20.2	46	248	26.8
500	31	5,438	-26.5	54	278	40.0	31	5,543	-21.9	38	279	33.8	31	3,511	-10.4	42	293	22.7	31	5,290	-30.0	51	260	22.0	31	5,487	-25.0	47	250	31.3
450	31	6,184	-32.0	54	276	41.6	31	6,302	-27.6	37	278	37.1	31	6,245	-28.5	48	290	35.0	31	6,024	-35.0	51	262	25.8	31	6,237	-30.6	46	251	34.6
400	31	7,016	-37.6	51	277	46.8	31	7,146	-33.7	39	278	38.9	31	7,085	-34.9	45	288	38.9	31	6,844	-40.4	50	260	30.3	31	7,072	-36.1	45	251	38.3
350	31	7,925	-43.3	58	278	51.3	31	8,068	-40.8	41	280	39.4	31	8,003	-42.0	41	288	42.5	31	7,743	-46.3		253	28.7	31	7,987	-42.3	36	259	40.4
300	31	8,951	-48.4		278	60.0	31	9,100	-48.2		281	43.9	31	9,032	-48.3		285	48.4	31	8,752	-52.0		248	35.2	31	9,014	-48.6		262	39.2
250	31	10,139	-52.4		279	60.4	31	10,281	-55.2		278	50.7	31	10,219	-53.7		285	53.8	31	9,924	-54.7		252	39.4	31	10,197	-53.9		268	41.4
200	31	11,576	-53.5		278	56.7	31	11,692	-57.9		275	50.9	31	11,642	-56.4		284	52.8	31	11,350	-54.7		253	40.6	31	11,620	-56.1		270	36.5
175	31	12,435	-53.6		277	53.4	31	12,533	-57.8		272	47.8	31	12,490	-55.8		282	50.1	31	12,208	-52.3		249	39.0	31	12,469	-55.5		264	31.7
150	31	13,425	-53.9		275	47.6	31	13,508	-56.5		271	44.7	31	13,474	-55.2		285	43.9	31	13,208	-51.0		252	38.9	31	13,453	-54.5		266	29.9
125	31	14,594	-54.4		274	39.0	31	14,663	-57.3		272	37.9	31	14,634	-56.1		286	36.7	31	14,395	-50.9		248	35.7	31	14,619	-55.1		265	27.0
100	31	16,019	-55.8		274	31.9	31	16,071	-58.4		271	26.8	31	16,050	-56.9		285	29.5	31	15,849	-50.1		243	35.5	31	16,043	-55.3		269	22.1
80	30	17,429	-57.2		276	25.6	29	17,468	-59.6		272	19.8	30	17,454	-58.2		289	22.1	31	17,308	-49.7		234	29.9	31	17,467	-55.3		264	13.0
70	30	18,272	-57.4		278	20.6	29	18,303	-59.3		272	15.3	30	18,293	-58.5		293	17.1	31	18,180	-50.2		231	29.9	31	18,316	-56.4		268	11.1
60	30	19,246	-58.2		280	14.0	27	19,267	-59.2		282	8.5	30	19,262	-58.6		297	14.0	31	19,186	-50.4		233	29.3	31	19,292	-56.9		294	5.8
50	28	20,389	-59.1		286	11.5	27	20,411	-58.9		310	4.3	30	20,408	-58.5		314	8.5	31	20,376	-50.4		234	25.8	31	20,444	-57.5		16	3.1
40	28	21,786	-59.3		289	8.5	25	21,817	-58.3		46	7.2	29	21,807	-58.9		5	6.0	31	21,830	-51.2		228	22.9	29	21,858	-57.1		71	8.2
30	26	23,577	-59.7		317	4.9	21	23,651	-58.2		77	18.3	26	23,614	-58.6		37	10.1	30	23,694	-53.0		205	17.5	28	23,679	-57.4		80	16.3
25	25	24,716	-59.4		1	4.7	20	24,802	-57.8		78	22.7	24	24,756	-58.5		60	16.5	29	24,870	-53.5		214	17.9	26	24,835	-57.1		81	20.6
20	22	26,105	-58.8		333	5.6	17	26,216	-58.5		69	24.3	18	26,198	-58.7		69	31.7	29	26,302	-54.6		188	17.3	22	26,256	-57.2		85	27.0
15	19	27,930	-57.7		29	4.3	10	28,026	-58.7				11	28,026	-57.7				20	28,166	-55.0		190	14.6	15	28,078	-57.5		84	34.0
10													5	30,597	-57.4				8	30,776	-58.2									

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb.)	SALT LAKE CITY, UTAH 871 MB						SAN ANTONIO, TEXAS 991 MB						SAN DIEGO, CALIF. 1000 MB						• SAN JUAN, P. R. 1014 MB						• SAULT STE. MARIE, MICH. 986 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,288	- 2.8	82	179	3.5	31	243	9.7	91	19	3.5	31	124	8.4	86	67	2.5	31	6	22.9	86	118	1.9	31	221	- 3.8	88	124	1.7
1000	31	184					31	165					31	127			44	1.4	31	128	23.5	81	90	6.4	31	110				
950	31	596					31	591	11.6	71	121	3.7	31	556	12.0	57	145	2.3	31	575	20.7	78	85	11.3	31	514	- 4.4	90	228	3.1
900	31	1,031					31	1,045	10.3	67	186	6.2	31	1,008	10.1	53	191	2.9	31	1,042	17.7	74	86	10.9	31	940	- 5.5	90	264	7.4
850	31	1,485	- 1.0	70	183	5.2	31	1,520	9.0	59	198	8.9	31	1,481	7.7	52	211	3.9	31	1,529	14.9	69	88	9.1	31	1,389	- 5.4	76	283	10.9
800	31	1,970	- .2	53	188	11.7	31	2,021	7.5	56	217	11.3	31	1,979	5.2	47	231	6.0	31	2,040	12.6	59	90	6.2	31	1,864	- 6.5	69	289	14.0
750	31	2,489	- 2.1	48	206	13.2	31	2,552	6.2	43	228	12.6	31	2,500	2.4	44	242	8.5	31	2,578	10.5	46	104	4.9	31	2,367	- 8.2	66	285	17.5
700	31	3,031	- 4.8	47	236	13.2	31	3,115	3.7	36	242	15.5	31	3,058	- .6	41	245	10.3	31	3,152	7.4	41	133	3.1	31	2,901	-10.5	66	285	22.1
650	31	3,611	- 8.4	50	246	16.7	31	3,708	.2	34	240	16.7	31	3,639	- 4.2	39	248	12.2	31	3,755	4.6	36	114	2.9	31	3,465	-13.5	60	290	25.8
600	31	4,227	-12.4	50	247	19.6	31	4,350	- 3.8	R33	240	21.2	31	4,274	- 8.1	33	255	15.9	31	4,409	1.1	32	199	1.6	31	4,073	-17.3	57	289	27.6
550	31	4,886	-16.5	50	249	22.7	31	5,027	- 8.1	R34	239	24.3	31	4,936	-12.8	33	260	17.3	31	5,094	- 2.9	31	238	3.1	31	4,717	-21.3	52	284	30.5
500	31	5,597	-21.6	49	253	26.2	31	5,767	-12.7	R34	245	28.6	31	5,665	-17.6	30	263	22.1	31	5,854	- 7.4	30	273	4.9	31	5,416	-25.9	50	284	33.4
450	31	6,363	-27.0	46	248	26.0	31	6,558	-17.9	R35	248	36.7	31	6,440	-22.9	32	266	25.8	31	6,660	-13.1	29	272	7.4	31	6,165	-31.3	49	286	35.7
400	31	7,204	-33.3	40	250	30.5	31	7,436	-23.7	35	250	44.1	31	7,299	-28.9	32	265	30.3	31	7,554	-19.7	29	282	13.2	31	6,993	-37.2	50	285	40.4
350	31	8,128	-40.4	46	247	37.5	31	8,399	-30.5	41	254	53.4	31	8,241	-35.7	33	263	36.5	31	8,531	-26.9	29	282	17.5	31	7,904	-43.1	51	288	46.4
300	31	9,162	-47.4		254	38.1	31	9,476	-38.9	39	254	59.2	31	9,297	-43.1	R36	262	43.9	31	9,623	-35.4	28	281	23.9	31	8,928	-49.3		290	53.6
250	31	10,349	-54.0		262	40.8	31	10,702	-48.5		260	64.5	31	10,508	-49.7		260	51.1	31	10,867	-44.7		276	33.4	31	10,108	-54.3		287	54.2
200	31	11,766	-57.3		265	43.1	30	12,135	-57.6		265	68.8	31	11,949	-55.5		260	53.6	30	12,323	-55.3		269	44.1	31	11,535	-54.5		285	53.2
175	31	12,610	-56.6		266	44.1	30	12,971	-60.9		267	71.1	31	12,797	-57.1		258	57.3	30	13,163	-61.3		271	48.6	31	12,390	-54.3		285	49.0
150	31	13,587	-57.0		265	41.0	29	13,927	-64.7		271	65.5	31	13,769	-59.2		257	50.7	30	14,105	-67.6		277	44.9	31	13,378	-54.0		289	43.9
125	31	14,737	-58.6		263	35.9	27	15,031	-68.3		271	54.2	31	14,906	-61.1		257	46.0	30	15,188	-72.7		276	38.7	31	14,547	-54.6		289	38.1
100	31	16,134	-59.9		265	28.7	27	16,356	-72.0		271	46.0	29	16,285	-64.3		258	35.4	29	16,485	-76.8		284	28.9	31	15,972	-55.9		290	30.3
80	31	17,525	-60.7		265	20.6	25	17,665	-72.0		275	31.9	29	17,646	-65.3		261	24.5	29	17,770	-75.2		285	13.4	31	17,387	-57.1		292	24.5
70	31	18,354	-60.7		269	15.2	23	18,453	-71.1		273	25.8	29	18,459	-64.8		267	17.1	29	18,551	-70.8		270	7.2	30	18,228	-57.6		296	20.2
60	31	19,313	-60.8		278	8.5	22	19,375	-69.0		271	18.8	29	19,400	-63.6		275	11.5	29	19,473	-67.0		248	2.7	29	19,204	-58.0		301	15.5
50	29	20,445	-60.6		315	4.9	21	20,472	-65.9		271	11.1	29	20,519	-63.2		283	6.8	29	20,580	-64.5		89	4.1	28	20,355	-58.2		317	10.5
40	26	21,836	-59.7		57	4.9	18	21,830	-63.2		276	11.5	28	21,897	-61.6		297	3.3	28	21,957	-60.6		71	9.3	28	21,758	-58.5		360	7.6
30	22	23,638	-59.5		60	9.5	17	23,615	-60.6		272	15.2	27	23,684	-60.5		276	3.9	27	23,769	-55.5		75	7.0	28	23,566	-58.6		63	12.4
25	20	24,781	-59.2		67	14.2	16	24,747	-59.8		268	21.4	25	24,826	-59.7		308	2.7	26	24,935	-53.6		89	4.7	26	24,713	-58.7		73	16.5
20	16	26,188	-59.2		64	20.4	13	26,141	-58.3				25	26,223	-58.9		302	5.6	26	26,371	-52.4		146	3.3	24	26,130	-58.3		67	23.1
15	10	27,974	-58.8				8	27,965	-57.3				25	28,035	-56.8		304	9.9	25	28,249	-48.1		298	5.2	15	27,945	-58.8		66	30.5
10													24	30,625	-53.1		298	18.5	14	30,946	-41.1		269	31.5	9	30,505	-57.7			
7													18	32,963	-47.4		284	36.5	5	33,412	-36.1				5	32,805	-56.1			
5													15	35,216	-43.3															

Standard pressure surface (mb.)	SHEMYA, ALASKA 1001 MB						• SHREVEPORT, LA. 1011 MB						SPOKANE, WASH. 930 MB						SWAN ISLAND, W. I. 1013 MB						TAMPA, FLA. 1019 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	38	.7	86	213	6.0	31	79	7.2	87	131	2.5	31	722	- 1.4	88	149	3.1	31	10	25.3	79	72	7.8	31	■	12.1	89	40	3.9
1000	31	41			159	8.4	31	167	8.7	78	134	4.1	31	133					31	120	24.5	79	65	10.3	31	167	14.5	77	58	6.2
950	31	450	- 1.8	80	217	9.5	31	601	9.4	66	193	5.8	31	542					31	569	21.0	85	66	14.8	31	602	13.9	65	96	3.5
900	31	880	- 4.1	79	229	12.8	31	1,042	9.4	56	241	7.2	31	977	- .8	74	180	9.1	31	1,036	17.8	84	67	12.6	31	1,056	11.9	55	120	.8
850	31	1,330	- 6.9	80	234	14.0	31	1,516	8.0	51	253	10.3	31	1,434	- 1.8	66	209	15.7	31	1,524	14.8	81	65	9.3	31	1,533	9.7	56	269	2.5
800	31	1,801	- 9.5	73	240	15.0	31	2,014	5.9	49	254	12.6	31	1,914	- 4.3	64	226	18.8	31	2,036	12.3	72	70	7.6	31	2,035	8.6	43	294	7.0
750	31	2,295	-12.1	69	245	16.3	31	2,544	4.4	42	261	14.8	31	2,418	- 6.9	63	234	21.4	31	2,580	10.8	55	77	6.4	31	2,571	7.4	32	291	12.6
700	31	2,822	-14.9	64	249	18.1	31	3,101	1.7	41	261	18.8	31	2,957	- 9.6	55	242	23.1	31	3,150	9.1	37	79	6.6	31	3,134	5.0	31	283	15.3
650	31	3,377	-17.7	62	246	20.8	31	3,695	- 1.6	42	263	22.1	31	3,522	-12.6	50	245	26.2	31	3,760	5.9	35	77	7.2	31	3,737	1.7	30	283	17.7
600	31	3,976	-21.3	61	248	24.1	31	4,327	- 5.4	38	265	27.6	31	4,133	-16.4	47	249	28.9	31	4,412	2.1	33	74	5.1	31	4,376	- 2.2	29	279	22.1
550	31	4,607	-25.3	58	243	27.6	31	5,002	- 9.7	32	266	29.9	31	4,780	-20.7	48	251	29.7	31	5,105	- 1.9	28	66	2.1	31	5,060	- 6.8	31	277	26.8
500	31	5,298	-29.8	59	242	31.1	31	5,734	-14.4	33	262	34.0	31	5,480	-25.7	49	251	34.0	31	5,861	- 6.4	29	47	2.5	31	5,800	-11.6	31	277	31.3
450	31	6,038	-34.7	54	240	33.8	31	6,522	-19.9	34	261	40.8	31	6,230	-31.3	49	250	37.9	31	6,674	-11.6	24	351	2.9	31	6,601	-17.0	31	280	36.5
400	31	6,855	-40.5	53	248	33.2	31	7,389	-25.8	37	260	43.9	31	7,060	-37.2	49	248	42.2	31	7,570	-18.1	22	307	6.2	31	7,475	-23.2	30	278	41.0
350	31	7,753	-46.3		248	39.4	31	8,343	-32.6	44	260	53.2	31	7,970	-43.5	61	251	47.4	31	8,553	-25.3	21	302	10.9	31	8,439	-30.1	32	277	47.0
300	31	8,765	-51.6		246	41.8	31	9,410	-40.8	53	262	61.6	31	8,993	-49.7		252	53.4	31	9,654	-33.8	20	303	14.6	31	9,518	-38.5	34	277	53.0
250	31	9,936	-55.6		243	42.3	31	10,625	-50.1		266	75.2	31	10,170	-54.9		257	54.2	31	10,906	-43.9		286	16.5	31	10,746	-47.9		279	60.6
200	31	11,352	-56.7		245	38.5	31	12,050	-59.1		270	76.9	30	11,586	-55.8		261	45.5	31	12,366	-55.7		275	20.6	31	12,185	-57.7		282	72.5
175	31	12,202	-55.0		245	39.8	30	12,877	-62.1		272	76.0	29	12,436	-54.7		257	41.6	31	13,204	-62.3		275	25.1	31	13,018	-62.3		282	71.9
150	31	13,190	-53.8		244	37.1	30	13,824	-64.2		273	70.5	29	13,424	-53.8		260	35.5	31	14,141	-68.6		272	28.2	31	13,962	-65.5		280	62.4
125	31	14,364	-52.5		242	39.4	30	14,932	-66.7		274	60.6	29	14,596	-53.4		267	28.9	31	15,220	-73.0		281	25.1	31	15,062	-68.8		278	55.0
100	30	15,802	-51.8		244	40.8	30	16,273	-68.5		277	45.8	29	16,031	-53.7		264	22.3	31	16,515	-77.1		286	19.2	30	16,389	-72.0		280	43.7
80	30	17,250	-51.3		240	36.7	30	17,605	-69.5		277	29.3	29	17,458	-54.8		266	17.7	29	17,790	-77.2		317	8.4	30	17,703	-71.9		279	24.7
70	30	18,115	-51.8		242	34.8	29	18,402	-68.7		276	22.9	29	18,310	-55.3		274	15.9	29	18,562	-73.2		350	4.3	30	18,493	-70.1		277	21.2
60	30	19,116	-51.7		235	30.1	29	19,329	-66.7		273	16.1	29	19,292	-55.4		300	10.7	28	19,476	-68.4		83	2.5	30	19,416	-67.3		276	17.7
50	30	20,298	-51.6		231	27.6	27	20,437	-64.9		280	10.3	29	20,454	-55.4		344	5.4	28	20,579	-64.6		105	6.8	30	20,525	-64.0		276	14.4
40	28	21,731	-52.7		229	19.6	27	21,805	-62.7		294	8.9	29	21,876	-55.1		47	7.4	26	21,955	-60.7		87	11.3	30	21,903	-60.8		268	15.9
30	27	23,592	-53.2		228	16.3	27	23,585	-60.9		269	14.0	27	23,709	-55.5		64	16.9	23	23,763	-55.8		91	10.9	29	23,706	-57.8		271	21.0
25	27	24,763	-54.0		236	14.2	23	24,719	-60.0		276	17.3	25	24,869	-56.1		62	21.8	22	24,921	-54.4		73	6.8	29	24,860	-56.2		275	23.1
20	24	26,188	-53.8		247	12.6	22	26,118	-58.6		277	21.6	22	26,272	-56.7		75	26.0	22	26,360	-51.5		40	3.1	29	26,284	-54.6		272	28.2
15	16	28,001	-55.6		300	5.6	16	27,953	-56.6		268	26.4	17	28,089	-57.3		76	30.1	20	28,241	-47.5		232	4.3	24	28,134	-52.3		259	38.3
10	10	30,604	-55.3				14	30,540	-53.0		264	42.0							7	30,949	-41.6				14	30,883	-45.2		250	62.9
7							11	32,825	-48.6		264	61.2													9	33,262	-41.5			
5																									6	35,580	-37.5			

Standard pressure surface (mb.)	■ TATOOSH IS., WASH 1007 MB						TOPEKA, KANS. 985 MB						TRUK, CAROLINE IS. + 1009 MB						• TUCSON, ARIZ. 925 MB						• WAKE IS., PACIFIC AREA 1015 MB					
	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	31	6.2	86	123	7.8	31	269	1.5	74	227	3.5	31	2	28.2	77	57	11.1	31	789	7.4	73	137	6.0	31	5	24.9	78	60	13.0
1000	31	87			139	9.3	31	145					31	84	27.4	73	60	13.6	31	138					31	138	23.6	78	68	14.8
950	31	504	2.5	82	180	14.0	31	558	4.0	67	252	9.5	31	530	23.5	73	72	20.6	31	565					31	583	19.3	85	76	17.5
900	31	939	- .1	83	198	16.1	31	1,000	4.1	62	265	14.0	31	1,008	20.5	68	79	20.4	31	1,013	10.6	54	147	8.2	31	1,048	16.0	78	82	17.7
850	31	1,395	- 2.6	82	207	16.5	31	1,465	3.9	53	272	16.1	31	1,501	18.2	61	83	18.8	31	1,488	8.9	52	187	7.4	31	1,533	13.6	66	82	15.7
800	31	1,874	- 5.1	75	218	16.5	31	1,957	2.3	50	270	18.6	31	2,019	16.2	51	87	17.7	31	1,988	6.0	52	218	10.1	31	2,044	13.4	35	80	13.2
750	31	2,376	- 7.8	69	228	17.1	31	2,472	.2	49	267	21.8	31	2,563	13.7	43	90	16.5	31	2,511	3.2	47	220	10.1	31	2,586	12.5	24	70	11.1
700	31	2,913	-11.2	68	233	19.0	31	3,028	- 2.4	47	270	24.5	31	3,145	11.0	40	92	16.7	31	3,070	.1	46	227	10.5	31	3,163	10.3	21	65	10.5
650	31	3,472	-14.7	61	233	20.6	31	3,605	- 5.5	46	272	27.8	31	3,756	7.4	39	91	16.3	31	3,655	- 3.4	45	242	13.4	31	3,770	7.1	21	51	9.3
600	31	4,080	-18.6	59	238	24.1	31	4,237	- 9.2	41	274	31.5	31	4,415	3.5	34	94	19.0	31	4,288	- 7.6	39	240	16.1	31	4,429	3.3	21	44	8.4
550	31	4,717	-22.8	55	242	25.4	31	4,897	-13.4	37	277	34.8	31	5,111	- .5	31	98	19.8	31	4,952	-12.2	37	240	18.8	31	5,121	- 1.2	22	28	8.9
500	31	5,416	-27.8	54	243	28.9	31	5,624	-18.2	35	275	40.4	31	5,874	- 4.5	27	96	20.0	31	5,682	-17.3	41	244	22.7	31	5,881	- 6.4	21	6	11.5
450	31	6,160	-33.2	53	243	31.1	31	6,392	-24.1	37	274	42.2	31	6,694	- 9.3	26	93	22.7	31	6,455	-22.4	42	248	29.7	31	6,690	-11.8	23	350	14.4
400	31	6,984	-38.7	51	245	38.3	31	7,250	-30.6	38	277	45.8	31	7,599	-14.9	23	93	20.6	31	7,319	-28.1	37	248	37.9	31	7,597	-17.9	24	333	17.5
350	31	7,889	-44.7		248	41.2	31	8,187	-37.0	38	277	53.8	31	8,597	-21.4	25	90	14.0	31	8,265	-34.6	36	250	44.1	31	8,575	-24.9	24	325	23.5
300	31	8,907	-50.2		245	44.7	31	9,235	-44.7		278	54.8	31	9,717	-29.7	24	96	8.5	31	9,326	-41.6	33	254	52.1	31	9,677	-33.2	25	316	26.4
250	31	10,086	-54.1		253	46.8	31	10,433	-52.6		275	62.9	31	10,990	-40.0	23	111	4.5	31	10,541	-49.4		257	64.3	31	10,933	-42.7		305	27.6
200	31	11,513	-54.7		257	37.9	31	11,850	-58.7		277	63.3	31	12,474	-52.2		118	3.9	31	11,981	-55.6		259	67.8	31	12,402	-53.8		299	29.9
175	30	12,373	-53.7		260	34.0	31	12,686	-60.0		278	57.5	31	13,325	-59.2		115	5.6	31	12,826	-58.1		258	68.8	31	13,248	-59.9		300	28.4
150	30	13,366	-53.0		265	31.1	31	13,647	-60.2		278	56.9	31	14,273	-66.8		96	6.2	31	13,791	-60.7		257	63.1	30	14,194	-66.6		303	28.2
125	29	14,538	-52.9		265	26.2	31	14,783	-60.9		280	45.8	31	15,353	-74.7		83	11.7	31	14,918	-63.6		256	52.6	30	15,277	-73.7		305	24.9
100	29	15,976	-52.9		265	21.8	31	16,165	-62.2		283	35.2	31	16,626	-81.8		81	17.7	30	16,276	-66.2		255	40.6	26	16,563	-79.9		306	[illegible]
80	28	17,421	-53.6		271	16.9	31	17,538	-63.5		281	22.3	31	17,871	-80.9		91	20.4	30	17,623	-67.5		259	31.1	22	17,817	-79.9		12	5.6
70	28	18,277	-54.4		278	11.1	31	18,357	-63.3		287	16.7	31	18,631	-76.0		95	19.8	30	18,426	-67.0		264	22.7	21	18,578	-76.2		84	7.4
60	28	19,264	-54.8		311	7.0	31	19,308	-62.5		288	12.6	31	19,532	-71.7		99	25.6	30	19,360	-65.3		266	16.6	21	19,476	-71.3		94	8.5
50	27	20,428	-55.2		360	5.4	31	20,435	-61.5		297	7.2	30	20,620	-66.7		97	35.4	30	20,472	-64.2		267	13.0	21	20,569	-65.7		47	7.8
40	26	21,854	-55.2		49	5.8	31	21,820	-61.3		334	4.7	30	21,986	-61.6		94	43.9	30	21,844	-62.2		268	8.5	21	21,936	-61.8		83	9.9
30	25	23,691	-55.3		70	17.9	30	23,606	-61.3		359	6.6	29	23,793	-55.6		92	51.1	30	23,627	-61.0		303	6.2	21	23,733	-57.4		77	15.0
25	23	24,857	-55.3		75	22.3	28	24,742	-60.4		9	8.9	29	24,965	-52.1		96	48.0	30	24,761	-60.5		297	5.4	21	24,890	-55.1		84	15.0
20	21	26,283	-56.0		87	25.6	24	26,124	-60.3		13	8.2	27	26,419	-49.0		102	29.3	29	26,148	-59.9		294	6.8	21	26,323	-52.7		110	[illegible]
15	13	28,116	-57.5		97	43.1	16	27,928	-59.6		24	7.0	15	28,324	-46.5		237	8.5	25	27,957	-58.3		293	11.8	19	28,164	-54.3		127	8.9
10							8	30,434	-57.1				6	30,975	-43.6				21	30,532	-53.3		286	20.2	15	30,809	-45.5		174	27.8
7																			8	32,874	-49.0				12	33,209	-39.3			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

DECEMBER 1965

Standard pressure surface (mb.)	* WALLOPS IS. VA. NASA 1020 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	WASHINGTON, D. C. 1010 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	3	2.5	80	279	2.9	31	84	- .5	76	305	1.9
1000	31	164	5.0	57	280	5.6	31	160			277	3.1
950	31	580	4.1	53	299	11.3	31	576	3.2	59	283	11.7
900	31	1,020	2.0	60	284	13.8	31	1,013	1.2	63	282	15.9
850	31	1,480	.3	57	279	16.7	31	1,471	- .7	60	283	17.5
800	31	1,966	- .6	44	281	19.4	31	1,955	- 1.3	51	286	20.0
750	31	2,476	- 2.3	36	282	24.9	31	2,467	- 3.3	50	286	23.5
700	31	3,026	- 4.8	39	283	30.3	31	3,012	- 5.8	47	286	28.7
650	31	3,601	- 7.9	43	282	32.8	31	3,587	- 8.9	48	283	31.1
600	31	4,223	-11.7	49	282	35.9	31	4,205	-12.5	52	282	34.2
550	31	4,879	-15.8	50	280	38.7	31	4,860	-16.6	52	281	37.7
500	31	5,597	-20.5	46	279	42.3	31	5,574	-21.5	47	281	42.0
450	31	6,359	-25.8	41	279	48.4	31	6,337	-27.0	47	281	44.7
400	31	7,213	-31.6	41	278	56.9	31	7,182	-33.0	44	280	52.1
350	31	8,145	-38.3	43	279	63.5	31	8,110	-38.8	44	280	58.9
300	31	9,191	-45.1		280	70.7	31	9,153	-45.6		280	63.7
250	31	10,388	-52.8		280	75.4	31	10,348	-53.0		283	68.6
200	30	11,810	-58.0		284	65.9	31	11,769	-57.6		284	65.9
175	30	12,649	-58.9		282	60.6	31	12,612	-57.6		285	58.1
150	30	13,616	-59.2		285	49.9	31	13,584	-58.3		282	54.0
125	29	14,758	-60.4		282	43.1	31	14,728	-59.5		282	46.8
100	29	16,143	-62.0		281	34.4	30	16,124	-61.1		280	35.7
80	29	17,519	-62.1		283	29.9	29	17,502	-61.5		282	28.7
70	29	18,344	-62.1		281	27.0	29	18,330	-61.3		285	21.4
60	26	19,292	-61.7		283	16.5	29	19,285	-61.7		285	13.6
50	26	20,420	-61.4		285	14.2	29	20,414	-61.3		288	11.1
40	26	21,806	-60.6		285	14.6	29	21,799	-60.8		294	8.5
30	24	23,607	-59.8		282	12.2	28	23,594	-60.4		301	7.2
25	22	24,749	-59.7		287	13.4	27	24,730	-60.3		303	8.7
20	21	26,141	-59.2		280	18.6	27	26,120	-60.1		304	8.5
15	21	27,952	-57.2		276	23.5	25	27,916	-58.6		299	10.1
10	19	30,531	-53.0		269	37.9	18	30,477	-55.1		267	15.2
7	11	32,892	-49.4				10	32,784	-52.3			
5	5	35,077	-46.6									

Standard pressure surface (mb.)	WINNEMUCCA, NEV. 868 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	WINSLOW, ARIZ. 851 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	YAKUTAT, ALASKA 1001 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	1,310	- 5.8	81	129	1.9	31	1,492	- 1.4	79	198	2.5	30	12	- 5.5	89	113	4.9
1000	31	182					31	186					30	20			98	4.1
950	31	592					31	604					30	425	- 2.6	77	126	8.9
900	31	1,027					31	1,042					29	857	- 5.2	80	165	8.9
850	31	1,475	- .7	66	163	4.3	31	1,501			170	1.4	29	1,304	- 8.0	77	174	9.7
800	31	1,960	- .4	53	205	7.2	31	1,989	2.0	59	216	8.4	29	1,773	-11.1	71	192	8.0
750	30	2,470	- 2.7	52	234	12.6	31	2,509	1.2	48	225	12.0	29	2,265	-14.1	64	197	7.0
700	30	3,016	- 5.6	49	242	17.9	31	3,062	- 1.4	46	229	12.6	29	2,786	-17.5	61	209	7.4
650	30	3,589	- 9.4	47	244	19.8	31	3,646	- 4.7	44	239	14.8	29	3,336	-20.8	61	230	8.4
600	30	4,208	-12.8	41	249	22.3	31	4,275	- 8.7	38	242	18.1	29	3,925	-24.7	62	244	10.9
550	30	4,861	-17.0	40	250	23.1	31	4,938	-13.2	R33	251	20.6	29	4,552	-29.0	59	245	13.4
500	30	5,575	-22.0	38	250	26.6	31	5,663	-18.5	R32	245	25.1	29	5,229	-33.9	60	251	14.4
450	30	6,337	-27.7	38	253	27.6	31	6,433	-24.2	R30	248	25.4	29	5,958	-39.3	60	255	18.3
400	30	7,179	-33.8	36	253	31.1	31	7,289	-30.5	R29	250	31.3	29	6,757	-44.4		264	22.3
350	30	8,101	-40.4	R31	252	30.3	31	8,225	-37.2	R28	252	34.2	28	7,645	-49.0		278	27.2
300	30	9,136	-47.2		257	34.0	31	9,274	-44.1	R22	259	39.8	28	8,650	-51.3		294	30.1
250	30	10,325	-53.4		257	36.5	31	10,479	-50.7		261	49.9	28	9,833	-51.1		292	29.7
200	30	11,748	-56.5		260	38.1	31	11,913	-55.9		262	57.1	28	11,289	-49.0		278	24.9
175	30	12,597	-55.8		261	39.8	31	12,760	-57.2		262	58.7	28	12,166	-48.9		280	24.1
150	30	13,577	-56.4		259	36.3	31	13,731	-58.9		262	52.8	28	13,178	-48.7		276	22.1
125	30	14,731	-57.9		259	33.6	31	14,869	-61.4		262	44.9	28	14,380	-47.7		285	20.2
100	30	16,137	-57.9		257	25.6	31	16,244	-63.8		263	35.2	28	15,853	-47.7		278	18.8
80	30	17,540	-59.1		267	15.3	31	17,606	-65.1		261	25.3	28	17,327	-47.6		276	19.2
70	29	18,377	-59.8		282	11.5	31	18,419	-65.1		271	18.5	28	18,208	-47.7		278	17.9
60	29	19,339	-60.0		303	6.4	31	19,359	-64.3		275	12.0	28	19,226	-47.9		274	15.3
50	29	20,477	-59.8		351	2.7	30	20,477	-62.7		286	7.2	28	20,426	-48.7		283	13.4
40	28	21,871	-59.1		44	4.7	30	21,855	-61.8		299	3.3	28	21,891	-49.2		280	12.2
30	27	23,677	-58.6		64	12.0	27	23,636	-60.8		357	4.1	28	23,773	-50.6		287	10.1
25	24	24,825	-58.3		64	16.1	26	24,770	-60.4		351	4.7	28	24,960	-51.2		273	7.2
20	16	26,251	-58.1		84	24.3	24	26,166	-59.8		9	4.9	26	26,400	-52.5		288	3.1
15	10	28,081	-58.3				14	27,967	-58.8		333	10.7	22	28,242	-54.9		279	5.1
10													13	30,815	-58.8			
7																		
5																		

Standard pressure surface (mb.)	+ YAP, CAROLINE IS. 1008 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	YUCCA FLAT, NEV. 881 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed	YUMA, ARIZ. 998 MB Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	17	28.0	78	52	9.1	31	1,196	- .7	79	318	2.1	21	131	9.6	73	35	.6
1000	31	89	27.1	76	56	12.2	31	169					21	116				
950	31	532	23.0	73	67	21.0	31	584					21	548	12.4	55	360	2.1
900	31	1,011	20.0	70	75	24.1	31	1,024					21	998	10.8	53	141	1.7
850	31	1,503	17.6	62	79	22.5	31	1,484	3.6	50	357	1.9	21	1,473	8.9	55	193	6.0
800	31	2,021	15.5	51	83	21.6	31	1,975	1.7	48	214	3.7	21	1,972	5.9	57	211	9.7
750	31	2,564	12.9	39	86	21.0	31	2,488	- .6	48	214	9.3	21	2,492	2.5	57	217	11.7
700	31	3,143	10.1	34	83	20.2	31	3,042	- 3.4	46	228	12.6	21	3,051	- .9	51	230	13.6
650	31	3,752	7.1	29	86	20.0	31	3,617	- 6.8	42	234	13.6	21	3,632	- 4.5	46	227	15.7
600	31	4,410	3.6	27	93	19.2	31	4,245	-10.7	38	243	16.3	21	4,265	- 8.5	35	227	17.7
550	31	5,103	- .3	26	91	21.8	31	4,902	-15.1	36	248	19.6	21	4,929	-13.2	34	229	20.2
500	31	5,869	- 4.7	24	94	23.7	31	5,623	-20.2	R31	244	23.1	21	5,653	-18.2	30	237	23.7
450	31	6,687	- 9.7	21	93	26.6	31	6,389	-25.7	R31	253	26.2	21	6,421	-23.8	36	238	25.6
400	31	7,592	-15.2	20	89	24.3	31	7,239	-32.0	R33	255	28.2	21	7,281	-29.5	32	236	33.2
350	31	8,587	-22.2	20	87	22.7	31	8,170	-38.7	R31	258	30.1	21	8,222	-35.3	28	241	43.3
300	31	9,701	-30.6	20	80	18.3	31	9,213	-45.5		258	34.2	20	9,273	-42.3		247	48.0
250	31	10,970	-40.5	21	90	12.8	31	10,410	-52.4		262	37.5	20	10,488	-48.7		255	55.6
200	31	12,451	-52.7		106	11.7	31	11,837	-56.7		261	42.9	19	11,933	-54.1		261	56.1
175	31	13,299	-60.0		103	11.1	31	12,684	-56.7		262	44.3	19	12,785	-56.3		256	54.4
150	31	14,244	-67.7		100	12.6	31	13,659	-58.0		261	40.0	17	13,757	-59.2		256	50.5
125	31	15,319	-75.7		94	15.3	31	14,803	-60.0		263	36.5	15	14,875	-61.1		257	50.7
100	31	16,582	-83.8		89	20.0	31	16,191	-61.8		264	28.9	11	16,248	-63.0			
80	31	17,818	-81.7		93	21.4	31	17,568	-62.9		258	20.0						
70	31	18,573	-78.1		91	20.2	31	18,390	-62.8		264	14.8						
60	31	19,467	-71.5		85	21.8	31	19,340	-62.1		275	9.3						
50	31	20,559	-66.3		84	31.3	30	20,468	-61.7		298	3.7						
40	30	21,927	-61.2		88	42.3	29	21,851	-61.1		23	2.9						
30	29	23,733	-56.0		92	47.4	29	23,640	-60.5		65	4.9						
25	29	24,900	-53.2		91	44.7	26	24,782	-60.0		49	7.6						
20	27	26,351	-49.6		89	37.1	25	26,176	-59.4		48	10.3						
15	23	28,253	-46.2		94	14.8	19	27,991	-57.6		63	12.8						
10	14	30,956	-41.3				8	30,532	-56.7									

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Relative humidity averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Relative humidity data are not published for standard pressure surfaces for which less than 3 observations are available.

Relative humidity data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from lithium chloride hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature in degrees Celsius, relative humidity in percent, and resultant winds in degrees and knots.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. They were also equipped with carbon hygristors. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.C.T.

R More than half of the observations are from statistical values.

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun. DECEMBER 1965

ALBUQUERQUE, N. MEX.

Date	Sun's zenith distance A M 78.7°	75.7°	70.7°	60.0°	*	Sun's zenith distance P M 60.0°	70.7°	75.7°	78.7°
Air mass	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Dec.									
2-----	1.01	1.12	1.23	1.41	1.43	1.38	1.24	1.09	0.95
3-----	1.09	1.19	1.30	1.43	1.43	1.36	1.22	1.08	.96
4-----	1.06	1.20	1.27	1.45	1.48	1.46	1.31	1.19	1.08
5-----	1.13	1.23	1.34	1.49	1.52	1.49	1.35	1.23	1.12
6-----	1.10	1.23	1.35	1.46	1.48	1.44	1.26	1.05	1.06
7-----	1.04	1.15	1.27	1.41	1.41	----	----	----	----
8-----	1.01	1.09	1.24	----	----	----	----	----	----
12----	1.00	1.12	1.25	1.40	1.43	1.42	1.28	1.15	1.07
14----	1.06	1.15	1.27	1.38	1.40	1.40	1.25	1.11	.99
18----	----	1.04	1.15	1.35	1.37	1.33	1.16	----	.91
19----	1.01	1.13	1.27	1.42	1.44	1.40	----	1.12	1.01
20----	1.09	1.21	1.43	1.49	1.51	1.48	1.30	1.16	1.03
21----	1.11	1.21	1.33	----	----	----	----	----	----
24----	1.00	1.13	1.26	1.43	1.45	1.45	1.25	1.14	1.02
25----	1.05	1.12	1.24	1.44	1.45	----	----	----	----
26----	1.04	1.15	1.27	1.41	1.42	1.45	1.29	1.17	1.06
27----	.96	1.06	----	----	----	----	----	----	----
28----	1.06	1.17	1.30	1.44	1.44	1.40	1.32	1.22	1.08
29----	----	----	----	----	----	1.36	----	----	----
30----	----	----	----	----	----	----	----	----	.98
31----	----	----	----	1.38	1.41	----	1.22	1.07	.97
Averages	1.05	1.15	1.28	1.42	1.44	1.42	1.27	1.14	1.02

BLUE HILL OBS., MASS.

Date	Sun's zenith distance A M 78.7°	75.7°	70.7°	60.0°	*	Sun's zenith distance P M 60.0°	70.7°	75.7°	78.7°
Air mass	4.89	3.92	2.94	1.96	*	1.96	2.94	3.92	4.89
Dec.									
1-----	0.94	1.04	1.18	----	1.24	----	1.08	0.96	0.84
2-----	.72	.83	.99	----	----	----	----	----	----
5-----	.87	.95	1.06	----	1.15	----	1.03	.87	.77
7-----	.69	.83	.98	----	1.25	----	1.18	1.06	.95
10----	----	----	----	----	1.16	----	1.05	.90	.74
20----	.96	1.06	1.18	----	1.25	----	1.16	1.01	.91
21----	.94	1.01	1.13	----	1.23	----	1.13	1.00	.89
22----	.83	.91	1.07	----	1.17	----	----	----	----
26----	----	----	----	----	1.30	----	1.20	1.04	.93
27----	.98	1.07	1.20	----	----	----	----	----	----
28----	----	----	1.07	----	1.18	----	1.07	.93	.84
Averages	0.87	0.96	1.10	----	1.21	----	1.11	0.97	0.86

TUCSON, ARIZ.

Date	Sun's zenith distance A M 78.7°	75.7°	70.7°	60.0°	*	Sun's zenith distance P M 60.0°	70.7°	75.7°	78.7°
Air mass	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Dec.									
1-----	0.83	0.91	1.03	----	----	----	1.07	0.95	0.86
2-----	.78	.83	1.04	----	----	----	1.05	.90	.77
3-----	.94	1.03	----	----	----	----	1.14	1.03	.92
4-----	1.03	1.12	1.24	----	----	----	1.21	1.08	.99
5-----	1.08	1.12	1.27	----	----	----	1.25	1.12	1.01
24----	.93	1.02	1.13	----	----	----	1.16	1.03	.93
25----	1.05	1.14	1.23	----	----	----	----	----	----
28----	----	1.13	1.21	----	----	----	1.14	----	.93
Averages	0.95	1.03	1.16	----	----	----	1.14	1.01	0.91

HS	Slight haze	H	Haze
HM	Moderate haze	S	Slight haze - indeterminable
( )	Clouds present	*	Values corresponding to true solar noon

MADISON, WIS.

Date	Sun's zenith distance A M 78.7°	75.7°	70.7°	60.0°	*	Sun's zenith distance P M 60.0°	70.7°	75.7°	78.7°
Air mass	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Dec.									
1-----	S 0.81	S 0.92	S 1.09	----	----	----	----	----	----
5-----	S .92	S 1.02	----	----	----	----	----	----	----
6-----	----	----	----	----	----	----	----	S 1.08	S 0.97
8-----	S .89	----	----	----	----	----	----	----	----
Averages	0.87	0.97	1.09	----	----	----	----	1.08	0.97

OMAHA, NEBR.

Date	Sun's zenith distance A M 78.7°	75.7°	70.7°	60.0°	*	Sun's zenith distance P M 60.0°	70.7°	75.7°	78.7°
Air mass	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Dec.									
2-----	----	----	----	----	HS1.29	----	HS1.14	HS1.03	HS0.9[illegible]
3-----	HS0.97	HS1.06	HS1.18	----	----	----	HS1.16	----	----
4-----	HS1.02	HS1.13	HS1.26	----	HS1.36	----	----	----	----
7-----	HS .92	HS1.01	HS1.15	----	HS1.28	----	HS1.15	HS1.03	HS .92
18----	----	----	HS1.15	----	----	----	HM1.08	HM .93	HM .80
21----	----	----	----	----	HS1.29	----	----	----	----
23----	----	----	----	----	HS1.28	----	HS1.14	HS1.02	HS .90
31----	HS .94	HS1.06	HS1.18	----	HS1.29	----	HS1.19	HS .93	----
Averages	0.96	1.07	1.18	----	1.30	----	1.14	0.99	0.89

MAUNA LOA OBS., HAWAII

Date	Sun's zenith distance A M 78.7°	75.7°	70.7°	60.0°	*	Sun's zenith distance P M 60.0°	70.7°	75.7°	78.7°
Air mass	3.36	2.69	2.01	1.34	*	1.34	2.01	2.69	3.36
Dec.									
2-----	----	(1.19)	(1.29)	(1.41)	(1.52)	----	----	----	----
3-----	1.19	1.27	1.37	1.50	1.59	1.49	1.36	1.26	1.18
4-----	1.17	1.26	1.36	1.49	1.58	1.48	1.35	1.25	1.16
5-----	1.17	1.26	1.37	1.49	HS1.56	H 1.43	(1.29)	(1.19)	(1.11)
10----	1.19	1.27	1.38	1.50	----	----	----	----	----
11----	1.23	1.33	1.42	1.52	----	----	----	----	----
12----	1.21	1.30	1.41	1.51	1.56	----	----	----	----
13----	1.16	1.26	1.37	1.50	----	----	----	----	----
15----	1.19	1.28	1.38	1.49	1.57	1.44	H 1.31	H 1.21	H 1.14
16----	H 1.15	H 1.23	H 1.34	H 1.46	H 1.54	H 1.46	H 1.33	H 1.24	H 1.15
17----	1.19	1.28	1.38	1.50	(1.56)	(1.45)	(1.36)	----	(1.20)
20----	(1.14)	----	(1.34)	----	----	----	----	----	----
22----	H 1.10	H 1.19	H 1.30	----	H 1.53	H 1.43	H 1.30	H 1.21	H 1.11
23----	----	H 1.22	(1.33)	H 1.45	----	----	----	----	----
24----	(1.09)	----	----	(1.42)	(1.51)	----	----	----	----
25----	H 1.10	H 1.19	H 1.29	H 1.41	H 1.51	H 1.41	H 1.29	H 1.19	H 1.11
26----	----	----	----	H 1.44	H 1.54	----	----	----	----
28----	----	----	----	(1.42)	H 1.52	H 1.42	H 1.29	H 1.19	H 1.11
29----	H 1.14	H 1.22	H 1.32	H 1.46	1.56	----	1.34	1.24	1.16
30----	1.18	1.27	1.37	1.49	1.57	1.47	1.35	1.27	1.18
31----	1.20	1.29	1.40	1.51	H 1.54	----	----	----	(1.13)
Averages	1.17	1.26	1.36	1.48	1.55	1.45	1.32	1.23	1.14

GUAM, M. I.

Date	Sun's zenith distance A M 78.7°	75.7°	70.7°	60.0°	*	Sun's zenith distance P M 60.0°	70.7°	75.7°	78.7°
Air mass	4.92	3.93	2.95	1.97	*	1.97	2.95	3.93	4.92

No data for December

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

DECEMBER 1965

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	151	310	310	311	320	323	285	244	194	182	---	376	200	---	168	---	216	---	---	---	---	---	---	---	---	---	---	291	254	85	265	---
ANNETTE ALASKA	33	37	---	---	52	21	47	34	26	14	57	10	23	7	50	---	---	40	8	29	30	21	37	70	68	67	72	50	60	44	56	39
APALACHICOLA FLORIDA	370	306	187	259	366	357	380	365	349	352	212	177	---	167	23	73	194	57	27	364	348	357	309	309	297	373	333	200	282	185	332	264
ARGONNE NAT. LAB.	190	47	117	117	212	158	199	196	152	29	9	18	22	51	35	39	61	213	190	32	95	176	37	6	118	132	160	184	45	59	70	102
ASTORIA OREGON	21	33	41	102	36	136	92	86	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
ATLANTA GEORGIA	334	400	115	308	282	321	317	324	278	289	167	105	267	133	48	32	169	38	126	264	311	293	204	241	175	316	310	274	217	305	357	236
BETHEL ALASKA	11	29	57	48	40	44	29	12	5	2	10	6	17	11	10	5	5	10	22	31	39	29	38	7	9	7	4	11	9	4	28	19
BISMARCK N.DAK.	168	56	123	84	168	173	161	158*	---	26	17	46	68	41	151	75	154*	---	87	146	153	38	58	110	129*	132	136	79	94	48	168	105*
BLUE HILL MASS.	224	186	175	115	193	69	214	122	155	173	56	44	14	30	58	85	42	178	177	212	204	198	127	116	62	188	171	202	112	139	134	135
BOISE IDAHO	176	110	130	91	180	204	200	166	152	83	118	40	118	165	116	169	121	185	228	215	154	158	207	66	92	200	53	175	116	85	118	142
BOSTON MASSACHUSETTS	212	167	160	104	196	61	186	99	130	151	46	30	6	28	49	82	41	166	163	204	194	193	---	---	---	---	---	197	113	97	128	123
BROWNSVILLE TEXAS	175	84	76	25	320	408	264	357	184	257	191	250	211	89	89	80	66	72	289	409	356	260	330	254	413	403	235	70	202	307	270	226
CAPE HATTERAS N.C.	283	284	293	253	283	285	279	293	268	271	253	177	42	96	203	76	220	229	36	252	222	208	275	161	80	147	243	---	249	270	255	216
CARIBOU MAINE	---	114	57	33	101	104	84	154	101	113	123	194	75	68	60	---	103	169	121	165	104	111	83	52	28	83	168	89	161	45	40	100
CHARLESTON S.C.	337	313	223	295	289	326	333	341	308	255	233	97	177	187	100	---	188	130	36	315	299	292	271	220	148	318	309	236	206	205	242	241
CLEVELAND OHIO	259	100	64	56	175	30	222	174	215	103	20	55	23	20	45	52	79	63	126	100	192	214	50	120	21	242	127	160	183	110	21	110
COLUMBIA MISSOURI	216	11	233	212	210	236	232	196	144	82	83	25	54	66	115	53	234	134	129	219	209	175	53	21	129	238	202	214	---	164	27	144
DODGE CITY KANSAS	142	247	250	247	225	235	240	214	218	36	168	246	166	107	147	213	207	174	269	260	262	140	25	165	270	121	234	248	256	112	250	197
E. LANSING MICHIGAN	185	100	17	41	61	78	129	106	132	39	3	8	6	22	6	34	112	44	183	69	153	157	26	10	74	199	57	95	56	35	1	72
EL CENTRO CALIF. NPF	267	273	270	274	267	192	264	109	58	121	252	254	194	182	202	28	201	264	248	272	286	128	257	224	234	249	249	232	227	266	251	219
EL PASO TEXAS	319	358	374	359	361	353	260	179	188	142	345	319	172	334*	177*	244	218	144	353	359	297	74	166	358	366	347	336	348	344	226	171	277*
ELY NEVADA	---	269	271*	---	---	251*	195	208	77	59	257	111	---	256	240	266	271	300	---	---	161	154	285	273	189	237	184	200	74	262	225	211*
EPPLEY NEWPORT R.I.	232	172	151	140	190	108	210	124	179	191	60	50	18	62	64	63	44	170	148	204	202	186	132	102	54	173	163	197	126	172	154	137
FAIRBANKS ALASKA	6	20	27	26	26	7	16	18	7	10	5	5	3	3	8	3	6	5	4	3	6	5	5	6	11	1	0	---	---	---	6	9
FORT WORTH TEXAS	160	22	124	342	344	338	337	283	131	31	198	327	158	91	76	262	165	28	316	337	336	205	31	240	342	334	191	202	120	201	110	206
FRESNO CALIFORNIA	164	69	85	151	55	42	61	76	154	90	128	234	110	219	242	257	231	259	268	79	112	64	230	246	190	180	150	81	89	98	127	146
GAINESVILLE FLORIDA	384	331	254	276	387	401	380	394	368	379	322	315	194	236	241	168	48	244	51	45	355	377	350	243	190	403	345	325	335	159	366	286
GLASGOW MONTANA	177	104	109	107	142	155	139	256	128	109	48	21	98	141	157	86	152	131	102	126	125	49	143	103	64	141	118	30	73	28	109	112
GRAND JUNCTION COLO.	207	243	262	209	261	246	215	227	114	48	45	94	83	144	154	220	235	275	262	299	265	58	68	260	215	146	234	174	140	203	184	187
GREAT FALLS MONTANA	115	73	98	42	84	137	139	91	113	68	115*	132	52	139	131	104	128	77	104	28	87	40	142	108	90	136	74	78	93	116	59	97*
GREENSBORO N.C.	291	245	126	285	225	280	298	276	253	220	187	151	180	136	86	85	243	206	127	209	150	245	230	113	159	287	289	274	261	253	162	211
INDIANAPOLIS INDIANA	395	87	143	151	249	156	256	241	156	26	56	27	30	167	33	56	---	---	---	---	---	229	67	53	36	257	104	230	193	203	---	144
ITHACA NEW YORK	163	153	31	43	58	13	179	45	31	30	4	8	19	16	6	48	22	35	69	170	203	128	69	39	16	127	88	180	135	56	30	71
LAKE CHARLES LA.	216	210	20	349	352	343	365	327	312	193	73	210	242	59	22	28	54	16	43	338	262	273	259	73	318	340	340	310	265	226	251	216
LAKELAND FLORIDA	386	325	202	153	384	344	387	379	272	362	347	197	214	235	248	193	267	340	158	249	369	366	315	215	292	348	277	305	223	220	362	288
LANDER WYOMING	250	220	227	221	150	---	244	173	175	94	140	204	70	200	214	220	246	232	257	224	195	154	201	255	174	262	193	164	94	248	196	197
LARAMIE WYOMING	178	224	257	174	228	209	160	156	211	84	82	279	204	228	261	289	277	307	243	251	248	140	97	292	249	202	249	148	196	170	277	212
LAS VEGAS NEVADA	305	302	304	302	257	283	231	164	22	109	244	224	235	43	---	122	234	293	296	296	176	65	259	264	289	264	306	145	125	296	330	226
LITTLE ROCK ARKANSAS	230	110	170	285	253	304	303	308	281	152	36	429	513	55	97	117	523	137	456	323	439	392	---	64	159	289	262	249	257	204	74	249
LOS ANGELES CALIF.WB	274	317	319	318	259	235	278	230	69	253	191	188	234	89	236	110	297	312	321	302	172	260	283	278	261	281	258	99	26	298	248	235
MADISON WISCONSIN	209	177	88	103	215	200	193	56	142	19	17	34	37	58	65	60	53	140	151	67	142	152	22	28	201	103	217	142	41	---	208	111
MANHATTAN KANSAS	174	264	241	187	216	253	245	167	58	30	154	38	222	62	88	155	286	110	317	242	265	192	29	34	125	74	276	54	182	192	203	166
MATANUSKA ALASKA	16	43	35	39	10	7	12	9	12	20	12	7	5	5	16	30	13	4	11	10	14	26	21	20	21	9	28	13	32	21	36	18
MAUNA LOA OB.HAWAII	389	477	577	579	558	395	466	314	142	302	445	385	539	358	553	548	554	339	416	393	341	551	511	485	528	509	479	522	541	557	487	459
MEDFORD OREGON	114	94	135	45	51	34	76	88	45	61	132	61	186	182	186	195	180	150	189	180	89	76	96	119	147	86	39	88	168	115	100	113
MIAMI FLORIDA	454	226	305	231	226	416	429	289	444	178	419	379	294	391	409	425	387	232	351	327	456	452	351	359	434	401	399*	387	333	414	384	361*
MIDLAND TEXAS	---	---	---	---	362	355	345	330	---	---	---	330	149	---	---	---	---	81	356	333	308	140	278	343	342	333	---	---	---	293	171	---
NASHVILLE TENNESSEE	320	183	78	277	280	159	299	288	269	164	180	191	79	78	38	41	62	75	282	185	269	266	194	111	49	298	275	245	268	139	110	186
NEW YORK N.Y.U	202	195	86	104	177	130	211	101	166	168	7	3	5	29	84	57	68	137	141	186	183	183	124	87	13	211	139	144	109	124	92	112
NORTH OMAHA NEBRASKA	214	260	259	183	239	262	251	204	181	43	127	40	99	71	82	178	79	243	187	222	239	174	71	47	161	54	255	72	140	141	250	162
OKLAHOMA CITY OKLA.	112	55	261	261	236	266	258	485	78	20	159	260	182	62	127	207	237	98	272	275	297	154	32	123	385	314	---	0	---	169	40	187
PHOENIX ARIZONA	267	266	278	282	283	259	250	70	88	50	254	228	248	98	80	71	61	264	269	270	206	68	141	268	268	271	271	271	69	207	273	202
PORTLAND MAINE	217	179	164	48	195	23	196	123	104	158	146	57	29	56	63	54	51	133	118	199	204	191	100	28	35	172	176	182	79	34	105	117
PROSSER WASHINGTON	81	56	99	80	118	153	103	115	75	110	69	49	144	170	185	146	99	---	176	165	94	176	62	152	---	105	73	101	147	179	93	116

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

DECEMBER 1965

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
RAPID CITY S.DAK.	156	102	163	77	146	164	161	140	128	70	65	158	72	154	169	130	146	158	120	102	164	60	65	14	124	117	122	70	90	80	155	118
RENO NEVADA	226	222	192	198	235	225	222	104	161	203	184	132	58	129	89	141	224	215	221	194	186	62	224	191	120	183	177	57	161	164	194	171
RICHLAND 25 NW WASH.	72	61	105	100	101	92	106	112	86	96	80	52	152	158	71	76	88	107	67	141	123	163	44	149	67	70	70	80	96	119	136	98
RIVERSIDE CALIFORNIA	369	381	363	374	357	362	301	284	37	191	293	235	309	147	284	86	338	360	367	367	177	159	352	346	301	325	334	189	96	356	---	281
SAINT CLOUD MINN.	198	209	155	102	182	198	181	37	44	14	15	22	47	58	141	130	119	197	53	60	101	63	24	162	200	30	179	60	61	34	177	105
SALT LAKE CITY UTAH	214	195	228	176	170	58	35	41	111	36	189	139	111	208	211	155	146	209	216	123	95	45	187	273	89	216	157	71	41	92	207	143
SAN ANTONIO TEXAS	48	28	141	324	375	372	365	283	143	67	149	329	156	98	35	139	48	46	281	423	424	225	123	445	582	580	207	195	---	---	---	237
SANTA MARIA CALIF.	278	275	276	280	262	238	262	202	63	250	228	148	240	190	244	250	262	263	271	175	140	231	266	257	185	238	234	167	95	105	153	217
SAULT STE MARIE MICH	106	41	20	91	37	158	66	127	18	61	43	12	28	30	---	---	96	103	161	198	88	20	28	48	186	169	116	69	33	35	---	78
SEATTLE TACOMA WASH.	24	51	45	116	33	138	96	116	98	88	101	38	54	156	102	117	44	45	33	22	40	85	28	115	74	74	25	18	47	56	66	69
SEATTLE WASH. UNIV.	11	47	51	82	24	145	82	127	83	80	86	37	37	122	78	124	36	32	56	14	43	59	14	106	67	42	14	7	31	71	83	61
SPOKANE WASHINGTON	75	47	108	39	78	123	30	66	103	35	51	25	58	172	24	37	131	45	111	119	22	127	112	69	97	73	39	66	71	93	106	76
STATE COLLEGE PENN.	233	212	56	87	177	111	240	185	102	158	25	18	22	26	42	40	48	70	170	181	211	138	67	158	47	241	153	201	102	67	55	118
STERLING VIRGINA	265	252	79	119	128	111	264	234	188	89	99	42	49	69	118	149	99	204	179	180	48	216	171	104	98	269	246	239	164	221	188	157
STILLWATER OKLAHOMA	155	32	258	260	255	257	251	219	103	11	158	233	207	32	145	109	246	47	260	243	251	131	31	57	137	224	102	104	195	188	12	159
SWAN ISLAND W.I.	165	357	444	471	447	469	171	117	214	267	464	457	472	473	452	---	415	454	456	303	319	---	441	382	473	477	340	323	337	491	168	373
TAMPA FLORIDA	376	349	---	135	391	328	401	385	363	357	355	185	288	325	282	259	---	327	173	349	361	369	305	277	241	389	296	333	199	334	341	313
WAKE ISLAND.PACIFIC	202	283	332	353	384	353	364	334	368	387	393	398	394	295	298	390	338	394	382	424	515	401	418	292	360	377	270	301	397	413	384	361

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

NET RADIATION

Net radiation in langleys per day (midnight to midnight) at Huntley, Mont.

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	2	-42	29	20	39	25	7	22	32	73	29	4	39	9	-72	-38	-52	-49	-44	-68	-15	32	36	41	25	8	71	42	-16	-71	11	4

The measurement is made with a Beckman and Whitley net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Huntley Exp. Station. The instrument with which they were measured has not been checked by the Weather Bureau.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code λ S Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units. Milli-atmo-cms.

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3
															Data will be delayed																	

The spectrophotometer measures the total amount of ozone in the atmosphere, i e , the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e g , 350 milli-atmo-cm ozone implies an ozone layer 0 350 centimeter thick The code λ s designates the type of measurement made

CONDENSED CLIMATOLOGICAL SUMMARY

DELAYED DATA

Section	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
October 1965		°F			°F			In.		In.
Alaska	Ketchikan	62	4	Venetie	-30	31+	Little Port Walter	57.17	Kobuk	0.07
Hawaii	4 Stations	91	31+	Mauna Loa Slope Obs.	27	31	Kahana 883, Oahu	26.84	Puak 95A, Hawaii	.08
November 1965										
Alaska	Ketchikan	59	7	Copper Valley School	-42	23	Little Port Walter	15.96	Sheep Mountain	.08
Hawaii	6 Stations	88	29	Mauna Loa Slope Obs.	28	2	Kahana 883, Oahu	77.39	Pohakuloa 107, Hawaii	1.56

STORM SUMMARY

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				Ø ALL OTHER			
								†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS
June 1963																													
Minnesota	4	3	0	0	3																								

SOLAR RADIATION DATA

Solar radiation intensities, tabulated in langleys per minute on a surface normal to the direction of the sun.

CORRECTED DATA

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	MADISON, WIS.								
	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Apr. 1965									
7-----	----	----	----	S 1.05	----	----	----	----	----
9-----	----	----	----	----	M 1.19	----	----	----	----
27----	----	S 0.67	S 0.79	S 1.04	----	----	----	----	----
28----	----	----	----	----	----	S 1.14	S 0.96	S 0.85	S 0.73
29----	S 0.73	S .86	S 1.00	S 1.16	S 1.34	S 1.10	S .92	S .78	----
Averages	0.73	0.77	0.90	1.08	1.27	1.12	0.94	0.82	0.73
Jun. 1965									
15----	----	----	----	M 0.98	----	----	----	----	----
17----	S 0.48	S 0.58	S 0.68	S .96	----	----	----	----	----
18----	S .61	S .73	S .88	S 1.06	----	----	----	----	----
21----	S .72	S .78	S .96	S 1.11	S 1.34	S 1.14	----	----	----
24----	S .76	S .83	S .98	S 1.16	----	----	----	----	----
Averages	0.64	0.73	0.88	1.05	1.34	1.14	----	----	----

Date	Sun's zenith distance								
	A. M.				*	P. M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	MADISON, WIS.								
	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
May 1965									
10----	S 0.73	S 0.88	S 1.02	S 1.24	----	----	----	----	----
29----	----	S .78	S .94	S 1.16	----	----	----	----	----
Averages	0.73	0.83	0.98	1.20	----	----	----	----	----
July 1965									
3-----	----	----	----	S 1.09	----	----	----	----	----
11----	S 0.77	S 0.86	S 0.97	S 1.14	----	----	S 0.93	S 0.82	S 0.71
15----	S .78	S .90	S 1.00	S 1.14	----	----	----	----	----
25----	M .77	M .86	M 1.01	----	----	----	----	----	----
28----	----	----	M .93	----	----	----	----	----	----
Averages	0.77	0.87	0.98	1.12	----	----	0.93	0.82	0.71

M Moderate haze - indeterminable
Also see reference notes with current data.

CORRECTIONS

Month: Annual 1965

page 95: Ithaca, N. Y. — Solar radiation for November should be 144; December 95.

Month: April 1965

page 225: Madison, Wis. — See corrected data on page 647 of this issue.

Month: May 1965

page 279: Madison, Wis. — See corrected data on page 647 of this issue.

Month: June 1965

page 336: Madison, Wis. — See corrected data on page 647 of this issue.

page 337: Griffin, Ga. — Average should be 517 langleys.

Month: July 1965

page 390: Madison, Wis. — See corrected data on page 647 of this issue.

page 391: El Centro, Calif. — Data is erroneous and should be deleted.

Flaming Gorge, Utah — Data is erroneous and should be deleted.

page 392: Page, Arizona — Data is erroneous and should be deleted.

Month: August 1965

page 438: Tatoosh Is., Wash. — 50 mb. height should be 20,874 m.

page 441: El Centro, Calif. — Data is erroneous and should be deleted.

Month: September 1965

page 462: Hawaii — Lowest temperature should be 32° on the 30th at Mauna Loa Slope Obs.

RAWINSONDE DATA

Average monthly values

DELAYED DATA

CHIHUAHUA, MEXICO 6/
856 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	1,428	19.6	40	234	2.3
1000	30	57				
950	30	510				
900	30	987				
850	30	1,484	19.8	38	227	2.7
800	30	2,005	18.7	33	238	4.1
750	30	2,551	15.0	35	201	5.6
700	30	3,135	11.0	38	207	7.2
650	30	3,743	6.3	41	203	8.0
600	30	4,398	1.3	42	203	9.5
550	30	5,084	- 3.7	41	208	10.9
500	30	5,839	- 8.4	35	234	12.8
450	30	6,642	-13.9	32	250	15.0
400	30	7,532	-20.1	32	256	17.7
350	30	8,508	-27.2	31	258	21.4
300	30	9,600	-35.6	27	258	27.0
250	30	10,842	-45.1		259	31.5
200	30	12,297	-55.4		254	33.8
175	30	13,139	-60.1		254	35.4
150	30	14,089	-65.0		250	31.7
125	29	15,185	-69.8		247	24.9
100	21	16,498	-71.1		249	17.1
80	13	17,828	-67.8		196	5.1
70	12	18,634	-63.8		86	3.3
60	12	19,586	-61.8			
50	9	20,717	-59.2			
40	7	22,130	-55.4			
30						
25						
20						
15						
10						
7						

CHIHUAHUA, MEXICO 7/
859 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,428	21.1	59	293	1.6
1000	31	81				
950	31	531				
900	31	1,013				
850	31	1,515	21.0	56	290	1.2
800	31	2,039	18.9	49	359	1.0
750	31	2,588	15.0	51	143	4.3
700	31	3,170	10.6	57	149	5.6
650	31	3,777	6.0	63	115	6.0
600	31	4,433	.9	70	83	9.7
550	31	5,120	- 3.3	60	86	11.7
500	31	5,877	- 7.6	49	98	14.6
450	31	6,681	-12.5	44	111	15.5
400	31	7,580	-18.4	35	108	13.8
350	31	8,562	-25.4	34	103	14.2
300	30	9,660	-34.0	34	100	14.2
250	30	10,911	-43.6		82	15.0
200	30	12,374	-54.5		83	15.5
175	30	13,217	-60.5		84	16.9
150	30	14,164	-65.9		85	16.7
125	28	15,257	-70.5		85	18.5
100	26	16,573	-71.9		91	16.5
80	16	17,889	-67.4		94	16.7
70	14	18,698	-63.5		92	18.8
60	9	19,653	-61.1			
50	7	20,775	-58.4			
40	6	22,182	-54.6			
30	5	24,030	-52.6			
25						
20						
15						
10						
7						

CHIHUAHUA, MEXICO 8/
858 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	1,428	19.6	66	88	.8
1000	31	80				
950	31	529				
900	31	1,011				
850	31	1,507	19.8	60	77	.8
800	31	2,029	17.9	53	124	2.5
750	31	2,574	14.2	55	147	4.7
700	31	3,158	9.9	60	120	4.9
650	31	3,764	5.2	66	90	4.3
600	31	4,419	.7	62	67	7.8
550	31	5,106	- 3.4	57	65	9.9
500	31	5,861	- 7.5	52	72	7.8
450	31	6,670	-11.9	43	75	6.6
400	31	7,569	-18.0	41	60	4.5
350	31	8,552	-24.9	38	20	5.8
300	31	9,654	-33.3	36	6	7.4
250	31	10,908	-43.1		353	11.8
200	31	12,374	-54.5		359	16.3
175	31	13,217	-60.4		6	15.7
150	31	14,164	-66.1		13	15.3
125	30	15,255	-70.7		26	13.4
100	29	16,576	-71.3		53	12.6
80	21	17,909	-67.0		65	14.8
70	18	18,720	-64.0		82	17.3
60	17	19,674	-61.0		88	20.2
50	15	20,809	-59.1		93	25.8
40	14	22,216	-55.4		89	31.5
30	10	24,068	-51.8		91	32.1
25	9	25,253	-51.1			
20	8	26,702	-48.9			
15						
10						
7						

CHIHUAHUA, MEXICO 9/
857 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	1,428	17.2	73	288	2.1
1000	30	85				
950	30	526				
900	30	1,003				
850	30	1,499	17.4	69	295	1.7
800	30	2,018	16.6	57	286	.4
750	30	2,560	13.4	57	180	3.9
700	30	3,142	9.4	61	179	7.8
650	30	3,744	5.0	66	189	8.4
600	30	4,403	1.2	56	184	7.4
550	30	5,089	- 2.7	47	207	7.2
500	30	5,848	- 7.0	40	210	7.6
450	30	6,656	-12.3	38	216	8.0
400	30	7,552	-18.5	34	221	10.3
350	30	8,535	-25.2	31	238	11.7
300	30	9,636	-33.3	31	249	18.3
250	30	10,892	-42.5		255	21.2
200	30	12,364	-53.0		257	24.7
175	30	13,213	-59.2		255	24.7
150	30	14,163	-65.8		252	23.5
125	29	15,254	-71.3		250	22.7
100	25	16,563	-73.3		238	12.2
80	18	17,884	-67.9		194	5.4
70	16	18,693	-64.6		118	4.3
60	12	19,643	-60.7		94	9.7
50	11	20,788	-57.6		102	12.4
40	9	22,220	-55.0			
30	8	24,078	-50.0			
25	7	25,282	-48.5			
20	6	26,763	-47.4			
15						
10						
7						

CORPUS CHRISTI, TEXAS 6/
1011 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	21	6	26.4	81	154	8.2
1000	21	101	25.8	83	161	8.9
950	21	548	22.2	93	166	15.2
900	21	1,021	20.5	77	166	14.8
850	21	1,515	18.8	64	160	13.2
800	21	2,034	16.5	56	162	11.1
750	21	2,573	13.6	51	171	8.4
700	21	3,160	10.0	50	170	5.4
650	21	3,768	6.1	50	215	2.7
600	21	4,422	1.7	51	312	3.9
550	21	5,109	- 2.8	52	306	6.2
500	21	5,867	- 7.2	49	280	5.8
450	21	6,673	-12.5	47	284	9.9
400	21	7,571	-18.7	50	281	13.4
350	20	8,548	-26.1	46	274	15.9
300	20	9,643	-34.6	45	269	20.4
250	20	10,891	-43.9		260	27.6
200	19	12,354	-54.0		268	35.2
175	19	13,201	-59.2		268	34.4
150	19	14,154	-64.1		265	33.4
125	17	15,250	-68.4		269	24.7
100	16	16,577	-70.7		270	15.7
80	16	17,903	-68.8		296	5.6
70	16	18,708	-65.1		19	2.5
60	16	19,658	-61.5			
50	15	20,788	-58.5			
40	14	22,204	-55.2			
30	13	24,055	-50.4			
25	13	25,250	-48.7			
20	13	26,725	-46.2			
15	12	28,656	-42.7			
10	9	31,423	-38.6			
7	5	33,920	-33.5			

CORPUS CHRISTI, TEXAS 9/
1011 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	26	6	26.2	89	162	2.5
1000	26	105	25.5	88	174	5.6
950	26	553	22.9	90	166	9.7
900	26	1,027	20.2	85	160	9.9
850	26	1,519	17.4	81	162	10.9
800	26	2,035	14.7	75	153	8.5
750	26	2,576	12.2	70	151	8.0
700	26	3,155	9.5	66	157	6.2
650	26	3,762	6.3	63	157	5.6
600	26	4,418	2.6	62	154	4.7
550	26	5,112	- 1.5	59	144	3.1
500	26	5,870	- 6.0	54	159	2.5
450	26	6,679	-11.0	50	139	1.7
400	26	7,581	-17.4	50	114	.8
350	26	8,567	-24.7	50	148	1.0
300	26	9,669	-33.2	47	161	1.4
250	26	10,924	-42.6		278	1.6
200	26	12,393	-53.8		298	1.0
175	26	13,239	-59.7		240	2.1
150	26	14,189	-65.9		248	2.3
125	26	15,279	-71.7		217	4.3
100	26	16,586	-73.5		150	5.8
80	25	17,904	-68.7		109	8.9
70	25	18,710	-65.0		106	11.8
60	25	19,659	-61.3		97	14.4
50	25	20,799	-58.3		98	18.5
40	24	22,212	-54.8		94	19.2
30	24	24,068	-51.2		88	24.9
25	24	25,258	-49.6		91	24.3
20	24	26,725	-47.6		84	24.1
15	24	28,638	-44.8		86	24.5
10	22	31,372	-40.8		88	29.9
7	12	33,808	-37.3			
5	8	36,126	-35.1			

EMPALME, MEXICO 6/
1009 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	12	20.9	70	23	3.3
1000	30	88	23.0	66	30	3.1
950	30	532	23.6	41	121	1.7
900	30	1,007	21.8	30	184	2.7
850	30	1,500	19.3	27	181	8.2
800	30	2,018	16.6	R23	193	10.1
750	30	2,561	13.6	R24	205	11.7
700	30	3,142	9.9	R24	211	12.8
650	30	3,751	6.1	R26	215	14.2
600	30	4,404	2.0	R27	216	14.8
550	30	5,095	- 2.6	R23	229	15.7
500	30	5,850	- 7.5	R23	241	19.4
450	30	6,658	-13.0	R19	252	21.6
400	30	7,549	-19.7	R21	261	25.4
350	30	8,526	-26.9	R20	261	29.7
300	30	9,619	-35.4	R24	262	33.4
250	30	10,863	-45.1		262	36.5
200	30	12,317	-55.5		257	40.4
175	30	13,158	-60.3		257	40.6
150	30	14,108	-65.4		251	36.9
125	29	15,203	-69.5		253	28.6
100	29	16,524	-72.0		242	14.8
80	29	17,851	-67.8		120	2.5
70	26	18,657	-64.7		82	8.9
60	26	19,605	-61.9		87	15.3
50	26	20,744	-57.8		92	21.6
40	26	22,160	-54.9		93	23.5
30	23	24,019	-51.0		90	27.0
25	20	25,213	-48.9		86	30.9
20	19	26,688	-46.4		89	30.9
15	13	28,618	-43.0		89	30.5
10	5	31,372	-36.6			
7						
5						

EMPALME, MEXICO 7/
1010 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	12	27.1	76	74	2.5
1000	31	103	27.2	75	114	3.1
950	31	553	25.9	62	149	5.6
900	31	1,032	24.0	56	144	5.1
850	31	1,531	21.2	55	131	3.5
800	30	2,053	17.6	60	103	4.1
750	30	2,598	13.9	63	99	5.6
700	30	3,180	9.9	66	93	6.6
650	30	3,789	5.6	66	99	6.6
600	30	4,442	1.1	68	131	7.4
550	30	5,130	- 3.4	66	138	8.4
500	30	5,885	- 8.0	65	129	10.3
450	30	6,695	-13.0	59	122	11.1
400	29	7,586	-18.5	51	131	12.4
350	29	8,568	-25.5	48	129	15.0
300	29	9,667	-33.8	40	131	17.1
250	29	10,919	-43.7		130	17.1
200	29	12,381	-54.6		124	11.8
175	29	13,225	-60.2		122	9.5
150	29	14,174	-65.8		118	9.7
125	29	15,267	-70.4		110	11.1
100	29	16,585	-72.1		97	13.0
80	26	17,920	-66.7		96	17.1
70	23	18,726	-64.6		93	19.0
60	20	19,680	-62.0		89	24.3
50	18	20,818	-58.9		93	29.7
40	16	22,231	-54.6		92	35.2
30	14	24,081	-51.1		90	34.8
25	14	25,271	-49.2		86	35.9
20	13	26,743	-46.9		88	39.2
15	12	28,653	-44.2		88	39.6
10	6	31,402	-40.7			
7						
5						

GUAM, MARIANA IS. 8/
998 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	111	24.5	93	99	3.3
1000	31	93				
950	31	545	23.5	88	97	8.2
900	31	1,017	21.0	82	98	9.3
850	31	1,510	18.4	77	98	8.5
800	31	2,029	15.5	74	94	8.5
750	31	2,573	12.7	67	97	8.9
700	31	3,151	9.5	63	97	8.9
650	31	3,764	5.9	60	98	9.5
600	31	4,414	2.0	60	98	9.5
550	31	5,112	- 2.1	61	96	8.7
500	31	5,863	- 6.5	54	90	9.3
450	31	6,680	-11.3	50	79	9.1
400	31	7,574	-16.8	46	84	8.0
350	31	8,563	-23.8	39	89	8.5
300	31	9,670	-32.1	34	92	9.3
250	31	10,930	-42.5		89	12.2
200	31	12,395	-55.0		79	15.0
175	31	13,234	-62.1		74	17.5
150	31	14,170	-69.5		70	19.8
125	30	15,239	-76.0		77	23.5
100	29	16,518	-76.2		84	27.2
80	26	17,820	-70.7		89	28.6
70	25	18,618	-67.5		87	31.1
60	25	19,553	-64.8		85	35.4
50	24	20,678	-60.7		89	40.2
40	24	22,075	-58.3		90	45.1
30	24	23,898	-55.2		88	58.7
25	24	25,072	-51.9		90	66.4
20	23	26,529	-48.6		90	68.6
15	16	28,444	-45.5		87	73.2
10	5	31,157	-45.6			
7						
5						

KEY WEST, FLORIDA 6/
1017 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	16	3	26.5	83	110	5.8
1000	16	151	25.3	85	117	8.5
950	16	599	21.8	86	126	11.8
900	16	1,069	19.3	73	128	11.7
850	16	1,560	16.6	65	129	9.9
800	16	2,074	13.5	59	129	9.1
750	16	2,606	10.6	52	127	7.4
700	16	3,187	6.8	56	137	6.2
650	16	3,784	3.1	59	138	5.8
600	16	4,437	- .3	52	126	4.9
550	16	5,121	- 3.9	49	93	4.3
500	16	5,875	- 8.5	52	92	3.7
450	16	6,678	-13.5	46	68	2.3
400	16	7,573	-19.2	36	151	1.0
350	16	8,552	-26.5	33	15	2.1
300	16	9,647	-35.2	34	315	5.6
250	16	10,892	-45.1		310	8.0
200	16	12,344	-57.2		310	14.8
175	16	13,178	-62.8		318	15.5
150	16	14,117	-67.1		329	15.7
125	16	15,209	-70.4		352	15.3
100	16	16,530	-71.0		39	8.5
80	16	17,856	-68.9		76	13.4
70	16	18,658	-66.6		81	17.9
60	16	19,597	-63.6		80	24.3
50	15	20,729	-59.5		88	29.1
40	14	22,136	-55.7		96	31.5
30	14	23,985	-51.6		91	34.4
25	14	25,174	-49.1		87	37.9
20	14	26,647	-46.3		88	35.7
15	13	28,581	-42.8		86	39.6
10	12	31,340	-37.2		86	39.0
7	8	33,819	-35.3			
5						

KOROR, CAROLINE IS. 9/
+ 1007 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	30	30	27.7	82	256	7.0
1000	30	90	26.8	78	258	8.9
950	30	541	22.9	77	261	15.9
900	30	1,013	20.0	70	264	17.3
850	30	1,505	17.6	66	268	15.3
800	30	2,022	15.2	61	272	12.8
750	30	2,566	12.4	59	277	10.7
700	30	3,143	9.1	58	274	9.1
650	30	3,753	5.5	57	279	7.2
600	30	4,405	1.9	56	273	6.4
550	30	5,100	- 1.9	51	217	3.1
500	30	5,855	- 5.9	42	137	3.1
450	30	6,672	-10.6	38	100	7.0
400	30	7,572	-16.2	36	106	9.5
350	30	8,563	-23.1	34	89	12.0
300	30	9,674	-31.3	30	81	16.1
250	30	10,939	-41.4	28	73	22.0
200	29	12,412	-53.9		68	31.5
175	29	13,255	-61.1		68	35.9
150	29	14,196	-68.2		70	37.9
125	29	15,271	-75.0		74	33.2
100	29	16,551	-77.9		80	22.7
80	29	17,847	-71.9		83	17.7
70	28	18,639	-68.7		86	16.7
60	27	19,568	-65.8		89	21.2
50	27	20,682	-63.3		91	32.6
40	26	22,063	-60.1		92	54.0
30	26	23,879	-55.2		91	66.4
25	22	25,050	-52.3		93	72.5
20	20	26,499	-48.4		92	72.1
15	11	28,427	-46.1		92	83.1

MERIDA, MEXICO 7/
1016 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	11	22.2	95	98	5.2
1000	31	148	23.6	90	105	9.9
950	31	595	22.6	79	123	15.0
900	31	1,068	20.2	69	120	14.0
850	31	1,560	17.5	61	120	12.4
800	31	2,077	14.8	55	121	10.5
750	31	2,611	11.7	53	122	11.1
700	31	3,195	8.2	50	121	10.3
650	31	3,795	4.5	49	119	9.7
600	31	4,451	.5	52	112	8.4
550	31	5,130	- 3.6	50	107	7.6
500	31	5,892	- 7.9	46	98	6.2
450	31	6,695	-12.9	44	86	6.2
400	31	7,594	-18.7	41	82	3.5
350	31	8,576	-25.6	37	129	1.6
300	31	9,674	-34.1	R31	273	3.3
250	31	10,924	-44.1		285	8.4
200	30	12,383	-55.8		292	11.7
175	30	13,221	-61.5		304	11.5
150	30	14,165	-66.6		332	9.3
125	30	15,256	-69.9		38	11.5
100	29	16,582	-70.1		69	19.8
80	28	17,915	-67.5		92	24.5
70	28	18,721	-65.0		93	25.8
60	28	19,668	-61.9		88	31.7
50	28	20,803	-59.2		92	36.7
40	27	22,210	-55.7		94	40.0
30	26	24,060	-51.2		94	47.2
25	25	25,250	-49.1		92	48.4
20	23	26,724	-46.3		89	53.4
15	17	28,638	-43.8			

MERIDA, MEXICO 8/
1015 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	31	11	22.5	97	93	4.9
1000	31	142	23.8	91	105	9.5
950	31	591	23.0	80	122	14.2
900	31	1,063	20.5	73	116	13.4
850	31	1,556	17.6	69	114	13.0
800	31	2,072	14.7	63	112	11.3
750	31	2,605	11.7	61	114	10.9
700	31	3,191	8.5	54	113	10.7
650	31	3,791	4.9	50	113	11.5
600	31	4,450	.9	52	108	9.9
550	31	5,129	- 3.2	48	102	11.1
500	31	5,893	- 7.5	42	98	10.5
450	31	6,697	-12.5	41	87	10.5
400	31	7,598	-18.3	38	79	10.3
350	31	8,581	-25.2	34	74	8.0
300	31	9,682	-33.5	R30	62	4.9
250	31	10,935	-43.5		360	3.3
200	30	12,398	-55.4		318	5.8
175	30	13,237	-61.5		317	7.8
150	29	14,179	-67.1		354	6.0
125	29	15,267	-70.3		40	7.2
100	29	16,589	-70.6		73	18.5
80	29	17,920	-67.9		93	24.5
70	29	18,728	-64.7		90	26.8
60	28	19,677	-61.8		88	29.5
50	28	20,813	-58.7		91	36.7
40	27	22,226	-55.0		93	42.0
30	23	24,076	-51.6		92	46.4
25	21	25,266	-49.6		92	47.0
20	14	26,737	-46.9		88	53.2
15	9	28,660	-44.0			

MONTERREY, MEXICO 1/
967 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	21	423	10.9	68	329	3.9
1000	21	137				
950	21	570	12.3	60	359	3.7
900	21	1,022	12.6	53	356	2.9
850	21	1,501	11.3	49	226	3.1
800	21	2,005	9.1	42	245	3.5
750	21	2,539	6.4	39	268	6.6
700	21	3,100	3.1	37	275	12.0
650	21	3,694	- .6	35	270	15.2
600	21	4,332	- 4.7	32	263	17.1
550	21	5,002	- 8.7	R32	259	22.0
500	21	5,745	-13.2	R30	257	22.0
450	21	6,530	-18.7	R27	263	23.9
400	21	7,407	-25.4	R28	263	25.6
350	21	8,362	-32.6	R28	257	29.9
300	21	9,429	-40.9	R26	252	35.0
250	21	10,643	-50.2		249	45.1
200	21	12,070	-58.7		244	53.2
175	21	12,901	-62.0		242	53.4
150	21	13,850	-63.3		243	49.5
125	20	14,969	-67.1		244	45.6
100	19	16,307	-70.9		243	33.2
80	14	17,633	-70.1		235	23.3
70	12	18,435	-69.0		235	13.4
60	10	19,362	-67.4		190	7.4
50	10	20,471	-63.0		184	3.9
40	10	21,855	-59.7			
30	7	23,654	-56.2			
25	7	24,814	-55.1			
20	5	26,259	-52.6			
15						

MONTERREY, MEXICO 2/
965 MB

Standard pressure surface (mb)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind	
					Direction	Speed
SURFACE	21	423	10.6	75	347	3.7
1000	21	119				
950	21	553	10.8	71	348	4.7
900	21	1,001	10.6	64	298	4.5
850	21	1,477	9.2	56	238	3.7
800	20	1,978	9.3	44	234	7.2
750	20	2,508	7.0	42	235	13.8
700	20	3,075	3.6	37	241	20.6
650	20	3,666	- .5	37	238	25.1
600	20	4,307	- 4.6	36	235	31.7
550	19	4,975	- 9.2	33	232	33.2
500	19	5,716	-14.3	38	231	36.7
450	19	6,497	-20.2	34	231	43.1
400	19	7,370	-26.5	R29	234	52.1
350	19	8,321	-33.2	R29	237	63.9
300	19	9,386	-41.2	R28	234	70.7
250	19	10,602	-49.2		234	81.2
200	19	12,045	-54.6		234	86.4
175	19	12,893	-57.4		233	90.3
150	18	13,856	-61.5		236	79.3
125	18	14,973	-66.1		238	73.8
100	17	16,310	-71.0		235	62.9
80	14	17,637	-71.4		235	38.5
70	12	18,426	-68.9		232	26.2
60	12	19,358	-65.6		236	15.3
50	11	20,482	-60.6		278	5.4
40	10	21,873	-58.8			
30	7	23,674	-56.7			
25	6	24,847	-55.1			
20						
15						

RAWIN SONDE DATA

Average monthly values

MONTERREY, MEXICO 3/
963 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	29	423	11.7	68	327	3.5
1000	29	106				
950	29	537	12.4	67	1	4.1
900	29	994	12.5	65	341	2.1
850	29	1,474	12.0	55	194	3.1
800	29	1,981	12.1	43	213	7.2
750	29	2,515	10.2	35	246	12.0
700	29	3,091	7.1	31	257	20.4
650	29	3,690	3.0	30	255	25.6
600	29	4,339	- 1.7	31	249	30.3
550	29	5,020	- 6.3	28	249	35.9
500	29	5,765	-11.2	R27	251	43.1
450	29	6,558	-16.8	R25	250	48.2
400	29	7,440	-23.2	30	250	59.2
350	29	8,404	-30.3	R30	255	65.3
300	29	9,483	-38.4	R24	252	73.6
250	28	10,707	-47.8		251	81.0
200	28	12,150	-56.5		251	89.6
175	28	12,988	-60.7		251	85.9
150	27	13,940	-64.4		250	81.6
125	27	15,041	-69.4		251	76.3
100	27	16,360	-72.9		250	70.5
80	22	17,668	-72.9		249	57.5
70	18	18,452	-69.4		249	48.6
60	17	19,377	-67.8		250	33.2
50	17	20,486	-63.7		245	22.5
40	13	21,863	-58.6		247	12.8
30	12	23,690	-53.7		251	16.7
25	11	24,870	-51.8			
20	5	26,348	-50.3			

MONTERREY, MEXICO 4/
962 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	423	18.4	81	346	.4
1000	30	88				
950	30	535	19.4	78	78	1.2
900	30	998	19.2	70	122	2.5
850	30	1,489	18.5	58	173	5.2
800	30	2,008	16.8	48	226	5.8
750	30	2,556	13.4	46	234	7.6
700	30	3,133	9.8	42	264	9.1
650	30	3,742	5.1	41	261	8.9
600	30	4,392	.0	42	256	12.2
550	30	5,078	- 5.4	45	253	14.2
500	30	5,824	-10.6	45	250	20.0
450	30	6,622	-16.3	44	249	24.3
400	30	7,502	-22.6	41	248	31.3
350	30	8,467	-29.9	41	242	35.4
300	30	9,546	-38.1	40	244	42.7
250	30	10,775	-48.0		244	52.6
200	30	12,211	-58.4		246	68.0
175	29	13,046	-62.0		244	68.0
150	29	13,993	-64.3		243	65.9
125	29	15,099	-67.6		245	60.0
100	26	16,428	-71.6		243	50.9
80	20	17,740	-74.1		246	37.9
70	19	18,525	-72.6		237	8.9
60	17	19,438	-67.0		194	6.8
50	13	20,556	-62.4		70	4.9
40	13	21,946	-58.4		63	10.9
30	7	23,793	-54.0			
25	5	24,987	-51.7			
20						

MONTERREY, MEXICO 5/
960 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	423	22.3	88	119	1.6
1000	31	70				
950	31	516	21.7	86	110	3.1
900	31	988	19.3	84	111	7.0
850	31	1,481	18.3	73	144	8.9
800	31	2,001	17.1	56	162	7.4
750	31	2,547	14.6	44	210	6.6
700	31	3,129	11.2	39	248	9.3
650	31	3,740	6.8	40	254	10.5
600	31	4,395	1.7	44	261	11.5
550	31	5,085	- 3.8	47	248	14.2
500	31	5,837	- 8.7	40	246	18.5
450	31	6,641	-14.0	R29	247	21.8
400	31	7,530	-20.3	R28	252	25.6
350	31	8,505	-27.1	R25	253	33.4
300	31	9,597	-35.5	R29	252	39.6
250	31	10,840	-45.1		255	50.1
200	31	12,292	-56.5		257	60.4
175	31	13,132	-62.0		256	66.2
150	30	14,073	-66.5		255	59.4
125	30	15,167	-69.9		254	48.4
100	29	16,485	-72.7		252	35.7
80	25	17,791	-72.1		220	16.1
70	20	18,585	-69.0		212	6.6
60	19	19,516	-64.5		78	5.6
50	17	20,643	-59.1		87	18.5
40	16	22,052	-55.3		73	20.8
30	14	23,906	-52.0		79	19.8
25	10	25,096	-49.7			
20	5	26,566	-45.9			

MONTERREY, MEXICO 6/
962 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	29	423	23.3	81	111	4.9
1000	29	82				
950	29	530	22.5	82	115	6.8
900	29	1,002	19.9	83	131	13.8
850	29	1,495	18.3	76	138	19.0
800	29	2,015	17.1	59	138	16.5
750	29	2,561	14.7	47	139	10.1
700	29	3,145	11.3	45	114	3.9
650	29	3,758	7.3	43	340	3.5
600	29	4,413	2.6	41	352	5.2
550	29	5,103	- 2.4	41	331	5.8
500	29	5,861	- 7.5	38	330	4.9
450	29	6,671	-12.1	29	346	3.5
400	29	7,565	-18.2	R26	319	7.0
350	29	8,549	-25.0	R25	308	9.9
300	29	9,651	-33.2	R26	297	13.8
250	28	10,904	-43.1		280	15.9
200	27	12,374	-53.9		285	20.6
175	27	13,220	-59.4		284	23.3
150	26	14,171	-65.1		280	20.0
125	25	15,270	-70.5		293	10.9
100	21	16,581	-73.5		35	6.6
80	19	17,900	-69.1		75	13.8
70	16	18,706	-65.0		88	16.3
60	12	19,660	-62.5		83	22.7
50	7	20,800	-59.1			
40	6	22,190	-56.6			
30						
25						
20						

MONTERREY, MEXICO 7/
965 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	423	22.9	78	96	2.3
1000	31	106				
950	31	562	22.1	79	105	4.1
900	31	1,026	19.3	85	132	8.0
850	31	1,519	18.9	63	135	12.0
800	31	2,038	16.7	51	133	11.7
750	31	2,588	13.4	46	132	9.1
700	31	3,163	9.7	43	124	5.4
650	31	3,776	5.7	46	86	2.1
600	31	4,424	1.2	44	64	3.9
550	31	5,109	- 3.2	40	73	8.0
500	31	5,867	- 7.6	33	81	10.3
450	31	6,679	-12.4	30	70	12.6
400	31	7,569	-18.5	29	64	13.6
350	31	8,551	-25.6	31	59	14.6
300	31	9,649	-34.0	26	65	15.0
250	31	10,899	-43.9		67	14.4
200	31	12,360	-54.8		68	17.9
175	31	13,203	-60.3		66	17.9
150	31	14,152	-65.4		65	20.6
125	31	15,248	-70.0		66	23.1
100	31	16,568	-70.6		69	25.1
80	29	17,907	-66.6		85	21.0
70	27	18,719	-64.7		[illegible]	20.2
60	26	19,670	-61.8		78	24.9
50	25	20,805	-58.7		78	31.1
40	24	22,220	-54.9		82	37.3
30	26	59,670	-61.8		78	24.9
25	11	25,274	-48.5			
20	6	26,776	-46.5			

MONTERREY, MEXICO 8/
964 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	423	23.0	82	118	3.9
1000	31	101				
950	31	556	22.0	83	115	5.2
900	31	1,021	19.3	84	128	9.7
850	31	1,512	18.0	69	136	14.0
800	31	2,030	15.6	62	133	11.7
750	30	2,580	12.8	54	136	8.4
700	30	3,153	9.5	48	124	6.4
650	30	3,764	5.7	44	105	4.3
600	30	4,414	1.3	45	98	3.7
550	30	5,101	- 3.1	46	97	4.9
500	30	5,857	- 7.6	42	91	5.2
450	30	6,668	-12.6	40	77	4.7
400	30	7,559	-18.7	41	70	3.3
350	30	8,540	-25.8	41	1	3.5
300	30	9,639	-34.0	32	340	6.8
250	30	10,890	-43.9		342	9.5
200	30	12,350	-55.3		349	12.4
175	30	13,190	-61.3		345	12.8
150	29	14,134	-66.6		6	13.0
125	28	15,227	-70.0		31	13.8
100	27	16,552	-70.2		55	16.3
80	25	17,892	-67.0		76	18.5
70	25	18,703	-64.1		79	20.6
60	24	19,653	-61.9		79	23.7
50	23	20,789	-59.0		81	29.5
40	22	22,202	-55.7		81	35.2
30	21	24,056	-51.3		84	38.1
25	20	25,238	-49.9		85	37.5
20	11	26,711	-47.6		81	37.9
15	8	28,620	-45.6			
10						
7						
5						

SAN NICOLAS, CALIF. 6/
993 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	29	174	11.4	87	323	8.0
1000	29	113				
950	29	543	11.2	73	314	9.9
900	29	996	13.6	44	323	9.5
850	29	1,478	13.4	34	322	10.1
800	29	1,986	12.0	24	315	8.7
750	29	2,524	9.3	22	308	8.5
700	29	3,092	5.8	23	295	8.9
650	29	3,694	2.2	24	281	10.5
600	29	4,336	- 2.0	22	273	13.4
550	29	5,021	- 6.7	22	270	15.5
500	29	5,757	-12.2	24	271	19.6
450	29	6,554	-17.8	23	274	22.9
400	29	7,425	-23.4	25	276	28.9
350	29	8,388	-30.8	25	277	35.5
300	29	9,464	-38.8	25	273	40.4
250	29	10,692	-47.0	28	268	43.9
200	29	12,144	-54.2	27	265	47.8
175	29	12,993	-57.4	27	264	49.0
150	29	13,962	-59.4	29	264	37.9
125	29	15,095	-62.2		260	35.0
100	29	16,468	-63.4		259	28.0
80	29	17,840	-62.8		236	5.4
70	29	18,664	-61.8		98	5.2
60	29	19,624	-59.5		101	10.1
50	29	20,772	-56.9		102	14.4
40	29	22,196	-53.9		93	17.1
30	29	24,057	-50.8		79	20.2
25	29	25,250	-48.7		89	23.1
20	29	26,724	-46.1		96	21.4
15	27	28,646	-43.5		86	22.7
10	25	31,396	-38.7		90	24.5
7	15	33,887	-32.5		90	32.2
5						

SAN NICOLAS, CALIF. 7/
994 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	174	12.4	92	309	8.7
1000	31	121				
950	31	556	19.0	42	310	6.0
900	31	1,023	21.8	28	304	5.2
850	31	1,518	20.5	24	271	4.1
800	31	2,038	17.8	24	238	4.9
750	31	2,586	14.4	28	219	6.0
700	31	3,165	10.5	34	213	7.0
650	31	3,777	6.0	34	208	8.0
600	31	4,426	1.0	36	214	8.2
550	31	5,119	- 4.2	35	219	9.5
500	31	5,863	- 9.6	34	216	10.3
450	31	6,668	-15.4	29	210	13.4
400	31	7,548	-20.8	25	209	16.3
350	31	8,522	-27.6	25	202	21.4
300	31	9,612	-35.7	24	206	23.9
250	31	10,857	-44.1	23	202	29.7
200	31	12,324	-52.8	20	200	31.3
175	31	13,176	-57.6	20	206	28.6
150	31	14,137	-63.0	18	208	23.9
125	31	15,246	-67.4		209	20.0
100	31	16,585	-68.2		187	10.1
80	31	17,933	-65.3		126	10.1
70	31	18,750	-62.9		117	13.0
60	31	19,704	-60.2		97	17.1
50	31	20,849	-56.8		94	19.4
40	29	22,275	-53.5		86	22.7
30	28	24,139	-50.6		89	25.6
25	25	25,325	-49.3		88	28.7
20	24	26,793	-46.7		89	27.0
15	23	28,711	-44.2		86	28.6
10	20	31,450	-40.0		86	36.5
7	16	33,906	-33.6		85	40.2
5						

SAN NICOLAS, CALIF. 8/
992 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	174	15.7	86	311	5.2
1000	31	103				
950	31	545	22.1	42	314	6.4
900	31	1,016	23.8	27	310	7.0
850	31	1,513	21.4	28	296	5.6
800	31	2,035	18.0	29	257	4.5
750	31	2,583	14.2	36	229	4.7
700	31	3,161	10.4	31	220	5.8
650	31	3,774	6.1	35	215	7.2
600	31	4,424	1.6	34	216	7.0
550	31	5,119	- 3.1	35	225	8.4
500	31	5,866	- 8.0	32	233	10.3
450	31	6,676	-13.8	26	241	12.2
400	31	7,561	-19.5	26	243	15.5
350	31	8,541	-25.8	19	248	18.6
300	31	9,639	-34.1	22	251	21.0
250	31	10,891	-42.8	21	252	23.9
200	31	12,364	-53.1	20	252	24.7
175	31	13,212	-59.3	20	244	22.9
150	31	14,164	-65.3	18	239	22.0
125	31	15,260	-69.8		241	16.3
100	31	16,586	-69.6		226	4.5
80	30	17,926	-66.4		100	7.4
70	30	18,740	-63.4		98	10.9
60	30	19,695	-60.3		93	12.6
50	30	20,841	-56.7		87	17.3
40	30	22,263	-54.3		88	17.9
30	29	24,117	-51.5		87	22.0
25	29	25,303	-50.2		89	24.1
20	28	26,767	-48.1		89	26.4
15	26	28,676	-45.4		84	28.0
10	21	31,402	-41.1		83	32.8
7	13	33,861	-35.2		92	36.5
5	7	36,237	-29.7			

* VANDENBERG AFB, CALIF. 1/
1006 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	31	113	8.4	89	79	2.7
1000	31	165	10.7	74	76	3.3
950	31	597	11.8	53	22	4.9
900	31	1,046	10.3	46	2	3.7
850	31	1,519	7.7	43	335	5.8
800	31	2,017	5.5	43	337	6.8
750	31	2,539	3.0	39	321	8.4
700	31	3,098	- .3	38	300	9.5
650	31	3,678	- 4.0	35	288	11.5
600	31	4,314	- 7.9	37	283	11.7
550	31	4,977	-12.3	35	281	12.6
500	31	5,707	-17.0	32	284	15.9
450	31	6,479	-22.9	38	284	17.3
400	31	7,341	-29.6	41	287	20.4
350	31	8,279	-36.8	41	286	23.3
300	31	9,327	-44.9		285	25.6
250	31	10,524	-53.0		279	28.2
200	31	11,941	-58.5		273	28.9
175	31	12,780	-58.6		275	27.0
150	31	13,746	-59.9		281	29.7
125	31	14,879	-62.1		283	24.7
100	31	16,250	-63.8		285	19.8
80	31	17,616	-64.4		300	11.7
70	31	18,432	-63.7		303	9.9
60	31	19,382	-62.0		335	3.7
50	31	20,513	-60.5		68	6.2
40	31	21,909	-58.7		60	9.1
30	31	23,719	-57.7		60	13.8
25	31	24,872	-56.8		61	15.0
20	31	26,291	-55.0		59	16.3
15	28	28,140	-52.8		61	17.7
10	24	30,757	-49.7		35	11.8
7	9	33,129	-46.5			
5						

* WALLOPS IS. VA. NASA 9/
1021 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	30	3	17.9	92	347	1.2
1000	30	184	20.0	73	326	2.5
950	30	623	18.3	69	332	3.1
900	30	1,089	15.4	67	301	2.7
850	30	1,573	13.6	54	276	4.1
800	30	2,081	11.6	47	267	5.6
750	30	2,616	9.1	44	272	6.4
700	30	3,189	6.2	44	272	8.4
650	30	3,790	2.8	40	263	8.9
600	30	4,437	- .6	34	269	9.9
550	30	5,118	- 4.6	31	267	12.0
500	30	5,872	- 9.0	31	267	13.6
450	30	6,673	-14.5	27	268	16.3
400	30	7,563	-20.4	29	274	19.8
350	30	8,537	-27.6	34	275	21.6
300	30	9,628	-35.9	30	274	25.1
250	30	10,870	-44.9		280	31.1
200	30	12,331	-54.3		290	34.8
175	30	13,178	-58.8		293	32.8
150	30	14,135	-63.5		291	27.0
125	30	15,241	-68.1		293	24.9
100	30	16,581	-68.0		291	16.9
80	30	17,933	-64.0		286	9.1
70	30	18,756	-61.0		288	5.6
60	30	19,718	-58.6		345	2.7
50	30	20,871	-55.8		34	3.5
40	30	22,300	-53.2		68	5.4
30	27	24,171	-50.0		74	5.1
25	26	25,367	-48.1		65	5.1
20	26	26,843	-46.2		77	5.4
15	24	28,761	-43.7		77	4.1
10	20	31,491	-40.7		82	6.6
7	10	33,910	-37.7			

YUMA, ARIZ. 9/
994 MB

Standard pressure surface (mb.)	Number of observations	Dynamic height	Temperature	Relative humidity	Wind Direction	Wind Speed
SURFACE	21	131	21.7	36	317	1.2
1000	21	81				
950	21	530	25.5	33	321	5.8
900	21	1,004	23.0	31	308	5.6
850	21	1,499	19.8	32	252	4.5
800	21	2,018	16.3	30	217	6.0
750	21	2,560	12.7	31	212	9.5
700	21	3,138	9.0	33	222	11.1
650	21	3,744	5.5	32	240	13.0
600	21	4,397	1.1	30	253	16.3
550	21	5,084	- 3.1	26	261	18.3
500	21	5,839	- 7.9	23	270	21.0
450	21	6,645	-13.4	22	268	24.3
400	21	7,535	-19.9	22	262	30.1
350	21	8,510	-27.6	25	262	33.2
300	21	9,598	-36.2	28	257	36.7
250	21	10,840	-44.5		252	45.8
200	19	12,295	-53.7		248	48.6
175	18	13,151	-58.2		252	47.2
150	17	14,104	-63.3		255	48.0
125	13	15,208	-67.5		255	43.5
100	9	16,542	-68.4			

1/ January 1965
2/ February 1965
3/ March 1965
4/ April 1965
5/ May 1965
6/ June 1965
7/ July 1965
8/ August 1965
9/ September 1965

Also see reference notes with current data.

See reference note at end of table

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
MAY 1965																																
FLAMING GORGE UTAH	628	420	637	653	197	451	258	272	408	536	590	646	158	165	580	651	645	481	416	425	394	505	655	446	238	423	694	---	---	---	---	466
RUSTON LOUISIANA	697	687	545	507	487	510	544	484	413	548	388	570	206	444	532	341	325	387	254	496	496	525	296	498	550	528	578	163	684	724	628	485
JUNE 1965																																
GRIFFIN EXP.STA.GA.#	713	724	600	679	428	673	235	367	502	464	267	368	545	583	153	238	286	508	813	779	637	561	581	335	514	344	270	406	580	520		489
MATANUSKA ALASKA	254	366	164	446	341	161	364	352	257	432	275	150	173*	435	487	233	361	368	216	234	191	257	386	231	350	320	200	437	215	226		296*
PULLMAN WASHINGTON	720	717	720	720	735	724	763	725	718	646	600	567	670	247	414	391	126	564	752	747	740	713	551	426	751	718	779	392	739	764		628
RUSTON LOUISIANA	416	587	608	634	545	242	608	578	598	553	537	600	359	486	572	662	492	295	665	702	575	---	---	---	334	694	543	478	651	644		543
JULY 1965																																
ITHACA NEW YORK	687	620	343	672	377	701	231	571	541	529	636	671	641	312	612	619	307	328	563	475	649	221	458	452	618	599	264	259	286	596	433	493
PULLMAN WASHINGTON	714	713	713	711	713	712	536	745	681	653	593	720	654	698	623	678	650	719	681	259	217	552	698	693	690	491	485	660	595	673	665	632
AUGUST 1965																																
ANNETTE ALASKA	310	327	296	291	228	197	135	134	332	290	145	291	299	283	99	161	335	208	274	139	212	204	296	123	83	269	110	221	124	67	97	212
EPPLEY NEWPORT R.I.	527	101	548	629	277	591	482	513	383	292	447	612	465	513	576	543	488	476	402	536	560	57	464	587	536	154	464	378	539	593	308	453
GRIFFIN EXP.STA.GA.#	511	628	645	484	358	529	457	344	437	447	603	509	442	544	394	466	541	592	618	437	551	522	555	546	510	554	473	546	604	549	597	516
INYOKERN CALIFORNIA	---	---	---	---	---	822	831	714	718	652	442	451	729	---	655	595	800	777	783	813	805	793	797	787	799	805	789	755	754	747	753	735
PULLMAN WASHINGTON	636	358	338	591	592	625	620	603	590	414	330	221	626	625	604	598	597	563	245	562	440	199	375	402	137	385	433	394	533	568	559	476
SEATTLE WASH. UNIV.	---	---	---	---	---	---	---	---	---	---	---	---	---	580	604	605	604	540	54	345	496	327	39	314	321	318	394	396	526	566	562	---
SEPTEMBER 1965																																
ANNETTE ALASKA	81	151	227	122	263	185	86	269	245	257	281	159	141	148	349	---	---	309	338	168	360	376	285	---	---	197	200	49	86	---		213
DAVIS CALIFORNIA	350	339	368	373	359	210	336	343	332	342	344	338	328	335	316	323	320	321	331	323	311	302	299	273	299	295	116	294	294	285		313
EPPLEY NEWPORT R.I.	361	553	489	557	559	507	490	184	510	454	224	189	56	318	118	466	241	396	103	360	304	269	291	190	284	457	425	458	379	411		353
FAIRBANKS ALASKA	203	175	311	218	81	---	265	351	343	356	---	335	341	355	---	185	145	115	95	212	148	53	123	101	193	97	103	149	---	104		198
GRIFFIN EXP.STA.GA.#	531	79	158	483	447	584	606	612	364	298	486	424	464	464	493	381	431	462	525	---	444	354	435	230	552	417	351	115	106	75		392
INYOKERN CALIFORNIA	727	703	703	664	651	724	405	707	699	404	713	705	673	702	669	642	618	405	597	662	625	629	626	611	592	629	624	617	618	608		642
PULLMAN WASHINGTON	500	535	267	459	505	500	510	459	401	467	372	482	153	165	140	470	347	405	325	443	265	382	441	426	417	405	231	155	387	397		380
SEATTLE WASH. UNIV.	339	113	383	409	427	503	478	388	322	441	419	232	99	70	101	477	339	403	386	308	160	189	392	401	305	42	388	162	203	284		305
OCTOBER 1965																																
EPPLEY NEWPORT R.I.	129	441	361	389	425	361	301	387	386	308	371	128	378	355	183	352	372	362	316	315	183	71	90	313	305	273	312	294	294	327	255	301
GRIFFIN EXP.STA.GA.	341	549	594	521	---	163	313	470	477	534	408	357	413	338	369	442	368	153	38	69	99	393	284	473	415	424	408	411	410	371	388	366
INYOKERN CALIFORNIA	606	587	583	580	539	569	567	578	---	518	521	507	477	510	495	491	499	---	460	474	473	477	474	480	465	456	450	442	440	438	430	503
PULLMAN WASHINGTON	326	384	363	210	270	293	355	311	332	354	336	244	140	160	180	332	65	267	210	266	---	302	292	259	269	266	244	196	210	241	212	264
RICHLAND 25 NW WASH.	---	386	326	173	287	317	323	316	350	350	343	189	306	227	337	306	286	153	277	265	291	288	274	271	239	226	203	210	210	256	215	273
SEATTLE WASH. UNIV.	358	243	291	103	104	171	330	228	325	310	182	52	198	134	186	201	166	681	142	79	274	267	212	175	177	206	85	159	147	140	186	210
NOVEMBER 1965																																
BARROW ALASKA #	10	14	17	12	3	4	2	2	2	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
DAVIS CALIFORNIA	303	310	295	309	286	311	194	322	238	302	240	48	41	123	196	40	100	152	202	231	291	88	82	197	110	111	270	255	202	264		204
GAINESVILLE FLORIDA	406	403	388	390	302	186	283	337	360	238	292	177	296	289	251	277	280	371	326	278	355	87	339	362	357	364	298	345	237	293		306
GRIFFIN EXP.STA.GA.	416	386	376	250	271	69	356	355	235	81	73	20	77	293	306	315	---	317	202	291	101	190	323	246	65	168	273	237	255	321		237
INYOKERN CALIFORNIA	417	412	409	393	291	406	374	395	369	382	382	307	142	86	152	71	136	355	308	123	275	30	279	201	229	355	349	312	338	305		286
PULLMAN WASHINGTON	176	167	115	100	172	184	142	105	55	103	146	145	158	45	108	153	51	61	171	70	33	47	50	41	120	107	121	117	181	81		111
SEATTLE WASH. UNIV.	157	236	45	159	97	107	127	97	149	58	167	71	95	66	25	166	101	67	67	31	37	62	101	16	51	19	107	55	115	93		91

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

# These are corrected data.

SOLAR RADIATION DATA

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

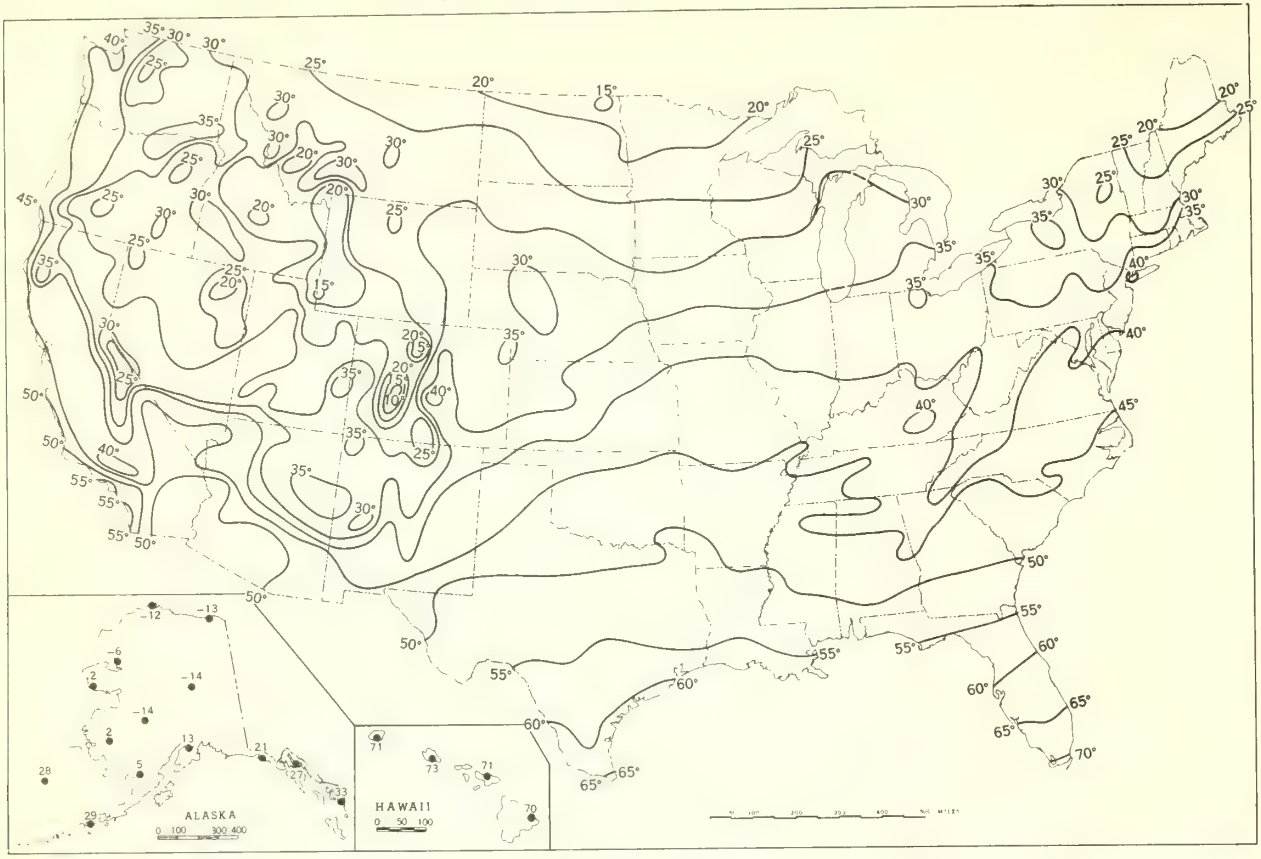
DELAYED DATA

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
DECEMBER 1965																																
AMES IOWA	178	183	211	170	212	203	204	155	150	13	61	24	80	65	152	102	124	211	90	70	180	174	69	20	214	65	209	41	72	84	202	129
BARROW ALASKA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DAVIS CALIFORNIA	70	60	49	71	85	55	51	40	59	125	42	125	244	252	245	257	250	212	249	167	52	240	240	73	236	162	87	29	103	77	250	137
GRIFFIN EXP.STA.GA.	312	278	152	300	289	315	313	313	260	295	149	123	236	126	54	28	130	32	97	280	301	294	258	184	152	308	296	280	222	273	234	222
INYOKERN CALIFORNIA	339	338	336	335	289	289	298	293	90	227	296	298	233	155	324	175	327	339	348	319	213	250	326	323	323	317	319	186	26	332	310	277
LOS ANGELES CALIF.U	266	136	315	321	254	249	285	220	65	211	232	151	223	77	228	101	294	291	309	286	162	167	286	524	---	287	269	129	36	314	552	241
PULLMAN WASHINGTON	81	72	69	40	110	163	59	87	139	18	96	26	84	119	29	94	158	143	162	169	46	60	166	53	117	136	35	25	71	95	143	92
TUCSON ARIZONA	324	319	335	335	333	372	303	92	41	79	311	259	112	57	183	112	617	229	307	304	193	---	88	324	326	318	304	321	141	51	391	249

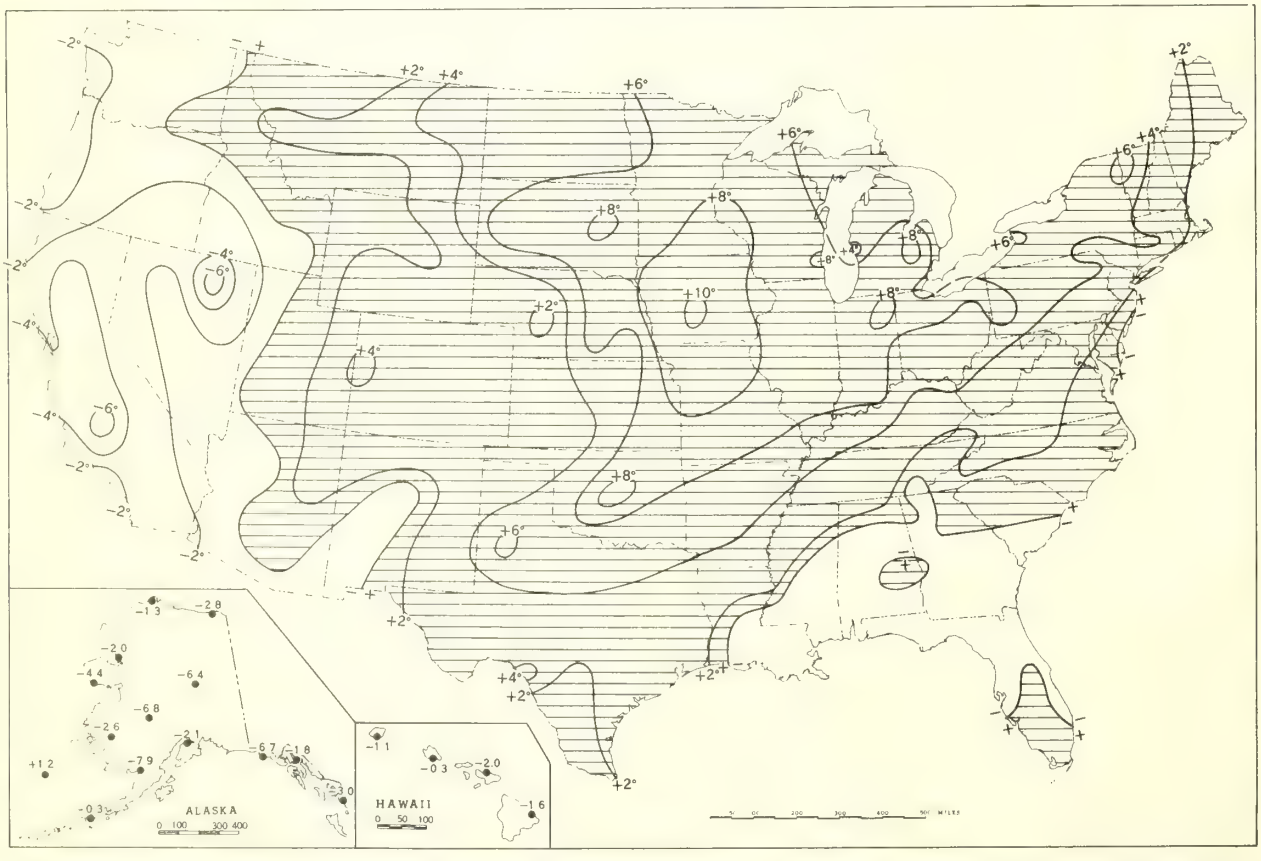
Note.--1 langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites.

Chart I. A. Average Temperature (°F.) at Surface, December 1965.



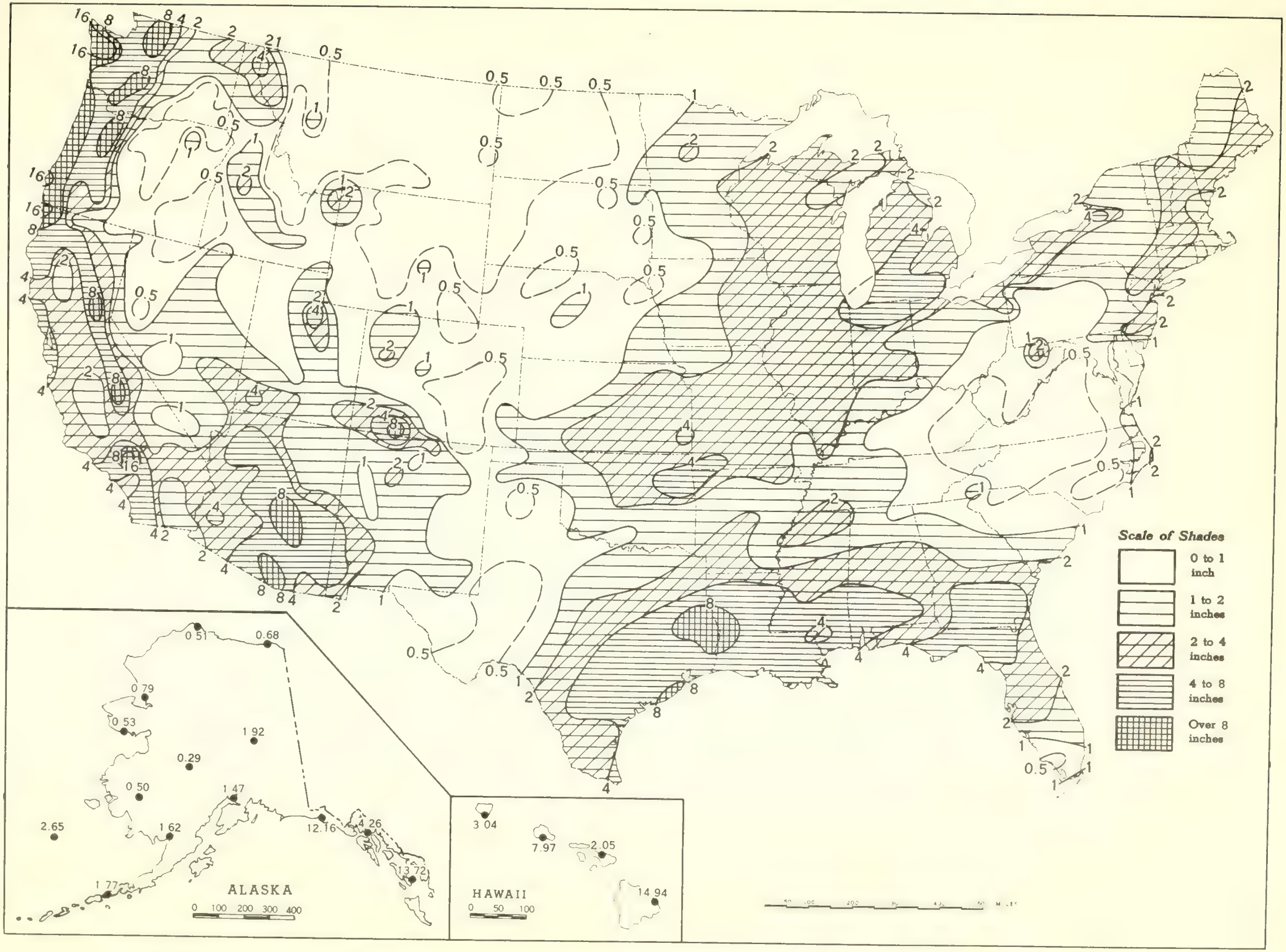
B. Departure of Average Temperature from Normal (°F.), December 1965.



A. Based on reports from over 870 Weather Bureau and cooperative stations. The monthly average is half the sum of the monthly average maximum and monthly average minimum, which are the average of the daily maxima and daily minima, respectively.

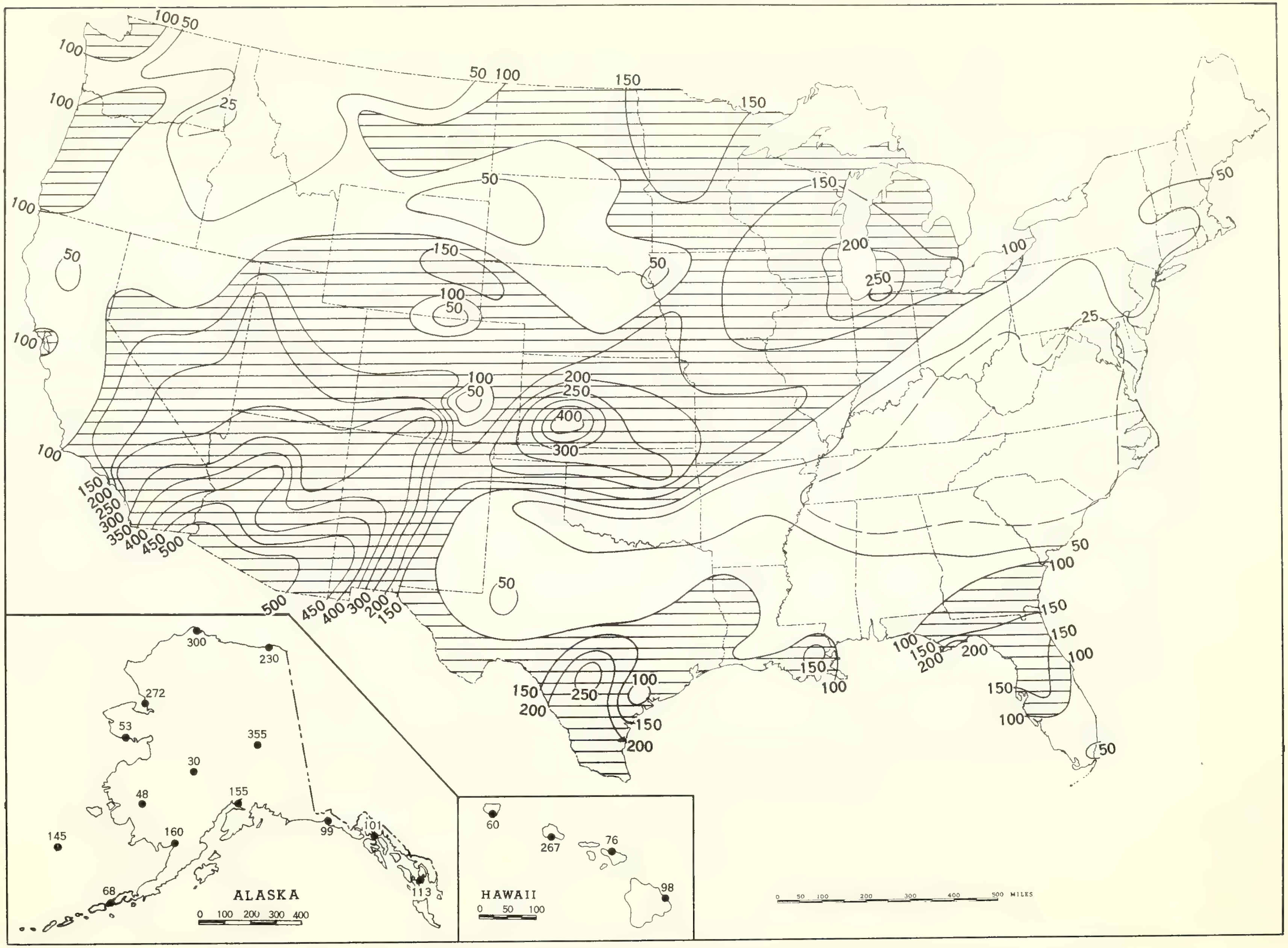
B. Departures from normal are based on the 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart II. Total Precipitation (Inches), December 1965.



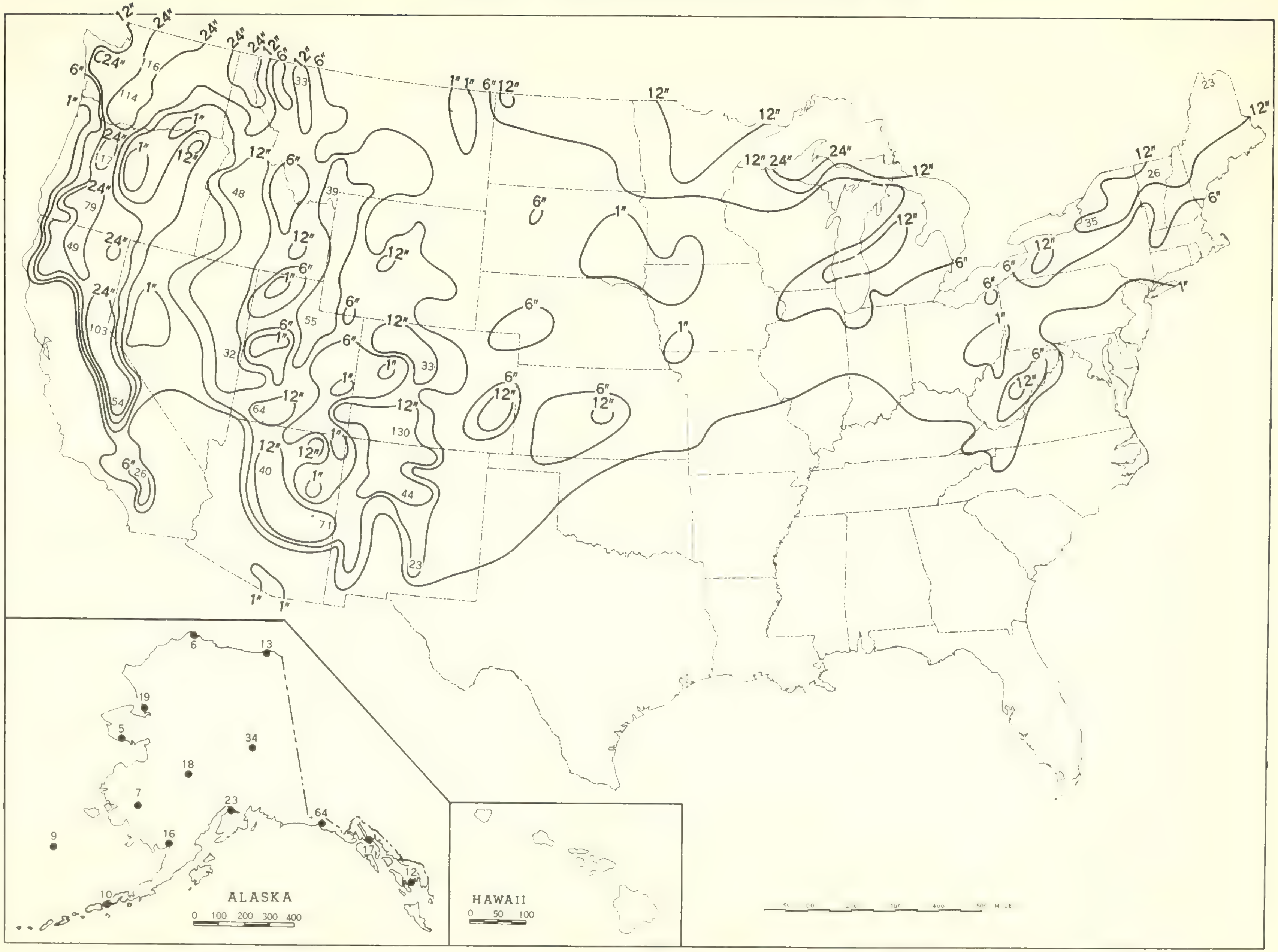
Based on daily precipitation records at about 870 Weather Bureau and cooperative stations.

Chart III. Percentage of Normal Precipitation, December 1965.



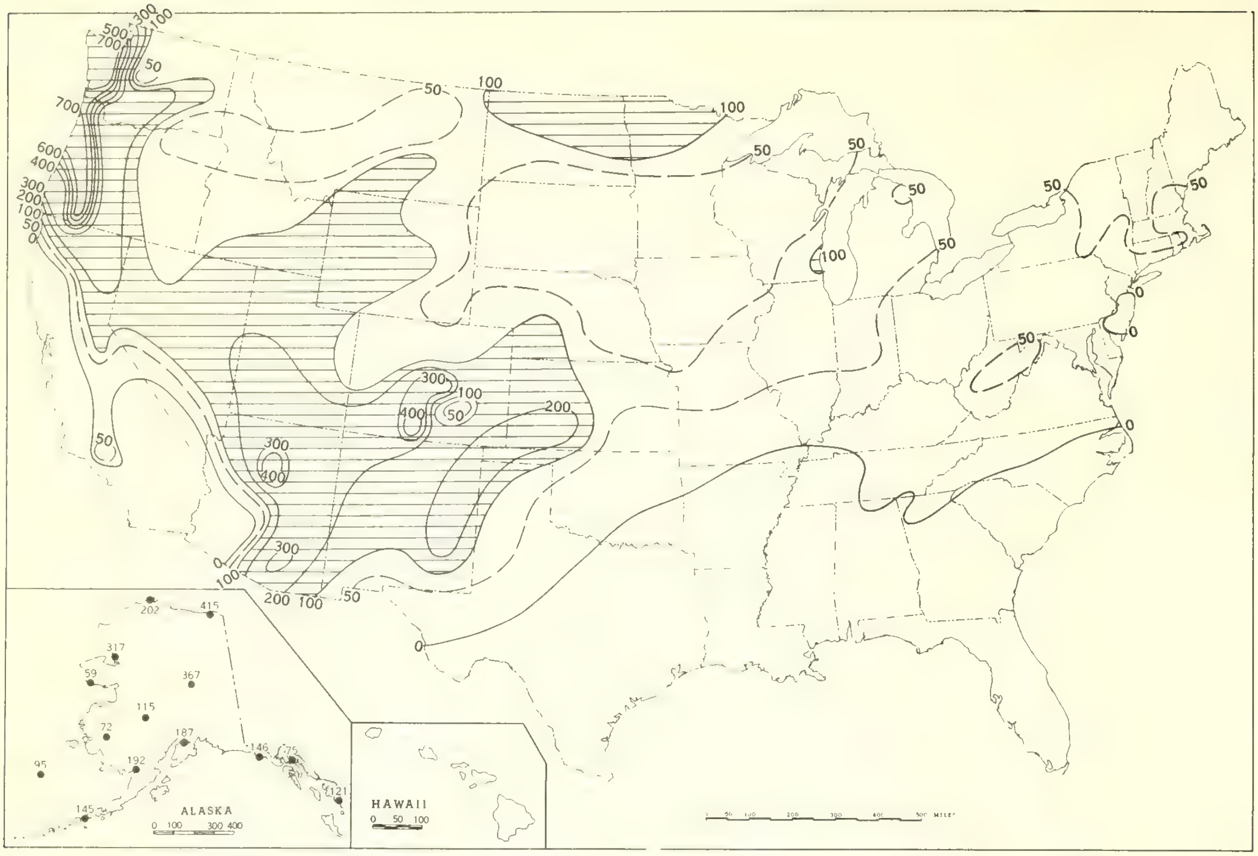
Normal monthly precipitation amounts are computed from 30-yr. normals (1931-60) for first-order Weather Bureau stations.

Chart IV. Total Snowfall (Inches), December 1965.

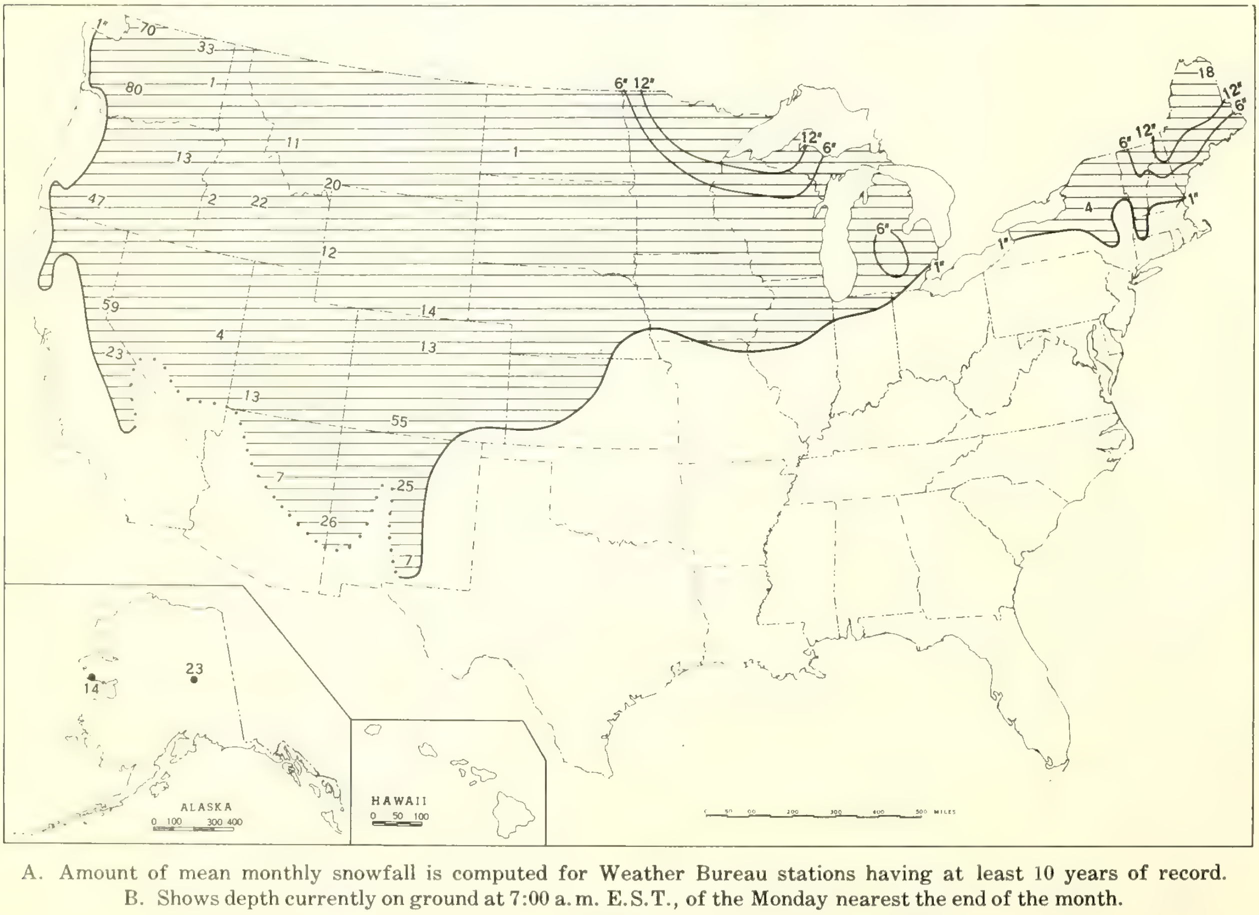


This is the total of unmelted snowfall recorded during the month at Weather Bureau and cooperative stations. This chart and Chart V are published only for the months of November through April although of course there is some snow at higher elevations, particularly in the far West, earlier and later in the year.

Chart V. A. Percentage of Mean Monthly Snowfall, December 1965.

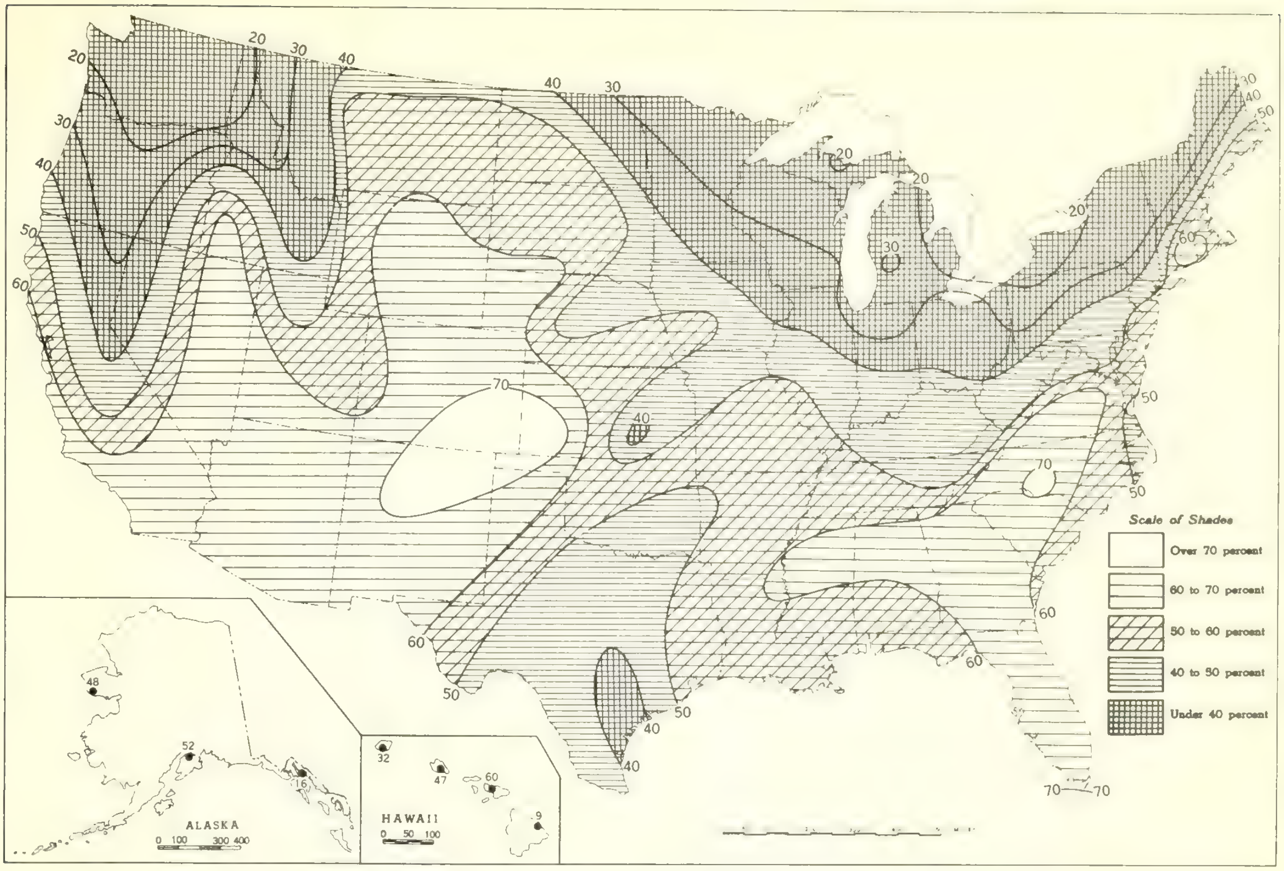


B. Depth of Snow on Ground (Inches), 7:00 a. m. E. S. T., December 27, 1965

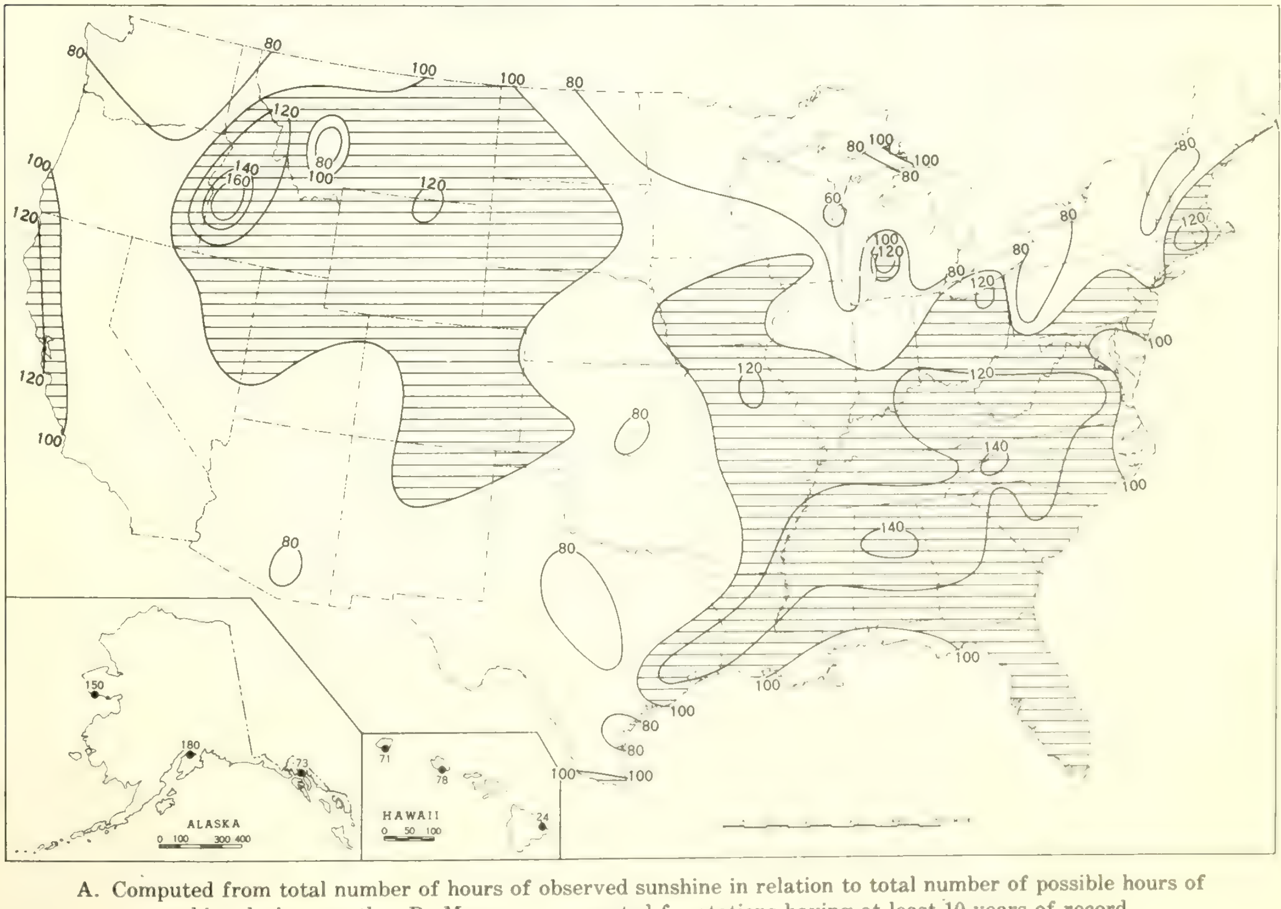


A. Amount of mean monthly snowfall is computed for Weather Bureau stations having at least 10 years of record.
B. Shows depth currently on ground at 7:00 a. m. E.S.T., of the Monday nearest the end of the month.
It is based on reports from Weather Bureau and cooperative stations.

Chart VI. A. Percentage of Possible Sunshine, December 1965.

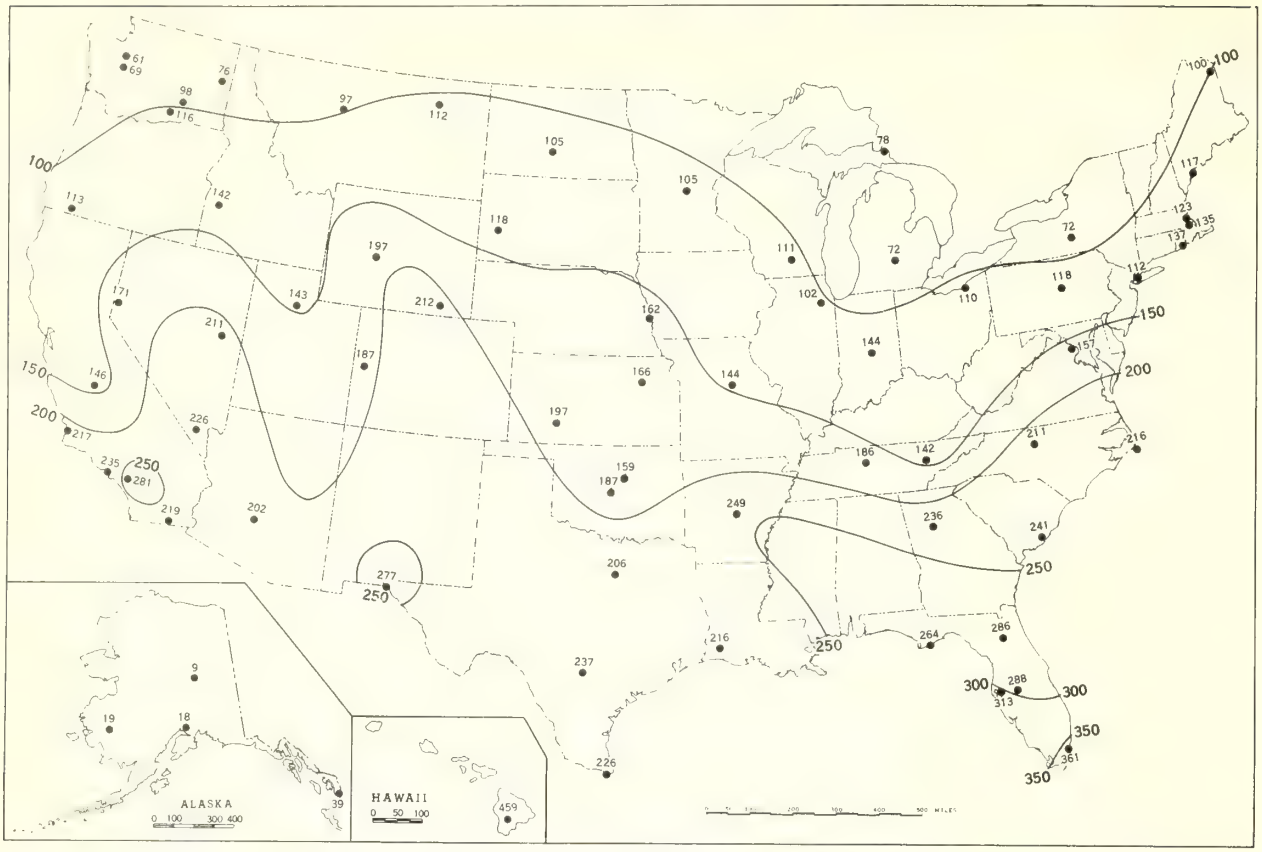


B. Percentage of Mean Monthly Sunshine, December 1965.

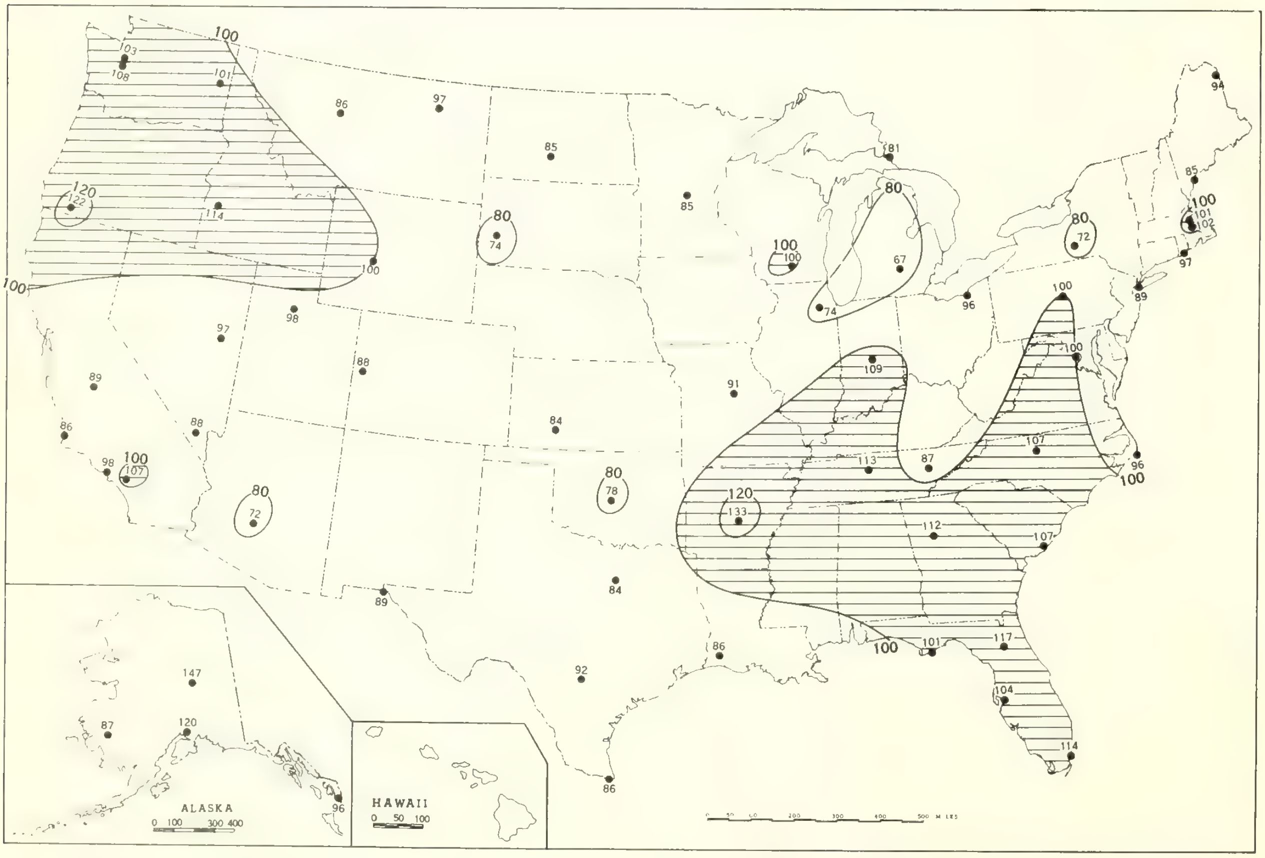


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, December 1965.

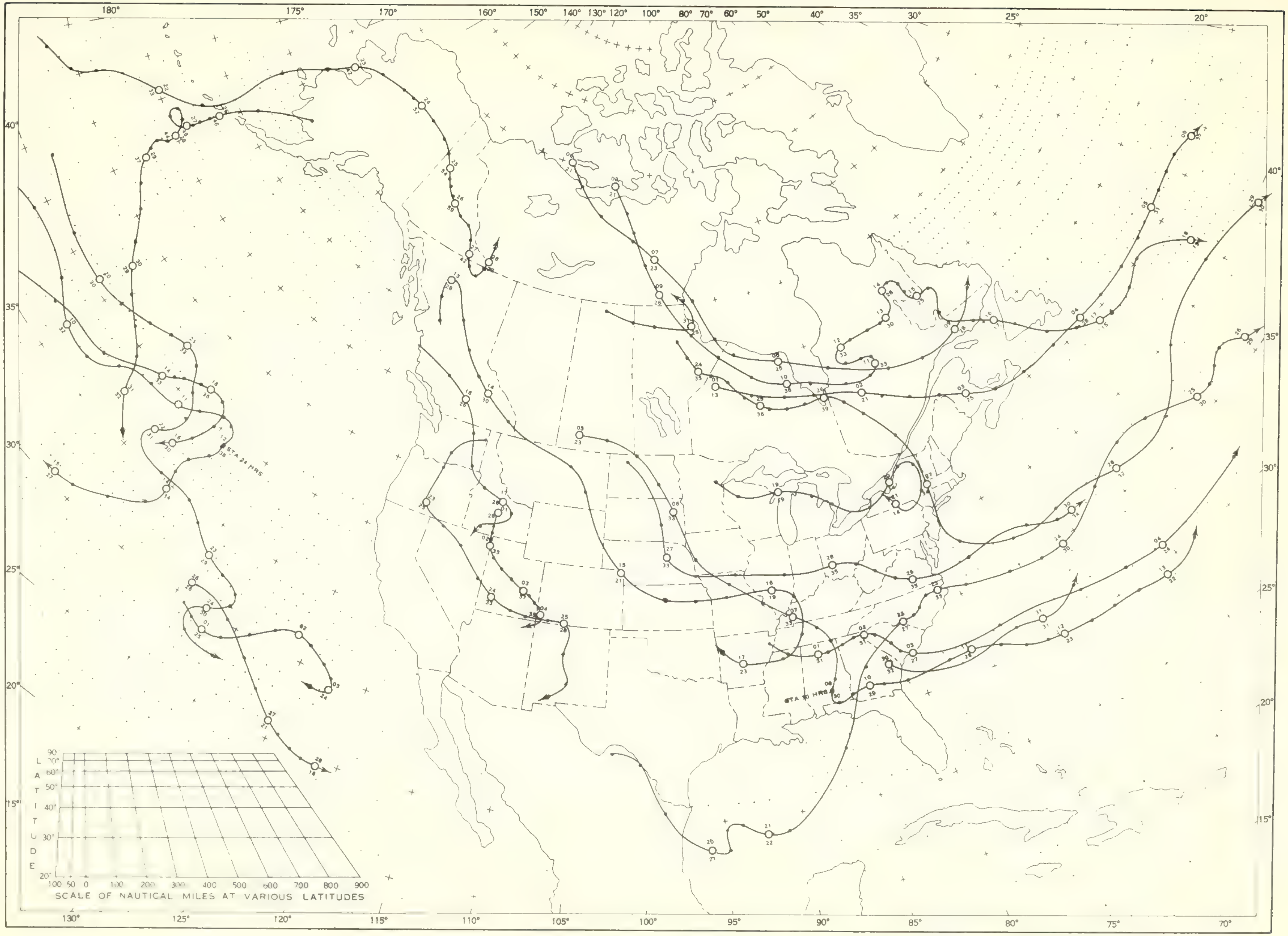


B. Percentage of Mean Daily Solar Radiation, December 1965.



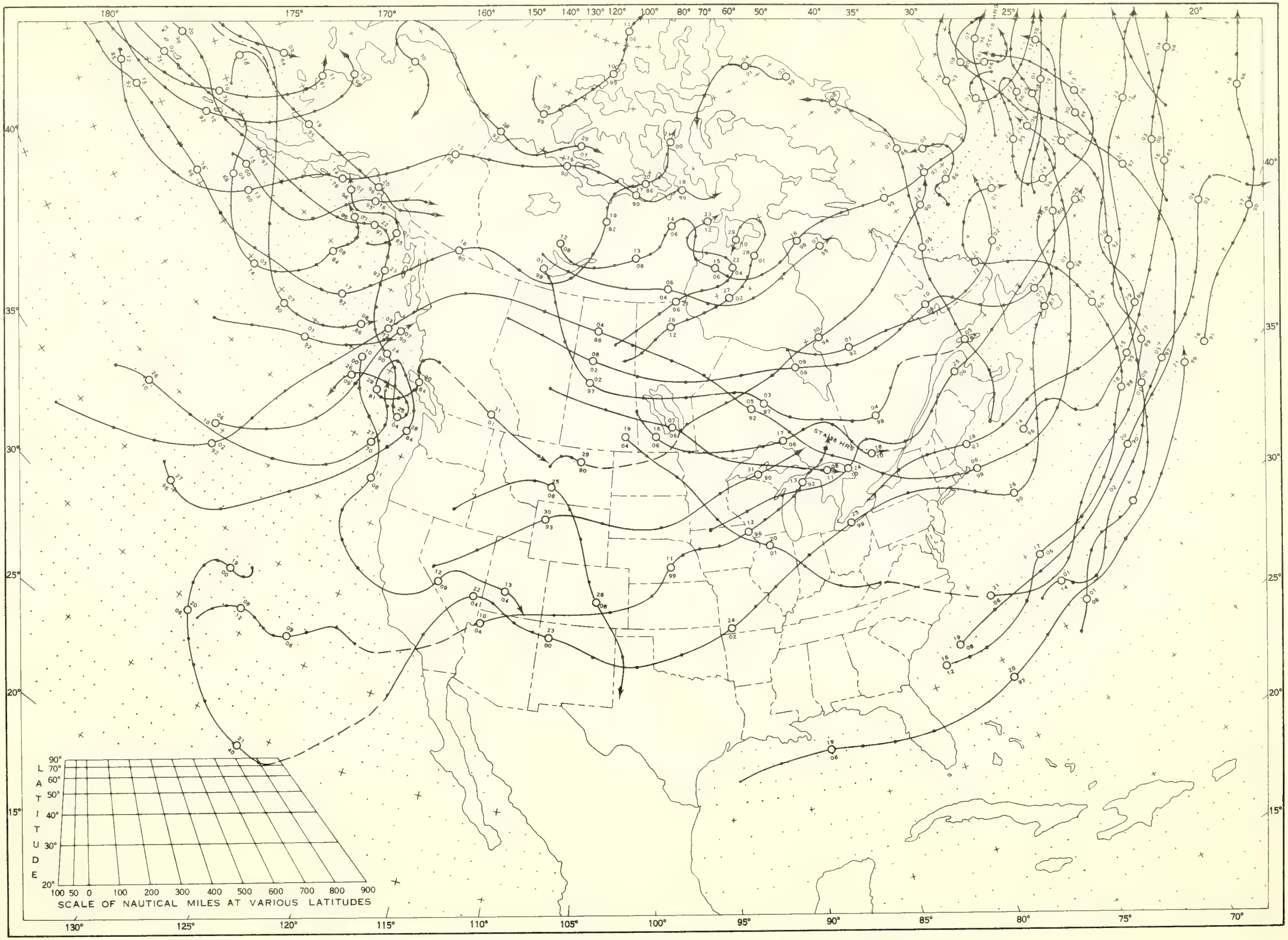
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm. $^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, December 1965.



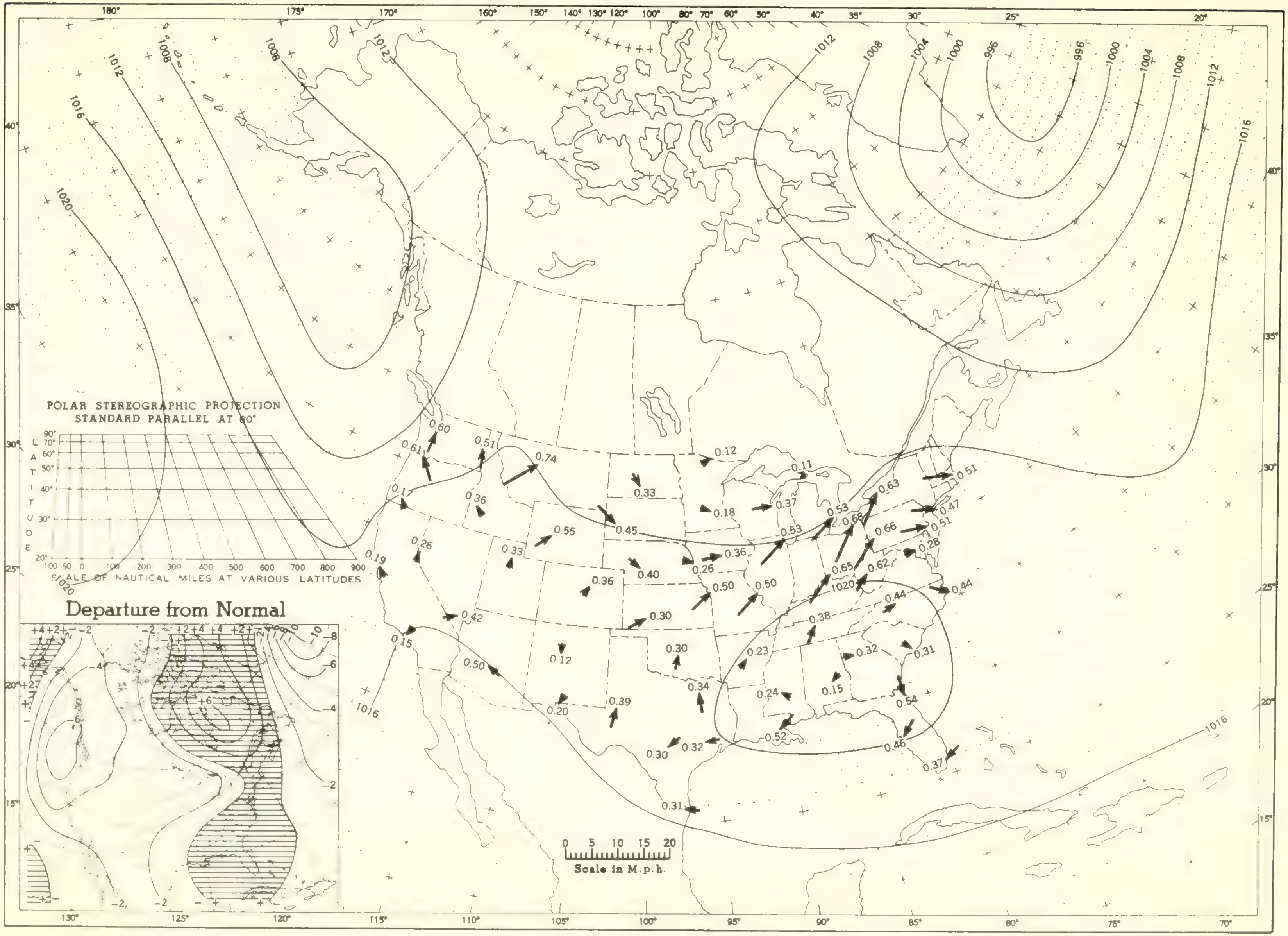
Circle indicates position of center at 7:00 a. m. E. S. T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, December 1965.



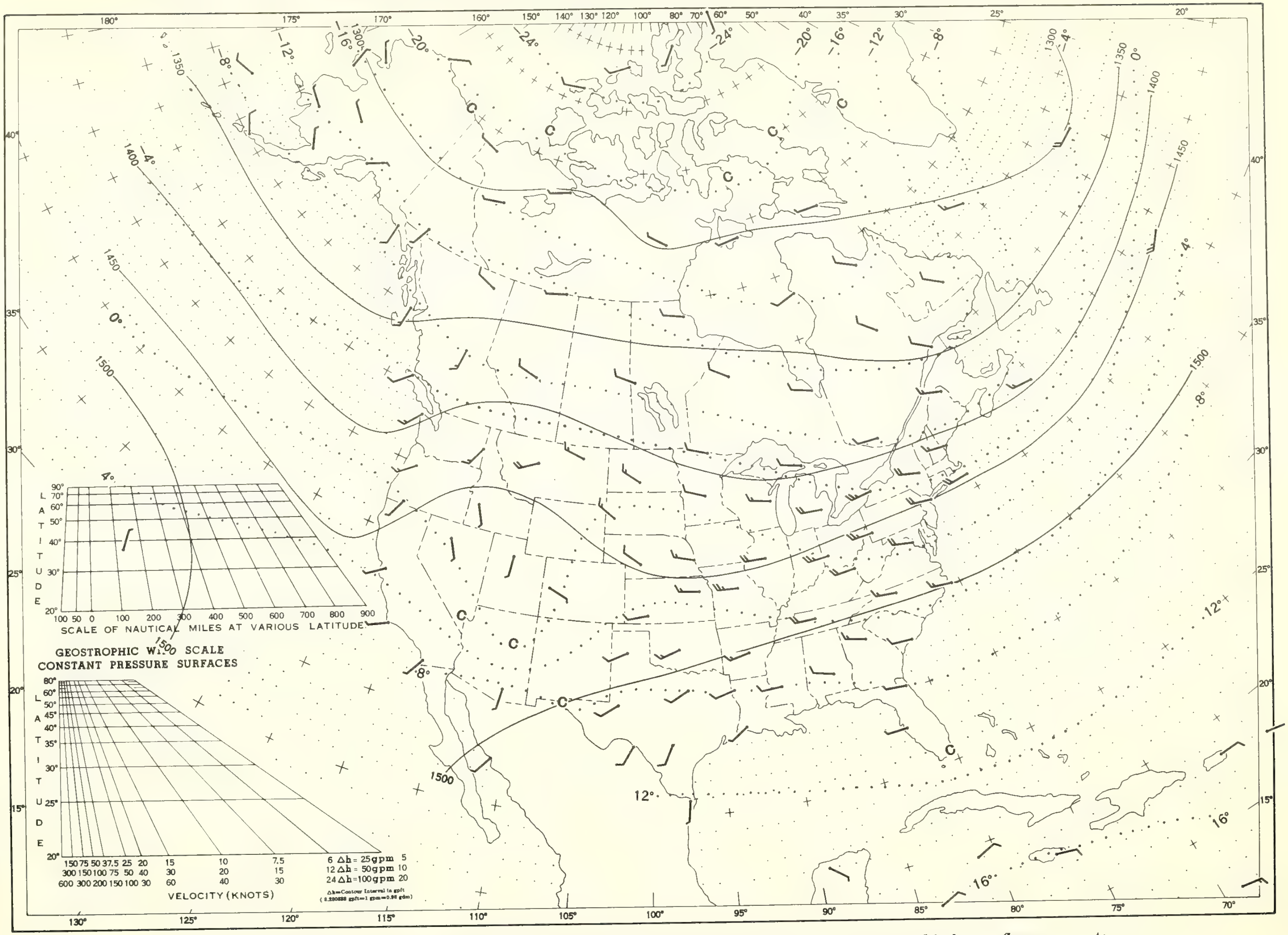
Circle indicates position of center at 7:00 a. m. E. S. T. See Chart VIII for explanation of symbols.

Chart X. Average Sea Level Pressure (mb) and Resultant Surface Wind, December 1965. Inset: Departure of Average Pressure (mb) from Normal, December 1965.



Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

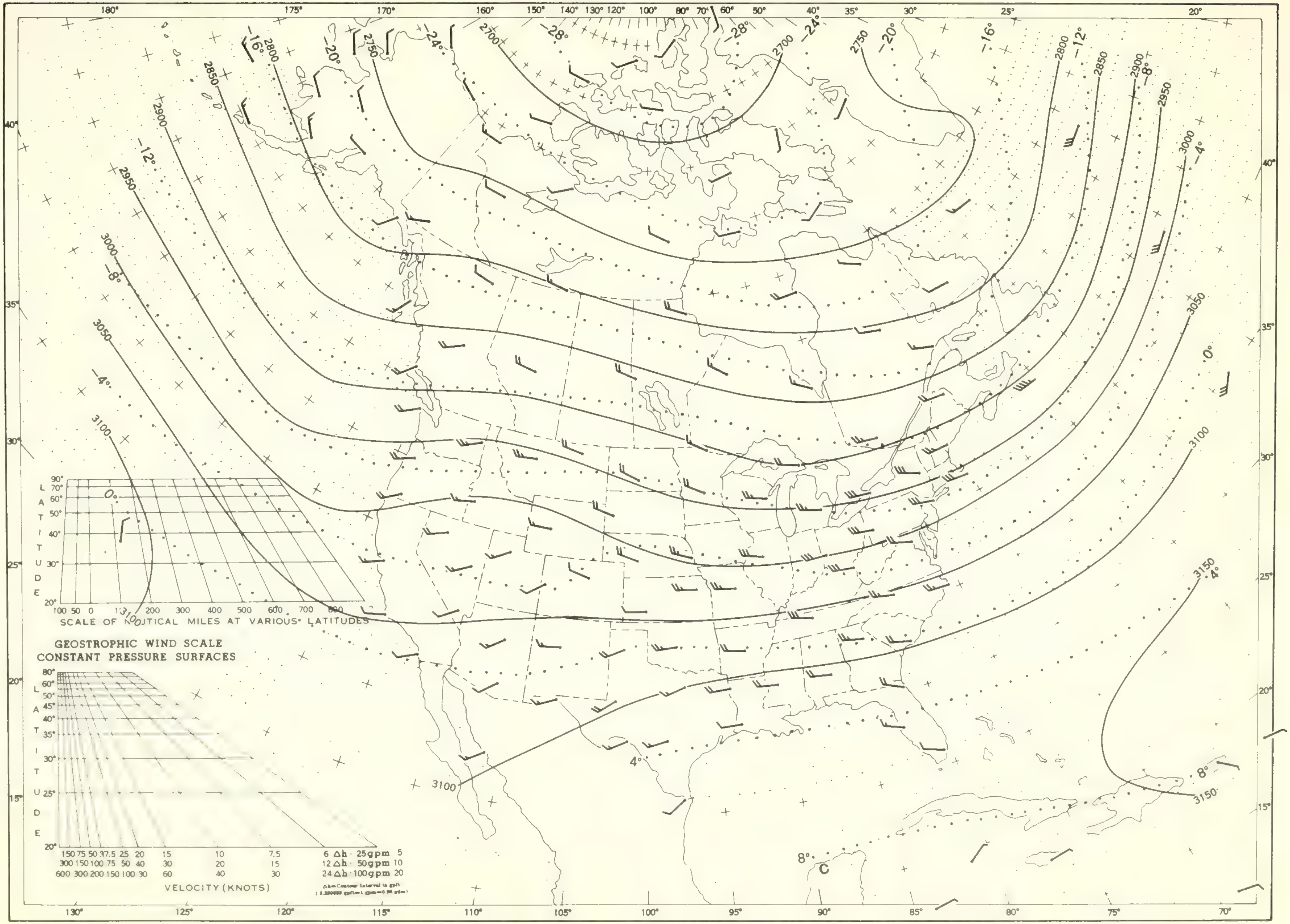
Chart XI. 850-mb. Surface, 1200 GMT, December 1965. Average Height and Temperature, and Resultant Winds.



Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in knots; flag represents 50 knots, full feather 10 knots, and half feather 5 knots. All wind data are based on rawin observations.

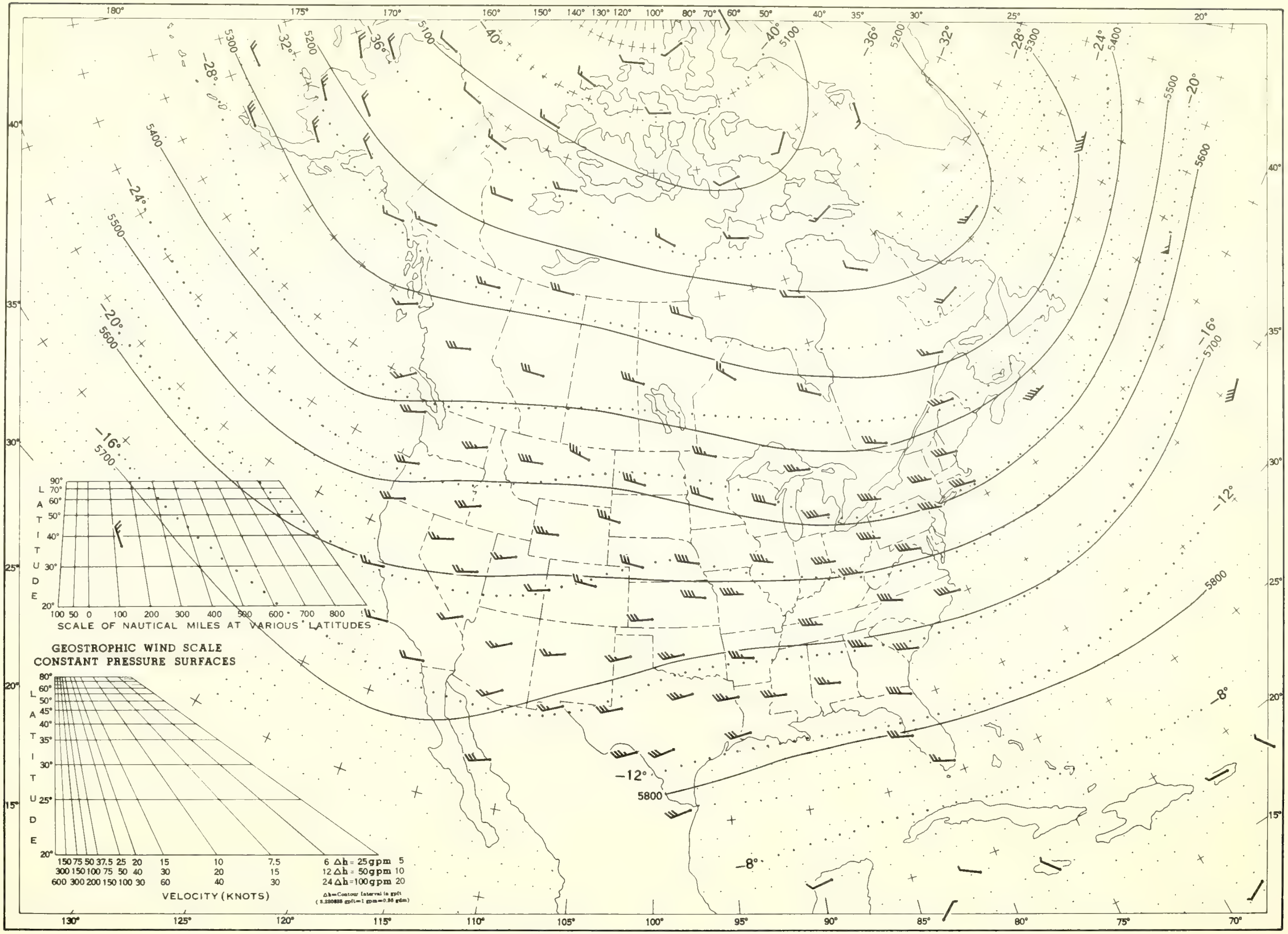
USCOMM-WB-DC

Chart XII. 700-mb. Surface, 1200 GMT, December 1965. Average Height and Temperature, and Resultant Winds.



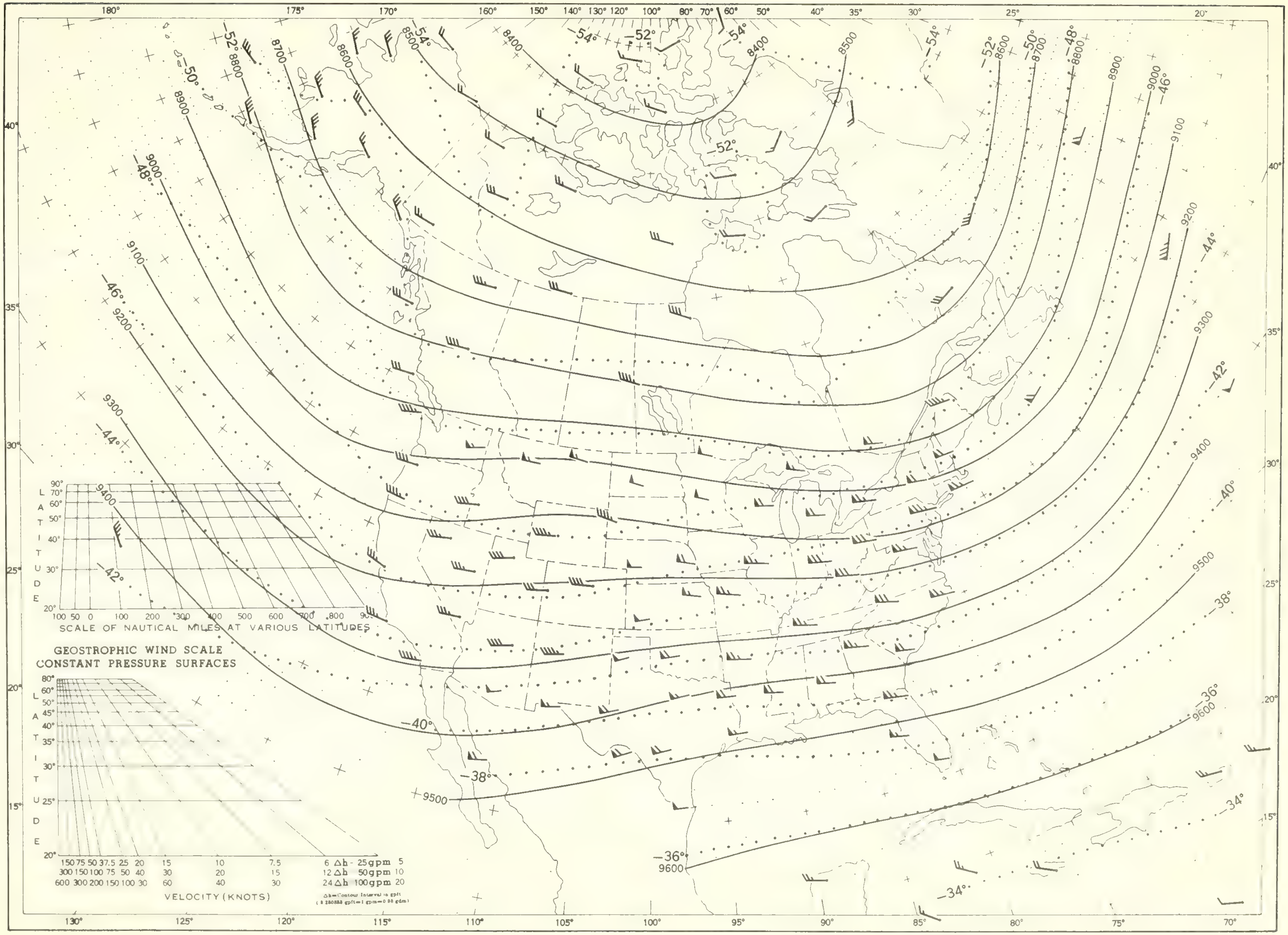
See Chart XI for explanation of map.

Chart XIII. 500-mb. Surface, 1200 GMT, December 1965. Average Height and Temperature, and Resultant Winds.



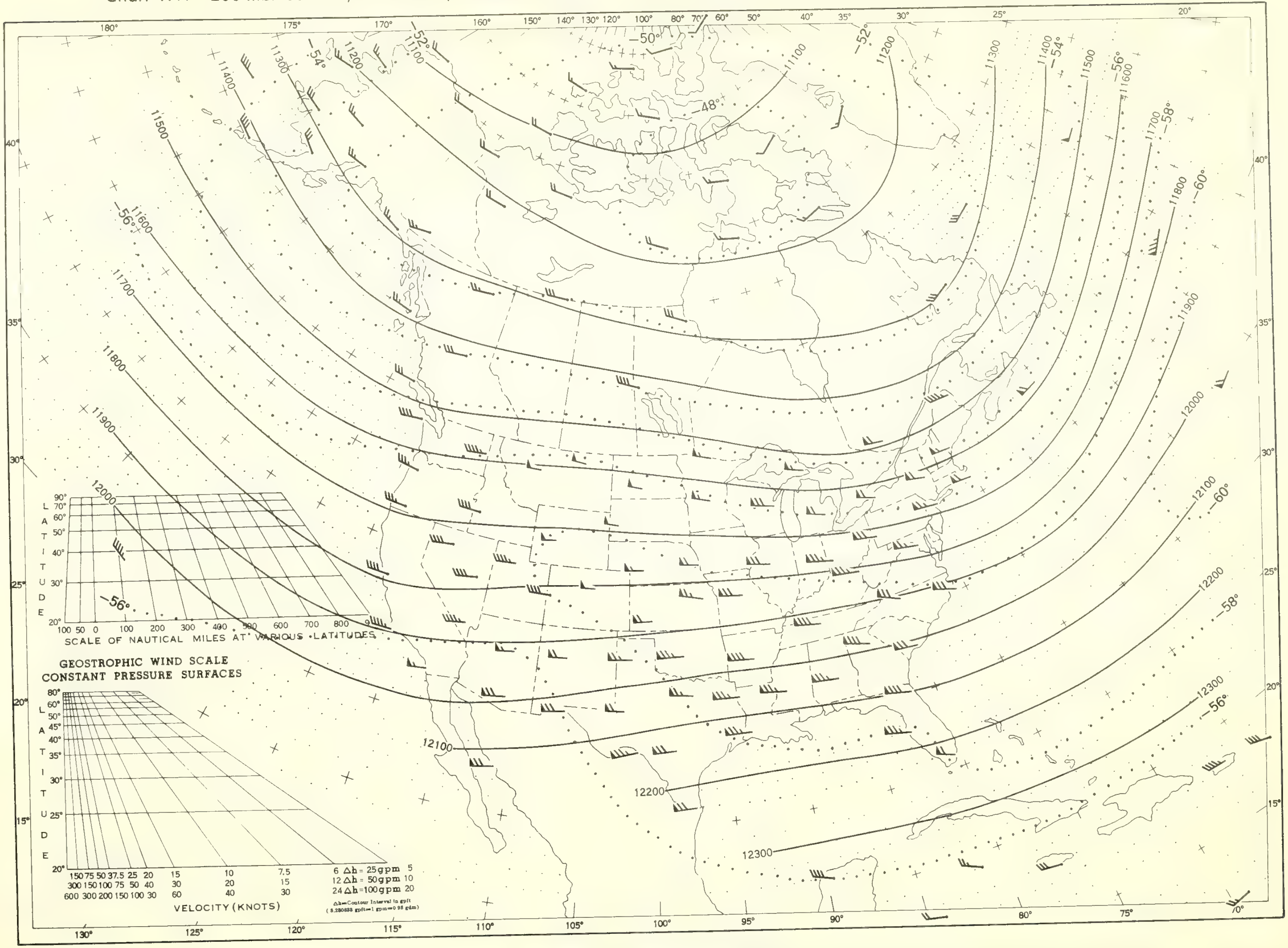
See Chart XI for explanation of map.

Chart XIV. 300-mb. Surface, 1200 GMT, December 1965. Average Height and Temperature, and Resultant Winds.



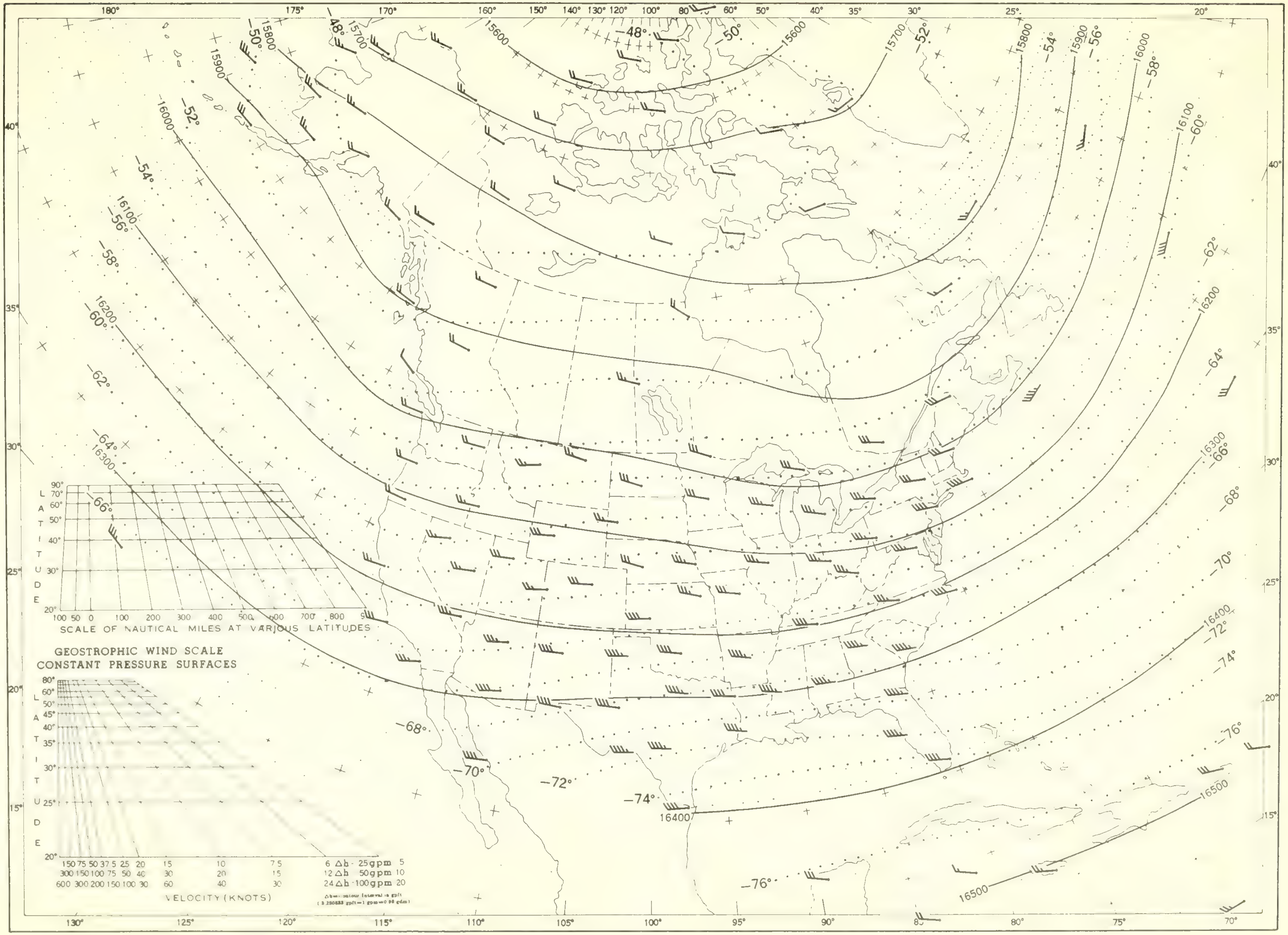
See Chart XI for explanation of map.

Chart XV. 200-mb. Surface, 1200 GMT, December 1965. Average Height and Temperature, and Resultant Winds.



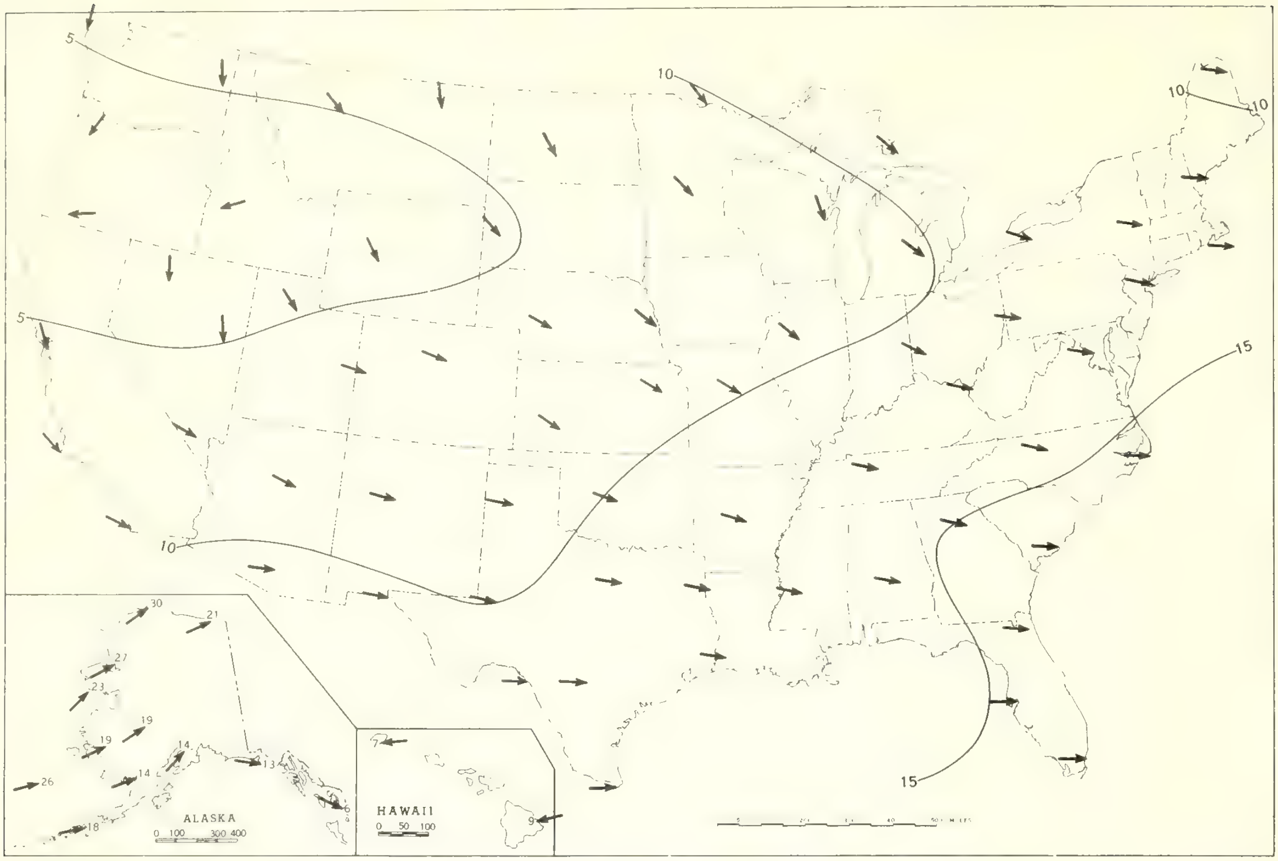
See Chart XI for explanation of map.

Chart XVI. 100-mb. Surface, 1200 GMT, December 1965. Average Height and Temperature, and Resultant Winds.

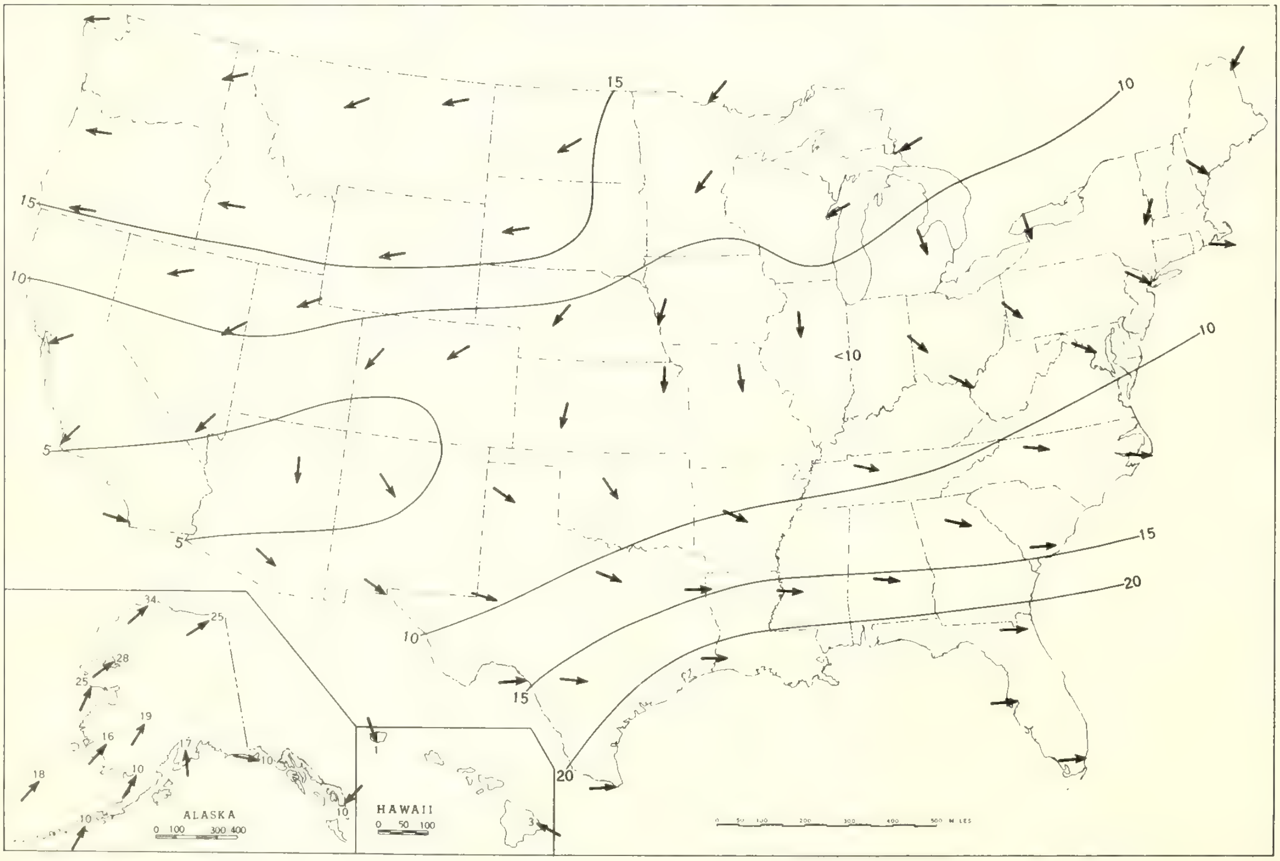


See Chart XI for explanation of map.

Chart XVII. A. 50-mb. Surface, 1200 GMT, December 1965. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, December 1965. Resultant Winds.



Wind speed (isotachs) in knots. Arrows show resultant wind direction. All wind data are based on rawin observations.

USCOMM-ESSA-Asheville, N. C. -3/17/66-1900

U. S. DEPARTMENT OF COMMERCE
JOHN T. CONNOR, Secretary
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
ENVIRONMENTAL DATA SERVICE

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

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ANNUAL 1965
Volume 16 No. 13

ASHEVILLE: 1966

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RAWINSONDE DATA (Average Annual Values) - tabulation discontinued. The tabulation RAWINSONDE DATA (Average Monthly Values) is carried in the monthly issue of the publication CLIMATOLOGICAL DATA NATIONAL SUMMARY.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 16 No. 13 ANNUAL 1965

GENERAL SUMMARY OF WEATHER CONDITIONS

L. H. Seamon
Environmental Data Service, ESSA
Washington, D.C.

HIGHLIGHTS:

1. Floods in Pacific Northwest in January.
2. Record-breaking spring floods in upper Mississippi Valley, Red River of the North, and portions of the Great Plains.
3. Frequent tornadoes.
4. Longest drought in history of Northeast.
5. Good snowfall in western mountains.
6. Most damaging hurricane on record.
7. Cool summer.
8. Wet September.
9. Favorable weather for bumper crops.

TEMPERATURE.--Temperatures for 1965 averaged below normal over about 75 percent of the 48 states. Relative to normal the year was coldest in the lower Appalachian region and between the Great Lakes and Rockies. In parts of the latter area the year was more than 2° colder than normal. Below normal temperatures generally prevailed in the northern Great Plains until October. The lowest temperature in the 48 states, -50°, occurred at Cook and Cotton in northeast Minnesota January 14. The 1964-65 winter at some locations in the northern Great Plains was the coldest since 1936. Degree days, a good indicator of fuel consumption, were well above normal from eastern Georgia to southern New England, thence westward along the northern border to the Rockies, and in central California. The year was warmer than normal in southern Florida, South Central areas, and in parts of the Pacific Northwest. In the latter area only May, September, and December were colder than normal. Highest temperature in the 48 states was 120° at Maricopa, Ariz., on July 31.

Temperature highlights, in addition to the cold winter in the northern Plains, included the following:

June was the coldest in many years in the Southwest and parts of the Southeast.

July was persistently cool in the Great Lakes region and Northeast with frost and freezing on the 6th and 7th in parts of Michigan and northern and central sections of New York and New England.

Near to locally record-breaking low temperatures for August occurred on the 29th to 31st in sections of the Ohio Valley, and locally from the Carolinas to Maine with widespread early frost and freezing in New England.

September was the coldest of record at a number of stations in the northern Great Plains and Far West.

Temperatures rose to record or near record high levels at the end of July in the Pacific Northwest and in mid-August in the Great Plains.

PRECIPITATION.--Precipitation for 1965 in the 48 states was below normal in much of the Pacific Northwest and east of a line joining Cleveland, Ohio, and the southwest corner of New Mexico. Totals were less than 75 percent of normal in the Rio Grande Valley and north Atlantic coastal sections.

By far the most serious precipitation deficiencies occurred in the Northeast where they prolonged a dry period that began in the area during September 1961, developed extreme drought characteristics by the end of September 1964, and spread southward during 1965. At the end of the year the drought was rated extreme in northern West Virginia, northern and eastern Virginia, Maryland, Delaware, New Jersey, eastern Pennsylvania, southeastern New York State, and central and southern New England. Owing to good distribution and timely occurrence during the warm season, the precipitation that did occur was sufficient to produce mostly fair to good crops. Reservoir and ground-water supplies reached record low levels, however.

Even though precipitation in the Pacific Northwest was below normal for the year, heavy rains and melting snow in northern California and western Oregon and Washington in January produced the year's worst flood. Losses included about 45 deaths and near a half billion dollars damage.

Precipitation was well above normal in a broad belt from the Far Southwest to the Great Lakes, and it was one of the wettest years on record in the Far Southwest and upper Mississippi Valley. Waterloo, Iowa, measured 50.79 inches of moisture for its wettest year. Warm season precipitation (April-September) also was above normal everywhere, except the Columbia River and Rio Grande Valleys, the east Texas coast, and the Northeast.

Record-breaking spring floods occurred along the upper Mississippi River for a distance of 700 miles as a result of heavy March and April rains and the rapid melting of a record-breaking March snowfall on frozen ground. Severe flooding also occurred along portions of the Missouri and Red River of the North. Total losses included at least 15 fatalities and over $100 million property damage.

Heavy June rains in eastern Colorado and the central Great Plains caused severe to record flooding on the South Platte and upper Arkansas Rivers. Several lives were lost and preliminary property losses were estimated at more than $200 million in the South Platte Basin alone.

Many flash floods occurred during the spring and summer in the western half of the Country. One of the worst was on June 11 at Sanderson, Tex., where losses included 24 deaths and a few million dollars property damage.

Numerous other periods of heavy rainfall occurred during the year. June and July rainfall was unusually heavy in the Southeast. Heavy August rains fell in northern and middle portions of the Far West. More than twice the normal rain fell during September in most areas from the Great Basin eastward to the Great Lakes and Ohio River. During the passage of hurricane Betsy, heavy rains fell in extreme southern Florida on September

8 and in the lower Mississippi and Ohio Valleys during the next 4 days. Tropical storm Debbie left a record 16.85 inches in downtown Mobile, Ala., on the 29th and 30th. A record 42 inches of rain fell in the Ft. Lauderdale, Fla., area in October, mostly on the 14th-15th and the 30th-31st. In southern California rainfall during storms on November 14 to 18 and 22 to 25 totaled 10 inches in Los Angeles and up to 16 inches in nearby mountains, with resulting floods, washouts, and mudslides blamed for at least 4 deaths and heavy damage. Heavy rains and melting snow in southeastern Arizona December 22 and 23 was responsible for millions of dollars damage from washing and flooding.

SNOWFALL.--Snowfall for 1965 was near to below normal in the West, and much above in the upper Great Lakes region and parts of the Northeast and Middle Atlantic States, except near the coast. Several heavy snowstorms in the eastern half of the Country during the first 3 months of the year hampered transportation and caused other hardships usually experienced during these storms. Some of the worst of these included the following: (1) January 16-17 in the Appalachians and Middle and North Atlantic Coastal States, (2) January 23-24 in the middle Mississippi Valley northeastward, (3) February 23-25 from middle Mississippi Valley through the Great Lakes and Northeast, (4) March 16-18 in northern Great Plains, upper Mississippi Valley, and Great Lakes.

Snowfall in the Far West together with above normal rainfall and above normal reservoir storage water furnished adequate irrigation water. Skiing conditions were excellent.

SEVERE STORMS.--The year 1965 had more than its share of storminess. A record number of tornadoes, 898, killed 299 persons, injured over 4,000 more, and and caused property damage of over $1 billion. The highlight of the tornado season occurred on April 11-12 (Palm Sunday Outbreak) when at least 47 of these storms killed 257 persons, injured over 1,500 others, and damaged property in excess of $200 million.

Betsy the most destructive hurricane, propertywise, in United States history crossed extreme southern Florida on September 8, crossed the Gulf of Louisiana and moved up the Mississippi Valley September 9-10. Damage totaled about $1,420,000,000, and the storm was blamed for more than 70 deaths.

In addition to tornado and hurricane losses, damage from winds, hail, and lightning was unusually heavy.

EXCESSIVE PRECIPITATION

(Excessive Short Duration Rainfall)

YEAR 1965

This table contains statistics of maximum amounts of rainfall during the calendar year 1965. Data presented in this table are generally from stations equipped with recording gages. Stations are at Airport locations unless otherwise shown.

Excessive precipitation data for the years 1896-1935 inclusive, generally present the accumulated amounts of precipitation for each 5, 10, or 20 minute intervals during storms in which the rate of fall equaled or exceeded .25 inch in any 5 minute period, or .30 in any 10 minute period, or .35 in any 15 minute period, etc., the tabulation beginning with the 5 minute period where the rate of .05 inch in 5 minutes began and continuing by 10 or 20 minute intervals up to 120 minutes. A detailed explanation of the method used may be found in the publications listed in the last paragraph of this explanation.

The present method, adopted with data for the calendar year 1936, gives the maximum fall of precipitation for the periods 5 to 180 minutes, the maximum amounts being taken for the periods in which the fall is greatest for the given time, and is tabulated to show maximum amounts for 5, 10, 15, 20, 30, 45, 60, 80, 100, 120, 150 and 180 minutes, even if the fall does not equal the excessive rate for some of the periods. (The 15 minute amount was not computed for 1936-43 and the 150 minute amount was not computed for 1944 through 1948).

The following Table A shows limits at which precipitation was considered excessive in this publication:

TABLE A

Duration (minutes)	Depth of precipitation (inches)	Duration (minutes)	Depth of precipitation (inches)
5	.25	60	.80
10	.30	80	1.00
15	.35	100	1.20
20	.40	120	1.40
30	.50	150	1.70
45	.65	180	2.00

This table is made up from the formula, A = t + 20 where A is the accumulated depth in hundredths of inches and t is the time in minutes.

For the years 1936 through 1948 stations in North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Tennessee, Arkansas, Louisiana, Texas, Oklahoma, and San Juan, P. R. used the limits shown in the following Table B:

TABLE B

Duration (minutes)	Depth of precipitation (inches)	Duration (minutes)	Depth of precipitation (inches)
5	.40	60	1.50
10	.50	80	1.90
15	.60	100	2.30
20	.70	120	2.70
30	.90	150	3.30
45	1.20	180	3.90

This table is made up from the formula A = 2t + 30. Its use, however, was discontinued at the end of 1948 and Table A is used by all sections for 1949 and the following years.

Publication of Data. A summary of maximum precipitation data for the years prior to 1896 is published in the annual report of the Chief of the Weather Bureau for 1895-1896. Excessive precipitation data for the period 1881-1896 are published in the annual report of the Chief of the Weather Bureau 1896-1897. Data for the years 1897 through 1934 have been published in the appropriate annual reports of the Chief of the Weather Bureau. For the years 1935 through 1949 these data are published in the appropriate issue of the United States Meteorological Yearbook. For 1950 and succeeding years excessive precipitation are presented in the annual issues of the Climatological Data, National Summary.

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
ALABAMA												
BIRMINGHAM												
FEB 10	.25	.50	.55	.61	.65	.85	.96	1.03	1.13	1.18	1.58	1.58
FEB 11	.30	.45	.50	.53	.67	.63	.66	.73	.78	.84	.94	1.03
MAR 24	.13	.25	.31	.41	.60	.85	.89	.90	.91	.92	.92	.94
MAR 23	.20	.32	.35	.37	.44	.47	.50	.55	.59	.64	.70	.75
APR 12	.33	.43	.46	.46	.46	.46	.46	.46	.46	.46	.46	.46
MAY 20	.35	.63	.66	.71	.75	.75	.75	.75	.75	.75	.75	.75
JUN 6	.17	.31	.37	.45	.58	.64	.78	1.02	1.23	1.44	1.63	1.73
JUN 7	.27	.30	.34	.37	.66	.68	.68	.68	.68	.68	.68	.72
JUN 15	.44	.83	.94	1.03	1.43	1.54	1.60	1.65	1.70	1.74	1.82	1.85
JUN 24	.17	.37	.45	.58	.70	.72	.75	.95	1.00	1.00	1.02	1.05
JUL 8	.54	.67	.74	.86	1.04	1.29	1.37	1.51	1.53	1.57	1.57	1.57
JUL 24	.34	.65	.76	.84	.90	1.05	1.08	1.26	1.27	1.27	1.27	1.28
AUG 3	.31	.52	.61	.64	.65	.65	.66	.66	.66	.66	.66	.66
AUG 19	.35	.50	.52	.53	.77	.78	.78	.78	.78	.78	.78	.78
NOV 21	.25	.40	.45	.57	.63	.73	.92	.97	.97	.97	.97	.97
HUNTSVILLE												
FEB 10	.25	.30	.32	.35	.50	.55	.70	.96	1.05	1.10	1.15	1.20
MAR 17	.31	.37	.39	.42	.48	.52	.56	.62	.65	.65	.65	.65
MAR 24	.26	.31	.32	.34	.30	.40	.46	.47	.50	.59	.83	.92
MAR 25	.25	.41	.47	.53	.61	.63	.72	.72	.72	.73	.74	.81
APR 5	.27	.37	.42	.45	.52	.65	.71	.78	.85	.87	.94	.94
APR 15	.25	.30	.34	.34	.34	.34	.34	.34	.34	.34	.34	.34
MAY 18	.42	.75	*1.05	1.12	*1.87	2.42	*2.44	2.44	2.61	*2.64	2.64	*2.67
JUN 4	.30	.45	.55	.55	.55	.55	.55	.55	.55	.55	.55	.55
JUN 12	.37	.55	.65	.73	.79	.83	.86	.86	.86	.86	.86	.86
JUN 30	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30
JUL 7	.20	.27	.37	.52	.54	.65	.72	.75	.76	.76	.76	.76
JUL 10	.18	.33	.33	.34	.34	.34	.34	.34	.34	.34	.34	.34
JUL 24	.26	.37	.41	.50	.61	.61	.61	.61	.61	.61	.61	.61
JUL 25	.15	.30	.35	.45	.55	.65	.70	.72	.72	.74	.75	.76
AUG 22	.22	.35	.39	.44	.46	.51	.72	.74	.80	.83	.84	.84
AUG 23	.42	.55	.58	.62	.70	.74	.77	1.18	1.29	1.30	1.30	1.30
SEP 11	.25	.38	.60	.74	.80	.85	1.16	1.37	1.50	1.52	1.54	1.72
MOBILE												
JAN 10	.34	.37	.38	.38	.38	.39	.42	.42	.42	.42	.44	.45
JAN 22	.50	.85	1.02	1.20	1.59	2.00	2.28	2.47	2.68	2.87	3.36	3.74
JAN 23	.40	.61	.80	.96	1.17	1.36	1.63	1.78	2.01	2.16	2.47	2.70
MAY 22	.38	.72	1.02	1.22	1.58	1.86	1.89	2.05	2.16	2.42	3.39	3.55
JUN 15	.40	.63	.75	.93	1.07	1.10	1.10	1.10	1.10	1.10	1.10	1.10
JUL 2	.16	.31	.34	.40	.44	.52	.56	.60	.62	.62	.62	.62
JUL 3	.40	.68	1.01	1.33	1.73	1.92	1.97	2.00	2.02	2.03	2.08	2.13
JUL 11	.21	.40	.54	.70	.92	1.02	1.06	1.09	1.09	1.16	1.16	1.16
JUL 14	.28	.38	.47	.49	.52	.52	.53	.56	.57	.58	.87	.91
JUL 21	.27	.45	.60	.73	.81	.97	.88	.88	.91	.93	.93	.93
AUG 5	.24	.45	.48	.57	.58	.58	.63	.63	.63	.64	.64	.65
AUG 8	.17	.34	.44	.56	.70	.79	.87	.92	.95	.98	1.02	1.04
AUG 17	.20	.31	.32	.34	.59	.69	.76	.76	.80	.82	.84	.84
MONTGOMERY												
JAN 23	.14	.21	.28	.34	.45	.67	.81	.95	1.06	1.16	1.30	1.51
JAN 23	.22	.42	.52	.61	.75	.91	1.04	1.21	1.31	1.40	1.55	1.64
MAR 17	.17	.29	.36	.37	.51	.68	.78	.88	1.02	1.08	1.14	1.30
MAY 27	.35	.46	.55	.58	.58	.62	.63	.63	.63	.63	.63	.63
JUN 8	.23	.41	.61	.70	.83	.94	.95	.95	.95	.95	.95	.95
JUL 26	.22	.43	.57	.62	.64	.71	.73	.73	.73	.73	.73	.73
JUL 29	.27	.40	.53	.67	.93	1.13	1.23	1.31	1.48	1.55	1.63	1.63
AUG 10	.34	.60	.78	.90	1.01	1.02	1.02	1.02	1.02	1.03	1.03	1.03
AUG 20	.26	.35	.47	.51	.52	.54	.54	.54	.54	.54	.54	.54
AUG 27	.45	.77	1.03	1.07	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
SEP 2	.35	.60	.75	.80	.82	.82	.82	.92	.93	.93	.98	.98
SEP 13	.16	.23	.29	.33	.56	.65	.78	1.10	1.27	1.40	1.45	1.45
SEP 24	.35	.49	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50
SEP 30	.16	.29	.35	.40	.43	.59	.61	.73	.77	.79	.82	.87
ALASKA												
ANCHORAGE						NONE						
ANNETTE						NONE						
COLD BAY						NONE						
FAIRBANKS						NONE						
JUNEAU						NONE						
KING SALMON						NONE						
MC GRATH						NONE						
ST. PAUL ISLAND						NONE						
YAKUTAT												
SEP 16	.12	.22	.26	.30	.48	.67	.92	1.01	1.22	1.38	1.58	1.80
ARIZONA												
FLAGSTAFF												
JUL 16	.25	.37	.50	.54	.57	.58	.60	.65	.69	.73	.76	.77
PHOENIX												
SEP 19	.25	.26	.28	.28	.28	.28	.28	.28	.28	.28	.32	.39
TUCSON												
JUL 25	.22	.41	.49	.61	.64	.65	.66	.68	.69	.72	.72	.72
WINSLOW						NONE						

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
ARIZONA												
YUMA						NONE						
ARKANSAS												
FORT SMITH												
JAN 22	.25	.29	.30	.31	.34	.36	.40	.47	.50	.51	.52	.54
MAR 1	.18	.36	.39	.45	.50	.52	.54	.55	.55	.55	.55	.55
MAY 8	.26	.46	.48	.59	.69	.72	.99	1.05	1.11	1.14	1.15	1.19
MAY 26	.34	.68	.70	.73	.78	.98	1.18	1.58	1.92	1.99	2.35	2.65
MAY 27	.28	.41	.54	.55	.56	.56	.56	.56	.56	.56	.56	.56
JUL 6	.18	.35	.39	.40	.46	.49	.52	.52	.52	.52	.52	.52
JUL 27	.22	.34	.42	.46	.55	.60	.62	.62	.62	.62	.63	.64
AUG 27	.20	.37	.49	.55	.73	.99	1.19	1.29	1.30	1.33	1.41	1.47
AUG 31	.32	.58	.74	.83	.90	.97	.99	1.03	1.09	1.14	1.19	1.20
LITTLE ROCK												
FEB 9	.15	.29	.39	.44	.51	.56	.66	.90	1.01	1.13	1.21	1.24
FEB 11	.15	.26	.37	.48	.60	.69	.76	.80	.81	.98	1.12	1.15
MAR 29	.27	.35	.42	.45	.50	.55	.75	.77	.80	.83	.88	.90
MAY 9	.16	.25	.35	.50	.55	.58	.60	.70	.71	.72	.72	.72
MAY 9	.16	.25	.35	.50	.55	.58	.60	.70	.71	.72	.72	.72
MAY 9	.30	.47	.60	.70	.90	1.12	1.18	1.29	1.40	1.56	1.64	1.67
JUN 11	.30	.45	.48	.48	.48	.48	.48	.48	.49	.50	.50	.50
JUL 11	.35	.55	.80	.95	1.12	1.13	1.15	1.22	1.22	1.23	1.36	1.46
AUG 31	.30	.35	.43	.45	.53	.61	.66	.67	.80	1.06	1.17	1.21
SEP 22	.25	.45	.60	.70	.95	1.25	1.45	1.60	1.70	1.76	1.81	1.92
TEXARKANA												
FEB 8	.19	.25	.32	.40	.55	.68	.77	.82	.90	.98	1.11	1.21
FEB 9	.29	.35	.41	.49	.51	.53	.54	.55	.61	.71	.72	.77
FEB 11	.20	.30	.42	.49	.64	.73	.95	1.25	1.45	1.55	1.63	1.70
MAY 9	.27	.38	.42	.43	.49	.53	.62	.68	.77	.85	.89	.96
JUN 5	.31	.44	.45	.46	.46	.46	.47	.48	.54	.60	.64	.74
JUL 15	.22	.33	.40	.51	.58	.59	.59	.59	.59	.59	.59	.59
JUL 25	.25	.42	.55	.65	.69	.70	.71	.72	.72	.72	.72	.72
JUL 25	.20	.37	.52	.60	.64	.67	.68	.68	.68	.68	.68	.68
AUG 21	.29	.39	.55	.73	.98	1.29	1.76	2.23	2.28	2.28	2.28	2.28
AUG 28	.11	.21	.30	.38	.53	.64	.72	.75	.76	.76	.76	.76
SEP 22	.21	.36	.48	.53	.78	.97	1.08	1.16	1.21	1.26	1.30	1.35
DEC 11	.20	.37	.42	.46	.51	.58	.58	.58	.58	.58	.58	.67
CALIFORNIA												
BAKERSFIELD						NONE						
BISHOP						NONE						
BLUE CANYON						NONE						
BURBANK						NONE						
EUREKA U						NONE						
FRESNO												
MAR 12	.24	.42	.53	.56	.67	.74	.77	.81	1.05	1.25	1.34	1.39
LOS ANGELES						NONE						
MT SHASTA R						NONE						
OAKLAND						NONE						
RED BLUFF												
FEB 5	.16	.30	.37	.41	.42	.43	.43	.43	.43	.43	.43	.43
NOV 17	.15	.23	.34	.40	.45	.50	.67	.71	.72	.72	.73	.75
SACRAMENTO						NONE						
SANDBERG						NONE						
SAN DIEGO												
DEC 10	.21	.40	.54	.66	.85	1.05	*1.36	1.60	1.75	1.77	1.77	1.79
SAN FRANCISCO U						NONE						
SANTA MARIA												
NOV 23	*.15	*.29	*.34	.44	*.61	.74	*1.01	1.17	1.25	*1.31	1.42	*1.53
COLORADO												
ALAMOSA						NONE						
DENVER												
JUN 9	.28	.32	.33	.34	.35	.35	.36	.36	.36	.36	.37	.37
JUL 20	.40	.76	.84	.87	.87	.88	.89	.88	.88	.88	.96	1.09
JUL 21	.23	.30	.33	.34	.34	.34	.34	.34	.34	.34	.34	.34
JUL 25	.68	1.31	*1.57	1.87	*1.99	2.00	2.00	2.00	2.00	2.00	2.00	2.00
GRAND JUNCTION												
JUN 12	.25	.32	.36	.36	.38	.42	.42	.42	.42	.42	.42	.42
PUEBLO												
JUL 30	.22	.30	.35	.43	.57	.66	.76	.84	.96	1.02	1.05	1.06
AUG 21	.30	.46	.50	.59	.82	.98	1.02	1.04	1.04	1.04	1.04	1.04

EXCESSIVE SHORT DURATION RAINFALL

Station and date	5	10	15	20	30	45	60	80	100	120	150	180
	Maximum precipitation in inches (5 to 180 minutes)											
CONNECTICUT												
BRIDGEPORT												
MAY 26	.34	.62	.71	.85	1.13	1.31	1.52	1.80	2.08	2.13	2.14	2.14
MAY 29	.16	.32	.36	.40	.40	.46	.48	.49	.50	.50	.50	.50
JUL 18	.33	.59	.64	.88	1.26	1.37	1.42	1.45	1.45	1.45	1.45	1.45
AUG 2	.25	.30	.32	.50	.56	.80	.82	.82	.82	.82	.82	.82
HARTFORD												
JUL 18	.18	.35	.42	.51	.58	.58	.62	.65	.67	.72	.77	.78
SEP 15	.28	.48	.52	.53	.54	.54	.54	.54	.54	.54	.54	.54
SEP 24	.20	.32	.32	.37	.45	.53	.57	.60	.60	.60	.60	.61
NEW HAVEN						NONE						
DELAWARE												
WILMINGTON												
MAY 27	.26	.47	.48	.48	.48	.49	.51	.52	.53	.54	.54	.54
JUN 8	.29	.54	.67	.72	.74	.80	.80	.81	.81	.81	.81	.81
JUL 11	.32	.48	.62	.82	1.06	1.22	1.25	1.32	1.41	1.54	1.61	1.69
SEP 24	.26	.39	.49	.58	.61	.62	.63	.64	.64	.64	.64	.64
FLORIDA												
APALACHICOLA U												
APR 21	.29	.36	.42	.44	.47	.53	.54	.54	.54	.54	.54	.54
JUN 4	.29	.41	.53	.58	.99	1.16	1.27	1.28	1.28	1.28	1.28	1.28
JUN 6	.39	.49	.51	.55	.62	.67	.68	.70	.75	1.07	1.24	1.26
JUN 8	.60	.85	1.12	1.34	1.41	1.42	1.43	1.57	1.58	1.58	1.58	1.58
JUN 10	.32	.56	.77	.87	.91	.96	1.00	1.05	1.09	1.15	1.18	1.18
JUN 15	.40	.72	1.06	1.43	1.70	2.22	2.52	2.72	2.87	2.93	2.97	2.99
JUN 17	.43	.68	.82	1.01	1.26	1.37	1.47	1.50	1.82	1.88	1.91	1.92
JUN 24	.27	.41	.45	.45	.45	.50	.50	.50	.50	.50	.50	.50
JUN 26	.31	.62	.81	.88	.96	1.12	1.17	1.18	1.36	1.43	1.43	1.43
JUL 13	.23	.36	.38	.38	.38	.38	.38	.38	.38	.38	.38	.38
JUL 13	.26	.35	.44	.50	.60	.66	.70	.75	.78	.81	.85	.86
AUG 2	.31	.45	.57	.59	.59	.59	.59	.59	.59	.59	.59	.59
AUG 12	.30	.47	.54	.60	.72	.82	.87	.88	.88	.88	1.00	1.05
AUG 17	.25	.41	.60	.63	.63	.66	.67	.67	.67	.67	.67	.67
SEP 3	.45	.72	.92	1.18	1.57	1.83	1.84	1.84	1.84	1.84	1.86	1.86
SEP 18	.35	.59	.70	.85	1.18	1.52	1.62	1.66	1.69	1.70	1.72	1.79
SEP 27	.27	.41	.57	.68	1.09	1.14	1.17	1.32	1.66	1.70	1.74	1.75
OCT 6	.50	.90	1.26	1.54	2.09	3.01	3.32	3.64	3.82	3.87	4.02	4.11
NOV 12	.39	.57	.68	.79	.98	1.10	1.25	1.30	1.34	1.35	1.37	1.37
DEC 15	.20	.33	.38	.41	.57	.66	.69	.73	.76	.81	.96	1.16
DAYTONA BEACH												
FEB 25	.17	.30	.32	.32	.32	.32	.32	.33	.34	.34	.34	.34
MAR 13	.15	.30	.32	.33	.34	.36	.62	.63	.74	.86	.94	.99
APR 16	.26	.37	.39	.40	.53	.71	.76	.79	.82	.82	.83	.85
JUN 11	.20	.28	.33	.39	.63	.65	.74	.75	.76	.76	.76	1.23
JUN 13	.28	.54	.55	.57	.58	.59	.60	.61	.61	.61	.61	.61
JUN 16	.17	.30	.32	.37	.63	.75	.93	.94	.94	.95	1.05	1.27
JUN 18	.39	.78	.83	.88	1.05	1.08	1.15	1.25	1.65	1.75	1.84	1.89
JUN 23	.30	.35	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36
JUN 25	.25	.43	.43	.43	.44	.45	.46	.46	.46	.46	.47	.53
JUL 24	.26	.41	.45	.48	.50	.73	.82	.83	.83	.83	.83	.83
JUL 25	.17	.30	.37	.41	.63	.74	.75	.75	.75	.75	.77	.80
AUG 28	.38	.57	.82	1.00	1.17	1.19	1.19	1.19	1.19	1.19	1.19	1.19
SEP 17	.25	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32
SEP 22	.24	.35	.43	.65	.73	.75	.76	.77	.77	.77	.77	.77
SEP 27	.16	.23	.36	.46	.50	.51	.51	.51	.52	.52	.52	.53
SEP 29	.23	.30	.35	.43	.55	.76	.86	.92	.95	1.04	1.08	1.11
OCT 6	.25	.42	.50	.58	.67	.75	.82	.84	.85	.86	.87	.88
OCT 19	.25	.45	.49	.58	.68	.70	.70	.70	.70	.70	.70	.70
FORT MYERS												
JAN 15	.25	.43	.48	.57	.67	.71	.75	.86	.86	.86	.86	.86
JAN 30	.27	.31	.34	.36	.37	.37	.37	.37	.37	.37	.37	.37
MAR 2	.30	.58	.72	.82	.89	.96	1.01	1.57	1.82	1.88	1.94	1.94
MAR 4	.26	.29	.30	.31	.43	.49	.50	.52	.52	.53	.53	.53
APR 21	.62	.82	.87	1.00	1.24	1.35	1.36	1.38	1.38	1.38	1.38	1.38
APR 25	.35	.60	.61	.62	.62	.62	.62	.62	.62	.62	.62	.62
MAY 26	.25	.30	.34	.40	.47	.48	.48	.48	.48	.48	.48	.48
MAY 31	*1.00	*1.80	*2.60	3.10	*3.45	3.55	*3.61	3.64	3.65	3.65	3.65	3.65
JUN 7	.32	.45	.54	.70	.82	.84	.85	.85	.85	.85	.85	.85
JUN 9	.25	.50	.55	.57	.60	.62	.67	.67	.67	.67	.67	.67
JUN 10	.40	.62	.82	1.03	1.10	1.10	1.10	1.10	1.30	1.54	1.54	1.54
JUN 18	.30	.32	.32	.32	.33	.33	.33	.37	.37	.37	.37	.37
JUN 22	.19	.30	.35	.41	.45	.65	.70	.73	.75	.75	.75	.75
JUN 26	.22	.28	.35	.39	.45	.46	.46	.47	.48	.48	.48	.48
JUL 11	.44	.75	.85	.90	1.04	1.13	1.17	1.23	1.24	1.25	1.30	1.30
JUL 12	.17	.24	.26	.31	.47	.57	.81	.96	.96	.96	.96	.96
JUL 16	.29	.45	.50	.64	.79	.89	.99	1.00	1.00	1.00	1.00	1.00
JUL 18	.25	.42	.60	.68	.77	.97	.97	.98	.99	1.00	1.17	1.30
JUL 29	.25	.40	.41	.43	.44	.44	.45	.45	.46	.47	.47	.49
JUL 29	.33	.60	.74	.80	1.33	1.54	1.58	1.61	1.63	1.64	1.65	1.93
AUG 7	.29	.55	.60	.70	.88	1.15	1.25	1.37	1.40	1.40	1.41	1.42
AUG 11	.45	.75	.80	.80	.80	.80	.80	.80	.80	.80	.80	.80
AUG 28	.18	.33	.40	.50	.57	.59	.77	.82	.82	.84	.84	.86
AUG 31	.24	.45	.51	.62	.81	1.00	1.02	1.02	1.02	1.02	1.02	1.02
SEP 1	.25	.32	.34	.35	.35	.35	.35	.35	.35	.35	.35	.35
SEP 24	.53	.83	.97	1.02	1.04	1.04	1.04	1.04	1.04	1.32	1.32	1.32
OCT 7	.25	.30	.30	.30	.39	.39	.55	.57	.58	.59	.59	.70
OCT 22	.15	.29	.31	.40	.54	.66	.84	.94	1.05	1.08	1.30	1.42
DEC 20	.19	.31	.35	.41	.49	.56	.64	.66	.66	.66	.68	.68
JACKSONVILLE												
FEB 2	.24	.30	.41	.41	.46	.51	.51	.52	.52	.52	.52	.52
MAR 19	.24	.35	.45	.47	.53	.62	.63	.63	.72	.72	.74	.76
JUN 7	.27	.39	.39	.39	.39	.39	.39	.39	.39	.39	.39	.39
JUN 11	.20	.38	.49	.61	.72	.89	1.07	1.28	1.36	1.47	1.54	1.57
JUN 16	.34	.51	.66	.87	1.12	1.13	1.14	1.17	1.21	1.23	1.24	1.24
JUN 17	.62	1.18	1.66	1.91	2.12	2.18	2.22	2.23	2.23	2.24	2.26	2.26
JUN 30	.21	.30	.33	.35	.36	.36	.36	.36	.36	.36	.36	.36
AUG 6	.26	.45	.63	.79	1.05	1.17	1.23	1.25	1.25	1.25	1.25	1.25
AUG 15	.19	.32	.45	.51	.60	.63	.64	.65	.66	.67	.69	.69
AUG 22	.71	1.13	1.44	1.68	1.81	2.01	2.07	2.11	2.11	2.11	2.11	2.11
AUG 23	.25	.42	.60	.75	1.07	1.19	1.28	1.30	1.30	1.30	1.30	1.30
AUG 26	.25	.35	.39	.41	.46	.63	.69	.70	.70	.70	.70	.70
AUG 29	.29	.42	.45	.51	.64	.77	.93	.99	.99	.99	.99	.99
SEP 10	.26	.48	.66	.78	.90	1.23	1.41	1.58	1.68	1.84	2.09	2.10
SEP 17	.38	.57	.61	.61	.61	.61	.64	.64	.64	.64	.66	.69
SEP 27	.33	.62	.86	1.03	1.21	1.37	1.45	1.75	1.85	2.04	2.49	2.59

Station and date	5	10	15	20	30	45	60	80	100	120	150	180
	Maximum precipitation in inches (5 to 180 minutes)											
FLORIDA												
JACKSONVILLE												
SEP 30	.22	.33	.38	.47	.54	.55	.55	.57	.67	.67	.67	.69
NOV 13	.30	.52	.59	.62	.67	.71	.74	.82	.86	.86	.87	.87
KEY WEST												
FEB 6	.39	.62	.68	.80	.92	.96	.96	.96	1.03	1.57	1.57	1.57
FEB 23	.30	.46	.48	.51	.53	.81	.82	.83	.83	.83	.83	.84
MAR 4	.25	.27	.29	.36	.43	.45	.45	.45	.45	.45	.45	.45
APR 21	.24	.35	.36	.38	.39	.40	.40	.43	.44	.44	.44	.44
MAY 31	.23	.32	.40	.42	.44	.45	.46	.46	.47	.47	.47	.47
JUN 9	.23	.40	.52	.61	.67	.72	.73	.78	.80	.80	.80	.80
JUL 10	.60	*1.05	1.15	1.45	1.65	1.82	2.01	2.27	2.27	2.27	2.27	2.27
JUL 29	.37	.44	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45
AUG 11	.45	.80	.98	1.02	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
SEP 4	.25	.45	.56	.72	1.03	1.11	1.13	1.59	1.65	1.66	1.67	1.68
SEP 8	.17	.28	.37	.46	.60	.66	.76	.95	1.10	1.18	1.28	1.40
SEP 8	.28	.44	.54	.56	.68	.97	1.23	1.38	1.38	1.43	1.73	1.74
SEP 24	.26	.52	.58	.62	.74	.93	.95	1.08	1.10	1.13	1.18	1.28
OCT 12	.30	.60	.73	.90	1.04	1.13	1.15	1.17	1.18	1.24	1.27	1.29
OCT 14	.25	.46	.65	.77	.83	.89	1.00	1.13	1.20	1.24	1.29	1.31
DEC 13	.22	.30	.35	.43	.50	.63	.68	.75	.75	.75	.75	.75
MIAMI BEACH U												
JAN 30	.34	.45	.52	.56	.65	.70	.71	.71	.71	.71	.71	.71
FEB 7	.19	.27	.35	.43	.52	.53	.55	.59	.78	.78	.78	.78
MAR 15	.50	.70	.72	.74	.75	.75	.75	.75	.75	.75	.75	.75
APR 27	.35	.55	.74	.85	1.02	1.15	1.17	1.19	1.27	1.30	1.30	1.30
JUN 8	.32	.46	.70	.89	1.18	1.25	1.33	1.51	1.61	1.76	2.17	2.39
JUN 9	.34	.47	.48	.48	.49	.55	.56	.57	.57	.61	.81	.89
JUN 19	.31	.49	.52	.52	.62	.62	.64	.66	.74	.76	.80	.81
JUN 26	.15	.28	.35	.39	.41	.41	.41	.41	.43	.43	.43	.43
JUL 18	.22	.43	.48	.53	.65	.71	.86	.91	.91	.91	.91	.98
JUL 21	.55	.85	1.00	1.30	*1.70	1.78	1.80	1.80	1.80	1.82	1.83	1.86
AUG 2	.39	.61	.86	.93	.95	.96	.97	1.03	1.03	1.03	1.06	1.06
SEP 5	.35	.37	.37	.38	.39	.39	.39	.39	.39	.39	.39	.39
OCT 31	.54	.77	.93	1.30	1.42	1.50	1.66	1.76	1.96	2.24	2.24	2.24
OCT 31	.40	.75	.98	1.21	1.57	2.17	2.28	2.53	2.85	*3.26	3.35	*3.35
DEC 20	.37	.40	.40	.40	.40	.40	.40	.40	.40	.41	.42	.43
MIAMI												
JAN 30	.40	.60	.70	.80	.93	.95	.95	.95	.95	.95	.95	.95
FEB 7	.20	.37	.37	.40	.43	.47	.48	.51	.51	.51	.51	.51
FEB 23	.27	.49	.51	.54	.58	.58	.58	.58	.58	.58	.58	.58
MAR 4	.30	.50	.60	.68	.76	1.20	1.35	1.42	1.54	1.54	1.54	1.54
MAR 31	.45	.70	.90	1.05	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45
APR 27	.40	.50	.65	.70	.75	.85	.90	1.05	1.09	1.09	1.09	1.09
JUN 6	.26	.28	.28	.28	.28	.28	.33	.52	.58	.58	.61	.62
JUN 9	.32	.38	.40	.40	.40	.40	.40	.40	.40	.40	.40	.41
JUN 9	.26	.49	.57	.66	.99	1.00	1.02	1.04	1.04	1.05	1.15	1.29
JUN 19	.35	.65	.70	.78	.81	.81	.82	1.10	1.23	1.27	1.29	1.30
JUL 13	.23	.30	.33	.35	.44	.48	.48	.48	.48	.48	.48	.48
JUL 16	.26	.28	.30	.33	.47	.49	.49	.49	.49	.49	.49	.49
JUL 18	.19	.30	.31	.36	.38	.39	.39	.39	.39	.39	.39	.40
JUL 19	.30	.30	.32	.38	.35	.35	.37	.42	.42	.42	.42	.42
JUL 28	.30	.44	.45	.46	.56	.57	.57	.66	.77	.77	.77	.78
JUL 30	.35	.38	.38	.38	.38	.38	.38	.38	.38	.38	.38	.38
JUL 30	.50	1.00	1.13	1.21	1.22	1.24	1.25	1.36	1.50	1.50	1.54	1.54
AUG 1	.30	.58	.61	.65	.67	.67	.67	.67	.67	.67	.67	.67
AUG 2	.45	.90	.97	1.10	1.30	1.36	1.36	1.40	1.45	1.45	1.45	1.45
AUG 19	.28	.34	.42	.46	.50	.51	.51	.53	.53	.53	.53	.53
SEP 15	.28	.52	.62	.67	.67	.67	.67	.67	.67	.67	.67	.67
SEP 15	.26	.29	.29	.29	.29	.29	.29	.29	.29	.29	.29	.29
SEP 26	.20	.40	.40	.48	.60	.65	.71	.80	.87	.93	1.02	1.18
OCT 5	.30	.42	.45	.47	.52	.57	.62	.73	.74	.95	1.25	1.32
OCT 13	.50	.76	.78	.78	.85	.90	1.04	1.19	1.30	1.32	1.76	1.96
OCT 14	.45	.85	.95	1.05	1.10	1.12	1.13	1.21	1.33	1.36	1.42	1.44
OCT 14	.49	.80	1.05	1.45	1.65	1.85	2.00	2.28	2.35	2.41	2.48	2.76
OCT 22	.35	.43	.49	.49	.49	.49	.49	.49	.49	.51	.56	.56
OCT 31	.50	.85	1.00	1.20	2.00	2.25	2.40	2.60	2.70	2.83	2.83	2.83
DEC 20	.38	.40	.40	.41	.42	.42	.42	.42	.42	.42	.42	.42
MIAMI U												
FEB 5	.22	.36	.38	.42	.48	.52	.52	.52	.52	.52	.52	.52
FEB 15	.20	.34	.41	.54	.62	.66	.69	.75	.78	.79	.80	.80
MAR 4	.22	.30	.35	.40	.60	.70	.73	.73	.73	.73	.73	.73
MAR 22	.33	.64	.69	.73	.73	.73	.73	.73	.73	.73	.73	.73
JUN 6	.37	.40	.45	.60	.81	.92	.94	.94	1.28	1.32	1.32	1.32
JUN 9	.31	.48	.60	.71	.88	.96	1.06	1.27	1.41	1.57	1.64	1.64
JUN 12	.32	.63	.68	.70	.70	.70	.70	.70	.70	.70	.70	.70
JUL 21	.33	.54	.66	.72	.77	.80	.80	.80	.80	.81	.86	.88
JUL 26	.30	.56	.59	.60	.60	.61	.61	.61	.61	.62	.62	.62
AUG 3	.20	.36	.40	.59	.75	.82	.87	.99	1.02	1.03	1.04	1.04
AUG [illegible]	.18	.33	.36	.47	.52	.52	.52	.52	.52	.52	.52	.52
AUG 11	.37	.51	.51	.52	.52	.52	.52	.52	.52	.52	.53	.56
AUG 17	.43	.65	.80	.90	.91	.92	.92	.92	.92	.92	.92	.92
AUG 19	.28	.43	.53	.62	.72	.79	.86	.88	.88	.88	.88	.88
AUG 27	.38	.63	.77	.80	.83	.83	.83	.83	.83	.83	.83	.83
SEP 26	.38	.74	.96	1.14	1.39	1.57	1.64	1.81	1.87	1.94	2.05	2.14
OCT 5	.29	.52	.74	.97	1.29	1.49	1.58	1.60	1.60	1.93	2.07	2.09
OCT 13	.46	.87	1.23	1.54	1.94	2.34	2.60	2.74	2.83	2.88	3.36	3.69
OCT 22	.19	.34	.39	.39	.39	.39	.39	.39	.39	.45	.46	.47
OCT 31	.36	.70	1.01	1.18	1.46	2.15	2.85	3.25	3.47	3.48	3.48	3.48
OCT 31	.23	.44	.53	.61	.82	1.07	1.23	1.63	1.78	1.92	2.13	2.39
DEC 20	.26	.26	.26	.26	.26	.26	.26	.26	.26	.26	.26	.26
ORLANDO												
FEB 7	.16	.32	.33	.35	.39	.43	.46	.46	.56	.56	.56	.56
FEB 25	.19	.32	.37	.40	.41	.41	.42	.42	.43	.43	.43	.43
MAR 13	*1.10	*1.35	1.39	1.40	1.40	1.41	1.42	1.45	1.48	1.53	1.95	1.95
JUN 4	.22	.40	.48	.56	.72	.80	.82	.83	.83	.83	.83	.83
JUN 14	.45	.58	.62	.64	.65	.65	.65	.65	.65	.65	.65	.65
JUN 23	.55	1.05	1.17	1.45	1.98	2.33	2.54	2.57	2.59	2.59	2.59	2.59
JUL 8	.21	.30	.36	.40	.43	.45	.47	.54	.64	.65	.67	.72
JUL 11	.35	.65	.70	.80	1.30	1.35	1.37	1.38	1.40	1.41	1.42	1.43
JUL 12	.23	.27	.32	.42	.44	.44	.44	.44	.44	.44	.44	.44
JUL 13	.49	.98	1.26	1.53	1.88	2.08	2.15	2.20	2.21	2.22	2.22	2.22
JUL 17	.17	.23	.33	.40	.47	.50	.54	.60	.61	.62	.66	.75
JUL 18	.41	.56	.59	.60	.61	.61	.61	.61	.61	.61	.61	.61
JUL 19	.40	.58	.63	.70	1.02	1.02	1.23	1.52	1.65	2.08	2.48	2.53
AUG 3	.50	.86	.95	1.15	1.31	1.37	1.38	1.40	1.42	1.43	1.43	1.43
AUG 1	.42	.49	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50
AUG 17	.25	.43	.53	.62	.99	1.14	1.19	1.21	1.22	1.22	1.22	1.22
SEP 2	.35	.65	.75	.86	1.04	1.07	1.09	1.18	1.18	1.18	1.18	1.18
SEP 15	.33	.40	.43	.45	.45	.45	.45	.45	.45	.45	.45	.45
SEP 17	.30	.32	.32	.32	.39	.46	.46	.54	.57	.57	.57	.57
SEP 26	.23	.34	.37	.38	.40	.50	.51	.53	.66	.69	.80	.80

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
FLORIDA												
ORLANDO												
SEP 27	.26	.43	.44	.45	.45	.64	.65	.66	.69	.75	.84	.87
SEP 30	.32	.46	.53	.64	.78	.78	.84	.85	.87	.91	.95	.96
OCT 7	.37	.50	.58	.69	1.02	1.03	1.03	1.03	1.03	1.03	1.03	1.03
NOV 22	.18	.24	.28	.40	.45	.47	.49	.50	.50	.51	.51	.51
PENSACOLA												
FEB 6	.32	.45	.54	.70	.83	1.05	1.14	1.36	1.41	1.45	1.71	1.80
APR 27	.25	.32	.39	.41	.46	.53	.61	.82	.94	1.02	1.05	1.07
JUN 7	.39	.58	.69	.92	1.11	1.24	1.52	1.61	1.62	1.68	1.80	1.84
JUN 9	.24	.33	.38	.39	.48	.80	.81	.95	.99	1.00	1.08	1.10
JUN 25	.37	.56	.56	.56	.57	.57	.57	.57	.57	.57	.57	.57
JUL 9	.34	.44	.47	.50	.55	.56	.56	.57	.59	.60	.64	.65
JUL 26	.24	.38	.50	.56	.62	.65	.65	.65	.65	.65	.65	.65
AUG 8	.28	.44	.45	.46	.50	.52	.52	.53	.54	.55	.56	.58
AUG 11	.29	.51	.71	.86	1.00	1.29	1.42	1.50	1.50	1.50	1.50	1.50
AUG 16	.17	.28	.35	.39	.43	.47	.47	.48	.48	.48	.48	.48
AUG 18	.23	.37	.50	.59	.61	.62	.63	.63	.63	.63	.63	.63
SEP 3	.22	.34	.45	.56	.65	.74	1.02	1.15	1.17	1.17	1.21	1.23
SEP 4	.32	.36	.36	.36	.36	.36	.36	.36	.36	.36	.48	.53
SEP 29	.17	.28	.33	.39	.47	.65	.71	.72	.76	.86	.91	.97
SEP 29	.42	.69	1.00	1.13	1.40	1.66	1.97	2.03	2.07	2.09	2.15	2.20
TALLAHASSEE												
FEB 6	.36	.47	.56	.75	.93	.99	1.11	1.20	1.34	1.53	1.56	1.95
FEB 12	.25	.48	.54	.60	.75	1.02	1.10	1.10	1.10	1.10	1.10	1.10
FEB 12	.31	.45	.47	.54	.55	.57	.69	.73	.78	1.12	1.33	1.46
MAR 1	.25	.37	.41	.46	.56	.76	.89	1.05	1.25	1.38	1.62	1.85
APR 19	.42	.63	.76	.91	1.12	1.18	1.20	1.22	1.23	1.23	1.23	1.25
APR 25	.40	.78	.84	.91	1.22	1.32	1.40	1.44	1.48	1.48	1.48	1.48
APR 27	.40	.60	.70	.82	.95	.99	1.06	1.13	1.21	1.28	1.40	1.50
JUN 11	.16	.25	.32	.38	.57	.70	.90	.98	1.04	1.41	1.66	1.77
JUN 15	.18	.27	.36	.48	.64	.68	.70	.79	.87	.92	1.01	1.04
JUN 15	.30	.57	.80	1.00	1.40	1.92	2.03	2.32	2.49	2.62	2.85	2.98
JUN 16	.22	.33	.34	.34	.38	.39	.40	.43	.43	.43	.43	.43
JUN 18	.16	.31	.41	.48	.54	.55	.57	.57	.57	.59	.83	.86
JUN 23	.18	.34	.38	.45	.46	.46	.46	.48	.50	.51	.51	.51
JUL 10	.60	.90	.96	1.05	1.30	1.32	1.36	1.36	1.36	1.36	1.38	1.42
JUL 12	.60	1.12	1.35	1.60	2.13	2.52	2.67	2.69	2.70	2.71	2.73	2.73
JUL 12	.55	.81	.97	1.22	1.38	1.46	1.51	1.51	1.51	1.51	1.51	1.51
JUL 31	.22	.37	.42	.42	.42	.42	.42	.42	.42	.42	.46	.65
AUG 8	.27	.51	.56	.73	.93	1.27	1.47	1.57	1.57	1.58	1.58	1.77
AUG 9	.22	.43	.44	.44	.44	.44	.45	.47	.47	.47	.47	.47
AUG 12	.20	.34	.40	.44	.48	.55	.61	.66	.68	.70	.70	.70
AUG 28	.37	.62	.72	.76	1.38	1.45	1.45	1.45	1.50	1.50	1.50	1.50
SEP 3	.70	1.28	1.50	1.85	*2.25	2.60	3.15	3.57	3.73	*3.75	3.80	3.83
SEP 10	.32	.40	.41	.42	.42	.42	.42	.42	.42	.42	.42	.42
SEP 15	.25	.31	.33	.34	.34	.34	.34	.34	.34	.34	.34	.34
SEP 16	.47	.53	.55	.55	.55	.55	.55	.55	.55	.55	.55	.60
OCT 1	.22	.32	.40	.53	.58	.58	.58	.58	.58	.59	.59	.59
OCT 6	.15	.23	.28	.32	.50	.58	.59	.60	.65	.66	.67	.67
TAMPA												
MAR 2	.25	.45	.55	.70	.93	1.03	1.06	1.18	1.18	1.18	1.18	1.18
MAR 13	.50	.58	.59	.60	.71	.71	.71	.71	.71	.71	.71	.71
JUN 10	.25	.27	.27	.27	.27	.27	.30	.30	.32	.33	.52	.63
JUN 12	.25	.50	.70	.82	.84	.84	.84	.84	.84	.84	.84	.84
JUN 18	.42	.58	.62	.64	.65	.66	.69	.71	.71	.71	.71	.72
JUN 26	.38	.70	.75	1.00	1.40	1.47	1.50	1.53	1.54	1.56	1.61	1.61
JUL 13	.23	.36	.42	.53	.55	.57	.59	.61	.63	.64	.66	.68
JUL 21	.23	.35	.38	.50	.63	.64	.64	.65	.65	.65	.66	.66
JUL 25	.25	.37	.42	.43	.50	.51	.51	.51	.51	.53	.54	.54
JUL 28	.23	.40	.48	.58	.62	.62	.62	.62	.64	.64	.64	.64
JUL 30	.45	.81	.85	.92	.99	1.07	1.13	1.16	1.16	1.16	1.16	1.16
JUL 30	.30	.31	.32	.33	.34	.53	.53	.55	.55	.55	.55	.61
JUL 31	.36	.53	.54	.55	.72	.75	.81	.85	.89	1.10	1.32	1.58
JUL 31	.18	.33	.35	.37	.41	.44	.53	.79	.91	*•	•	*•
AUG 8	.45	.80	.90	1.06	1.40	1.49	1.54	1.55	1.55	1.55	1.55	1.55
AUG 9	.25	.50	.55	.67	.77	.78	.78	.78	.79	.79	.80	.80
AUG 27	.14	.27	.30	.42	.56	.76	.93	1.09	1.10	1.10	1.10	1.10
SEP 2	.30	.60	.62	.70	.80	.88	.91	.91	.91	.92	.93	.94
SEP 17	.33	.65	.70	.80	1.03	1.05	1.05	1.05	1.05	1.05	1.10	1.10
SEP 17	.25	.32	.32	.35	.55	.58	.58	.58	.60	.61	.63	.64
SEP 23	.30	.50	.69	.87	1.34	1.60	1.80	1.88	1.95	2.01	2.07	2.12
SEP 25	.15	.30	.35	.50	.65	.74	.74	.74	.74	.74	.74	.74
WEST PALM BEACH												
JAN 4	.20	.30	.40	.50	.56	.62	.65	.66	.66	.66	.66	.66
JAN 22	.15	.30	.43	.52	.62	.70	.72	.74	.76	.77	.77	.77
FEB 2	.22	.34	.43	.50	.67	.78	.82	.90	1.01	1.04	1.08	1.08
FEB 23	.25	.35	.40	.45	.46	.46	.47	.50	.50	.50	.50	.50
JUN 8	.19	.30	.40	.46	.54	.56	.58	.64	.66	.71	.75	.82
JUN 9	.20	.36	.40	.41	.42	.43	.43	.43	.43	.43	.43	.43
JUN 10	.17	.34	.37	.45	.55	.60	.62	.65	.68	.70	.75	1.03
JUN 13	.30	.55	.73	.94	1.22	1.33	1.35	1.37	1.40	1.44	1.51	1.60
JUN 18	.25	.49	.64	.85	1.09	1.25	1.34	1.56	1.70	1.74	1.77	1.79
JUL 12	.14	.27	.40	.48	.52	.54	.54	.54	.54	.54	.54	.54
JUL 15	.14	.25	.34	.43	.50	.60	.67	.71	.73	.75	.78	.80
JUL 17	.18	.27	.45	.50	.58	.76	.83	.85	.87	.90	.95	.99
JUL 18	.20	.40	.51	.55	.56	.57	.58	.59	.59	.60	.63	.65
JUL 19	.35	.60	.80	1.00	1.20	1.24	1.28	1.30	1.34	1.39	1.40	1.40
JUL 20	.35	.60	.83	1.00	1.40	1.75	1.86	1.91	1.93	1.95	2.07	2.16
JUL 21	.35	.62	.75	.86	.92	1.05	1.11	1.15	1.20	1.21	1.23	1.26
AUG 19	.35	.41	.46	.50	.54	.75	.98	.99	1.05	1.07	1.07	1.07
SEP 23	.18	.30	.35	.35	.35	.35	.35	.35	.35	.50	.55	.55
SEP 29	.20	.32	.37	.41	.49	.53	.55	.58	.60	.60	.65	.67
OCT 14	.22	.40	.44	.49	.59	.67	.74	.88	.94	.96	1.00	1.00
OCT 15	.33	.63	.73	.94	1.13	1.31	1.49	2.04	2.31	2.57	3.08	3.48
OCT 22	.22	.37	.42	.62	.78	.84	.87	.89	1.01	1.11	1.20	1.35
OCT 31	.26	.44	.52	.53	.57	.62	.69	.80	1.13	1.26	1.47	1.52
NOV 14	.35	.62	.80	.92	1.11	1.14	1.14	1.14	1.14	1.14	1.14	1.14
DEC 20	.26	.45	.63	.70	.75	.75	.75	.75	.75	.76	.77	1.20
GEORGIA												
ATHENS												
MAR 17	.25	.47	.55	.61	.68	.76	.81	.87	.93	1.02	1.15	1.23
JUN 4	.24	.32	.34	.36	.49	.53	.53	.53	.53	.53	.53	.53
JUN 12	.20	.26	.32	.49	.49	.49	.49	.49	.49	.49	.49	.49
JUL 3	.20	.36	.49	.54	.54	.55	.56	.56	.56	.56	.56	.56
JUL 7	.20	.40	.43	.45	.46	.46	.46	.48	.49	.49	.51	.51
JUL 15	.52	.62	.63	.63	.63	.63	.63	.66	.66	.66	.66	.66
JUL 28	.33	.64	.92	1.22	1.45	1.52	1.53	1.55	1.56	1.56	1.60	1.61
AUG 3	.17	.32	.38	.47	.56	.68	.75	.75	.75	.75	.75	.75
SEP 16	.23	.40	.43	.44	.44	.44	.44	.44	.44	.44	.44	.44

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
GEORGIA												
ATLANTA												
JAN 23	.23	.27	.30	.35	.52	.65	.84	.93	.99	1.05	1.15	1.25
MAR 17	.23	.32	.43	.46	.58	.41	.65	.70	.82	.87	1.02	1.07
APR 12	.31	.33	.35	.38	.38	.40	.40	.40	.40	.40	.40	.40
MAY 9	.30	.39	.45	.51	.57	.58	.58	.59	.59	.61	.62	.63
MAY 20	.30	.55	.69	.73	.75	.76	.76	.78	.78	.78	.78	.78
MAY 21	.43	.49	.50	.51	.52	.60	.84	.87	.87	.87	.87	.87
JUN 7	.58	.76	.81	1.04	1.21	1.28	1.30	1.30	1.31	1.32	1.36	1.39
JUN 12	.28	.49	.53	.57	.60	.60	.60	.60	.60	.60	.60	.60
JUL 3	.55	.77	.80	.81	.81	.81	.81	.81	.82	.83	.83	.83
JUL 5	.35	.48	.55	.59	.61	.67	.68	.68	.71	.71	.71	.71
JUL 15	.20	.30	.40	.43	.55	.60	.64	.64	.64	.64	.64	.64
JUL 24	.18	.30	.35	.37	.41	.41	.41	.41	.41	.41	.41	.41
JUL 25	.65	.95	1.22	1.36	1.46	1.51	1.51	1.52	1.53	1.54	1.54	1.54
SEP 30	.12	.24	.30	.42	.50	.68	.80	.83	.90	.92	.97	1.15
OCT 1	.25	.47	.59	.60	.67	.75	.76	.80	.83	.88	.92	1.05
NOV 21	.19	.26	.41	.50	.67	.78	.90	.94	1.00	1.04	1.05	1.07
AUGUSTA												
MAR 17	.31	.38	.44	.46	.49	.50	.65	.74	.78	.83	.88	.90
JUN 10	.19	.33	.34	.37	.44	.45	.45	.45	.45	.45	.45	.45
JUN 11	.36	.66	.72	.78	.90	.90	.91	.91	.92	.93	.93	.94
JUN 15	.20	.34	.37	.43	.47	.49	.51	.53	.55	.60	.64	.76
JUL 8	.23	.38	.47	.50	.55	.56	.58	.62	.65	.66	.68	.70
JUL 9	.34	.53	.62	.74	.89	.92	.95	.96	.97	.97	1.02	1.12
JUL 9	.34	.53	.62	.74	.89	.92	.95	.96	.97	.97	1.02	1.12
AUG 1	.34	.56	.60	.83	.85	.85	.92	.94	.94	.94	.94	.94
OCT 7	.26	.36	.40	.58	.75	.90	1.01	1.11	1.13	1.23	1.30	1.58
NOV 22	.21	.41	.43	.45	.56	.58	.60	.62	.65	.67	.72	.76
COLUMBUS												
JAN 23	.21	.28	.34	.38	.57	.70	.90	.97	.99	1.01	1.04	1.07
MAR 17	.44	.57	.61	.74	.88	1.10	1.16	1.18	1.22	1.27	1.31	1.40
MAR 23	.28	.41	.42	.43	.47	.49	.51	.52	.53	.56	.58	.60
MAR 26	.25	.41	.50	.54	.67	.76	.84	.91	.92	.94	.96	1.00
MAY 28	.43	.83	.94	1.05	1.08	1.40	1.64	1.64	1.74	1.74	1.74	1.74
JUN 3	.22	.34	.38	.44	.46	.47	.48	.48	.48	.48	.48	.48
JUN 4	.32	.62	.89	1.14	1.65	2.15	2.20	2.25	2.26	2.27	2.28	2.28
JUN 15	.28	.48	.55	.58	.65	.66	.66	.66	.85	.96	.96	.96
JUN 16	.25	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30
JUN 25	.36	.58	.70	.84	.85	.85	.85	.85	.85	.85	.85	.85
JUN 30	.25	.34	.34	.34	.35	.35	.35	.37	.41	.44	.44	.44
JUL 5	.30	.45	.46	.47	.50	.50	.50	.50	.50	.50	.50	.50
JUL 6	.36	.42	.52	.60	.85	.89	.90	.90	.93	.94	.94	.94
JUL 11	.25	.45	.50	.65	.91	.94	.95	.95	.95	.95	.95	.95
JUL 24	.40	.65	.70	.77	.83	.85	.86	.87	.89	1.15	1.16	1.16
AUG 10	.32	.53	.58	.69	.77	.79	.80	.83	.84	.84	.84	.85
SEP 2	.30	.52	.57	.59	.95	1.08	1.20	1.64	1.84	2.14	2.45	2.57
SEP 10	.26	.46	.49	.49	.49	.49	.49	.49	.49	.49	.52	.54
OCT 1	.40	.57	.72	.87	.92	.99	1.00	1.02	1.04	1.06	1.13	1.16
OCT 7	.22	.31	.33	.35	.43	.56	.59	.61	.66	.69	.70	.70
NOV 21	.20	.28	.30	.34	.52	.57	.58	.58	.58	.58	.58	.58
MACON												
MAR 17	.28	.34	.47	.58	.72	.76	.83	.88	.92	.95	.99	1.09
MAR 23	.15	.23	.31	.43	.55	.73	.81	.85	.89	1.09	1.19	1.26
APR 12	.25	.25	.25	.25	.25	.26	.27	.32	.32	.32	.41	.48
APR 26	.51	.64	.67	.68	.73	.74	.74	.75	.75	.75	.75	.75
APR 27	.20	.34	.38	.39	.40	.40	.40	.40	.40	.40	.40	.40
MAY 28	.21	.29	.38	.45	.67	.73	.84	.97	.99	.99	.99	.99
JUN 12	.25	.47	.52	.52	.59	.60	.61	.61	.61	.61	.62	.62
JUN 16	.28	.46	.49	.59	.88	1.00	1.08	1.15	1.19	1.23	1.65	2.06
JUN 25	.28	.40	.49	.51	.51	.51	.51	.52	.52	.52	.53	.54
JUL 7	.20	.34	.44	.44	.44	.45	.46	.46	.46	.46	.46	.46
JUL 12	.23	.36	.47	.48	.61	.80	1.00	1.23	1.59	1.76	1.86	1.91
JUL 16	.22	.41	.46	.60	.64	.65	.65	.66	.66	.66	.66	.66
JUL 24	.29	.49	.66	.77	.81	.81	.81	.87	.89	.91	.91	.91
JUL 28	.40	.67	.85	.90	.94	1.05	1.28	1.41	1.45	1.78	2.08	2.19
AUG 15	.50	.87	1.06	1.25	1.30	1.30	1.30	1.31	1.31	1.31	1.31	1.31
SEP 9	.23	.35	.48	.53	.72	.73	.73	.78	.83	.83	.83	.83
SEP 24	.15	.27	.37	.42	.53	.55	.57	.57	.57	.57	.57	.57
ROME												
MAR 24	.21	.24	.45	.47	.54	.56	.56	.67	.71	.72	.84	.85
MAR 24	.36	.62	.82	.86	.88	.91	.92	.97	1.04	1.05	1.07	1.14
APR 19	.17	.24	.33	.42	.42	.50	.57	.59	.64	.67	.68	.68
JUN 7	*.65	.83	.87	.90	.96	1.06	1.13	1.19	1.26	1.32	1.40	1.45
JUL 3	.53	*1.05	*1.33	1.36	1.50	1.54	1.58	1.60	1.60	1.60	1.61	1.61
JUL 11	.40	.73	.80	.87	1.11	1.12	1.12	1.12	1.12	1.12	1.12	1.12
JUL 15	.25	.50	.60	.65	1.15	1.22	1.25	1.25	1.25	1.25	1.25	1.25
JUL 18	.28	.54	.55	.55	.55	.55	.55	.55	.55	.55	.55	.55
AUG 7	.32	.61	.64	.65	.68	.73	.76	.83	.84	.85	.85	.85
AUG 21	.33	.35	.55	.58	.58	.58	.58	.58	.58	.58	.58	.58
SEP 2	.15	.22	.32	.40	.47	.54	.54	.55	.55	.55	.55	.55
SEP 10	.20	.34	.40	.40	.42	.47	.47	.52	.52	.53	.53	.53
SEP 12	.13	.22	.32	.42	.63	.83	.95	1.11	1.26	1.27	1.31	1.35
SEP 30	.14	.28	.40	.44	.56	.58	.76	.84	.91	.96	1.00	1.00
NOV 21	.18	.35	.38	.38	.39	.53	.61	.62	.64	.71	.73	.81
SAVANNAH												
MAY 12	.46	.54	.64	.67	.68	.68	.68	.68	.68	.68	.68	.68
MAY 28	.30	.50	.57	.62	.75	.83	.87	.88	.89	.89	.89	.89
JUN 11	.13	.25	.35	.42	.51	.56	.63	.65	.66	.68	.68	.68
JUN 11	.24	.32	.35	.36	.38	.58	.71	.72	.73	.75	.75	.75
JUN 26	.25	.40	.55	.69	.87	.97	1.00	1.01	1.02	1.02	1.02	1.02
JUN 27	.21	.33	.42	.49	.52	.53	.53	.54	.54	.54	.54	.58
JUL 9	.39	.62	.83	.96	1.26	1.27	1.27	1.27	1.27	1.27	1.28	1.28
JUL 11	.19	.30	.36	.37	.44	.45	.45	.46	.46	.50	.53	.56
JUL 20	.23	.37	.43	.51	.61	.66	.71	.74	.74	.74	.74	.75
JUL 24	.37	.66	.83	.98	1.19	1.24	1.25	1.26	1.26	1.26	1.26	1.26
JUL 27	.25	.34	.41	.42	.43	.54	.54	.54	.54	.54	.54	.54
JUL 31	.20	.30	.37	.39	.40	.41	.41	.42	.42	.42	.42	.42
AUG 9	.31	.40	.41	.47	.73	.85	.86	.87	.88	.88	.88	.88
AUG 25	.20	.33	.37	.38	.40	.41	.41	.41	.41	.41	.41	.41
AUG 27	.20	.30	.39	.40	.44	.61	.67	.74	.76	.77	.77	.77
SEP 2	.29	.44	.54	.66	.80	1.00	1.05	1.15	1.18	1.19	1.19	1.19
SEP 24	.30	.53	.68	.85	1.11	1.23	1.26	1.30	1.30	1.31	1.31	1.31
SEP 30	.29	.41	.46	.48	.55	.72	.83	.85	.86	.86	.90	.90
NOV 10	.38	.50	.64	.67	.73	.77	.81	.88	.98	1.05	1.21	1.36
DEC 13	.25	.44	.49	.58	.65	.68	.74	.74	.74	.74	.74	.74

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
HAWAII												
HILO												
JAN 23	.43	.65	.68	.72	.84	.96	1.13	1.30	1.48	1.50	2.10	2.41
JAN 23	.28	.52	.57	.61	.76	.88	.89	.91	.92	.98	1.00	1.05
MAR 4	.22	.33	.37	.41	.49	.67	.82	.84	1.02	1.20	1.36	1.47
MAR 30	.17	.33	.37	.43	.54	.57	.58	.59	.60	.61	.64	.65
APR 5	.36	.52	.59	.72	1.05	1.40	1.83	2.19	2.44	2.69	3.10	3.35
MAY 2	.33	.55	.63	.83	.99	1.12	1.30	1.45	1.55	1.69	1.85	1.95
MAY 3	.28	.50	.56	.70	.85	1.10	1.19	1.43	1.53	1.72	2.45	2.89
JUL 17	.20	.32	.33	.34	.34	.34	.35	.36	.36	.37	.37	.41
SEP 30	.17	.32	.37	.47	.69	.87	1.07	1.20	1.35	1.45	1.51	1.60
OCT 28	.30	.53	.59	.70	1.10	1.38	1.75	2.10	2.47	2.58	2.68	2.78
NOV 8	.25	.43	.46	.50	.68	.75	.89	1.00	1.05	1.05	1.09	1.11
NOV 14	.26	.50	.55	.65	.95	1.36	1.52	1.64	1.75	1.85	2.12	2.63
NOV 15 T	M	M	M	M	M	M	.80	M	M	1.40	M	1.89
HONOLULU												
JAN 10	.40	.52	.75	.87	1.07	1.18	1.31	1.44	1.52	1.57	1.65	1.70
MAY 2	.59	*1.15	*1.40	1.55	1.73	1.89	1.96	1.97	2.07	2.10	2.17	2.55
MAY 4	.20	.32	.38	.39	.47	.54	.56	.56	.57	.57	.57	.57
NOV 14	.23	.35	.54	.63	.90	1.21	1.37	1.65	1.77	1.90	2.14	2.36
DEC 14	.33	.50	.58	.64	.78	.93	1.11	1.23	1.39	1.51	1.84	2.34
DEC 14	.23	.33	.42	.52	.76	.98	1.20	1.35	1.43	1.49	1.64	1.94
KAHULUI												
FEB 3	.30	*.52	*.82	1.04	*1.54	1.69	*2.18	2.51	2.57	*2.74	2.81	*2.92
MAR 24	*.43	*.76	*.93	.98	1.27	1.48	1.56	1.58	1.61	1.64	1.64	1.65
LIHUE												
JAN 24	.29	.44	.57	.82	.95	.99	1.00	1.00	1.00	1.00	1.00	1.00
APR 4	.36	.59	.81	.91	1.18	1.50	1.55	1.55	1.55	1.55	1.55	1.55
APR 13	.48	.82	1.03	1.17	1.36	1.50	1.54	1.75	1.89	1.94	2.00	2.00
MAY 3	.37	.56	.66	.67	.70	.72	.75	.78	.79	.80	.80	.81
MAY 4	.32	.55	.73	.87	1.07	1.22	1.43	1.52	1.56	1.67	1.80	1.96
AUG 26	.25	.46	.62	.68	.73	.78	.78	.86	.93	.94	.94	.95
SEP 21	.19	.27	.37	.40	.61	.70	.75	.82	.83	1.16	1.26	1.42
NOV 6	.38	.67	.89	1.07	1.38	1.80	2.18	2.27	2.34	2.39	2.45	2.48
NOV 19	.23	.32	.35	.47	.62	.69	.76	.80	.92	1.20	1.45	1.51
IDAHO												
BOISE						NONE						
LEWISTON						NONE						
POCATELLO						NONE						
ILLINOIS												
CAIRO U												
FEB 9	.17	.28	.36	.38	.62	.67	.85	.87	.92	.98	1.35	1.44
MAY 18	.20	.29	.35	.37	.39	.40	.40	.41	.44	.50	.55	.57
JUN 2	.47	.61	.69	.74	.78	.79	.79	.79	.79	.79	.79	.79
JUN [illegible]	.47	.65	.65	.66	.66	.66	.68	.68	.78	.78	.80	.81
JUL 2	.31	.49	.54	.55	.59	.68	.71	.72	.72	.72	.72	.72
JUL 10	.25	.45	.58	.67	.73	.76	.77	.88	.89	.89	1.07	1.30
AUG 8	.51	.79	.97	1.13	1.35	1.36	1.36	1.36	1.36	1.36	1.36	1.36
AUG 31	.25	.46	.52	.55	.67	.69	.69	.70	.70	.71	.74	.74
SEP 11	.13	.23	.28	.34	.53	.70	.86	1.05	1.28	1.44	1.70	1.94
CHICAGO O HARE												
JUN 5	.25	.46	.53	.61	.63	.66	.79	.79	.79	.81	.85	.85
JUL 13	.34	.62	.76	1.02	*1.35	1.49	*1.61	1.68	1.71	1.73	1.74	1.75
AUG 6	.26	.40	.47	.52	.52	.53	.53	.53	.53	.53	.53	.53
AUG 17	.24	.28	.42	.46	.68	.84	.90	.94	.96	.96	.97	1.08
AUG 27	.32	.41	.43	.45	.52	.56	.58	.61	.64	.65	.66	.67
SEP 17	.20	.31	.33	.35	.36	.40	.40	.40	.41	.42	.44	.72
OCT 21	.24	.28	.36	.38	.42	.43	.49	.49	.49	.49	.50	.50
CHICAGO MIDWAY												
MAY 4	.35	.45	.47	.49	.51	.56	.61	.65	.68	.70	.70	.70
JUN 5	.37	.40	.41	.43	.44	.48	.55	.55	.55	.55	.55	.55
JUN 22	.24	.40	.49	.60	.81	.86	.88	.88	.88	.88	.88	.88
JUL 6	.17	.28	.38	.45	.52	.59	.67	.73	.75	.75	.75	.77
JUL 13	.30	.41	.43	.48	.61	.66	.77	.78	1.05	1.14	1.35	1.41
JUL 27	.45	.58	.59	.59	.59	.59	.59	.59	.59	.59	.59	.59
AUG 18	.14	.25	.35	.40	.44	.49	.52	.55	.56	.70	.93	1.00
AUG 27	.24	.39	.48	.53	.61	.74	.83	.85	.88	.90	.90	.91
SEP 17	.33	.52	.56	.58	.63	.64	.64	.64	.64	.64	.64	.77
MOLINE												
APR 24	.17	.33	.43	.55	.72	.77	.82	1.12	1.16	1.24	1.39	1.52
MAY 7	.18	.29	.36	.43	.48	.53	.57	.59	.60	.60	.67	.67
MAY 21	.25	.36	.38	.40	.40	.40	.40	.40	.40	.40	.40	.40
JUL 6	.24	.43	.53	.56	.56	.57	.58	.59	.61	.62	.66	.66
JUL 13	.26	.42	.53	.61	.69	.71	.71	.71	.71	.71	.93	.94
JUL 18	.27	.49	.62	.65	.68	.81	.85	.86	.86	.86	.86	.87
AUG 3	.26	.42	.57	.75	.94	1.42	1.69	2.03	2.13	2.26	2.53	2.85
AUG 7	.13	.24	.32	.40	.54	.59	.60	.64	.66	.69	.78	.84
AUG 25	.22	.35	.41	.43	.46	.50	.56	.56	.56	.56	.56	.56
SEP 4	.29	.46	.54	.59	.69	.72	.72	.72	.72	.72	.72	.72
SEP 14	.26	.46	.59	.64	.68	.78	1.08	1.46	1.54	1.62	1.64	1.65
SEP 20	.24	.38	.50	.55	.61	.77	.86	.91	1.44	1.67	1.72	1.74
SEP 21	.32	.39	.40	.41	.42	.43	.43	.43	.44	.46	.46	.48
OCT 16	.17	.30	.35	.36	.36	.36	.36	.36	.36	.36	.36	.36
PEORIA												
APR 8	.16	.32	.37	.45	.72	.91	1.02	1.18	1.20	1.20	1.20	1.20
MAY 4	.26	.29	.31	.34	.41	.43	.44	.44	.44	.44	.44	.44
MAY 7	.15	.27	.35	.41	.60	.73	.80	.82	.82	.82	.84	1.08
JUN 29	.28	.37	.41	.42	.42	.42	.42	.42	.42	.42	.42	.42
JUL 2	.23	.42	.46	.53	.58	.60	.62	.62	.62	.62	.62	.62
AUG 1	.28	.33	.34	.34	.34	.38	.38	.38	.38	.38	.38	.38
AUG 4	.26	.38	.42	.46	.48	.52	.71	.81	.93	.99	1.19	1.30
AUG 25	.20	.40	.52	.61	.82	1.00	1.08	1.20	1.26	1.29	1.49	1.74
AUG 30	.12	.19	.31	.35	.51	.82	.89	1.14	1.30	1.35	1.35	1.35
SEP 4	.23	.40	.52	.61	.94	1.02	1.38	1.41	1.41	1.41	1.41	1.41
SEP 14	.20	.36	.44	.51	.63	.75	.76	.76	.76	.76	.76	.76
SEP 14	.45	.76	.96	1.08	1.35	1.47	1.47	1.66	1.68	1.68	1.80	1.82
SEP 17	.26	.34	.34	.38	.39	.40	.40	.43	.44	.46	.48	.48

T Clock malfunction
M No record

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
ILLINOIS												
ROCKFORD												
MAY 8	.31	.50	.67	.75	.95	1.10	1.17	1.20	1.21	1.23	1.23	1.23
JUN 5	.34	.54	.59	.61	.79	.81	1.31	1.44	1.44	1.44	1.44	1.44
JUL 16	.23	.46	.50	.54	.61	.69	.71	.75	.75	.75	.75	.75
JUL 31	.17	.33	.48	.62	.80	1.10	1.32	1.53	1.60	1.68	1.73	1.81
AUG 6	.22	.40	.47	.56	.67	.78	.79	.91	.93	.99	.99	.99
AUG 17	.37	.47	.50	.51	.70	.88	1.21	1.21	1.26	1.26	1.30	1.30
AUG 25	.15	.30	.35	.39	.53	.71	.73	.75	.79	.79	.81	.81
AUG 26	.56	.93	*1.40	1.65	*1.95	2.12	*2.15	2.19	2.19	*2.20	2.20	2.20
SEP 9	.26	.34	.47	.48	.51	.52	.65	.65	.65	.65	.65	.65
SEP 9	.18	.30	.40	.47	.64	.72	.79	.79	.79	.79	.79	.79
SEP 20	.24	.34	.39	.40	.40	.44	.46	.46	.65	.85	.86	.90
SEP 20	.15	.20	.25	.32	.45	.65	.67	.70	.89	.90	.92	.95
OCT 14	.29	.49	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51
OCT 16	.21	.39	.51	.53	.54	.54	.57	.59	.59	.64	.64	.64
SPRINGFIELD												
APR 11	.34	.36	.36	.42	.66	.70	.71	.71	.72	.74	.76	.82
JUN 1	.30	.56	.76	.93	1.10	1.38	1.40	1.78	1.99	2.13	2.17	2.63
JUN 8	.33	.66	.70	.86	.86	.86	.86	.86	.86	.86	.86	.86
JUL 7	.36	.58	.61	.62	.63	.65	.68	.68	.68	.68	.68	.68
AUG 7	.26	.46	.64	.82	1.00	1.27	1.29	1.29	1.29	1.29	1.29	1.29
AUG 19	.20	.34	.35	.38	.40	.41	.42	.43	.43	.43	.43	.43
AUG 30	.43	.80	.86	.92	1.00	1.04	1.06	1.08	1.09	1.11	1.17	1.23
SEP 14	.28	.50	.62	.69	.78	.90	.96	.96	.96	.96	.96	.96
NOV 26	.28	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32
INDIANA												
EVANSVILE												
FEB 9	.31	.36	.40	.47	.63	.67	.71	.92	1.10	1.36	1.44	1.48
JUL 7	.20	.38	.50	.62	.72	.79	.82	.98	1.05	1.05	1.05	1.05
JUL 9	.26	.31	.38	.48	.50	.59	.85	1.02	1.03	1.05	1.10	1.15
JUL 17	.24	.44	.62	.71	.77	.78	.78	.78	.78	.78	.78	.78
JUL 25	.27	.49	.76	.88	.94	.94	.94	.94	.94	.94	.94	.94
AUG 8	.24	.43	.56	.59	.61	.61	.61	.61	.61	.61	.61	.61
AUG 26	.24	.26	.29	.31	.54	.60	.75	.84	.89	.92	.94	.95
AUG 31	.32	.52	.67	.77	.86	.90	.98	1.06	1.09	1.10	1.10	1.10
SEP 21	.23	.32	.35	.41	.46	.51	.53	.53	.53	.56	.59	.60
NOV 26	.24	.30	.31	.32	.32	.35	.36	.37	.37	.37	.37	.37
FORT WAYNE												
APR 6	.14	.23	.32	.38	.54	.67	.86	.94	1.06	1.17	1.29	1.41
MAY 26	.24	.38	.46	.60	.69	.87	.94	.98	.98	.98	.98	.98
JUL 7	.29	.44	.54	.62	.73	.78	.84	.98	1.02	1.03	1.04	1.05
JUL 15	.28	.50	.64	.72	.74	.78	.79	.80	.80	.80	.80	.80
AUG 16	.26	.41	.43	.43	.43	.43	.43	.43	.43	.43	.43	.43
OCT 21	.29	.54	.69	.91	1.26	1.50	1.69	1.80	1.96	2.11	2.14	2.21
INDIANAPOLIS												
APR 8	.70	.72	.72	.72	.72	.72	.72	.72	.72	.72	.72	.72
MAY 26	.24	.28	.48	.50	.52	.54	.56	.57	.58	.58	.58	.58
JUN 6	.19	.32	.40	.48	.55	.57	.60	.62	.67	.71	.75	.77
JUN 28	.32	.52	.72	.85	1.10	1.14	1.14	1.14	1.14	1.14	1.14	1.14
JUN 29	.22	.36	.46	.55	.55	.55	.60	.77	.78	.79	.79	.79
SEP 15	.34	.61	.75	.84	.90	.95	.99	1.02	1.02	1.02	1.03	1.05
NOV 26	.28	.33	.35	.37	.40	.41	.43	.43	.43	.43	.43	.43
SOUTH BEND												
APR 11	.27	.48	.55	.65	.76	.79	.80	.86	.91	.91	.91	.91
MAY 26	.25	.36	.37	.46	.47	.48	.49	.53	.54	.55	.55	.55
JUN 23	.42	.50	.51	.60	.60	.61	.61	.61	.61	.61	.61	.61
AUG 8	.21	.41	.43	.47	.49	.50	.65	.65	.65	.65	.65	.65
AUG 18	.27	.45	.45	.50	.57	.62	.72	.80	.83	.83	.89	.90
AUG 25	.31	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36
SEP 14	.22	.43	.47	.55	.77	.80	1.01	1.05	1.33	1.58	1.62	1.66
SEP 21	.29	.42	.43	.44	.44	.44	.45	.45	.45	.46	.46	.46
SEP 30	.15	.26	.30	.33	.58	.63	.67	.69	.70	.71	.72	.73
IOWA												
DES MOINES												
JUN 29	.48	.76	.84	.91	1.20	1.44	1.52	1.61	1.71	1.74	1.79	1.81
AUG 30	.23	.31	.36	.40	.45	.47	.49	.51	.52	.64	.66	.66
SEP 7	.26	.37	.39	.40	.44	.44	.44	.44	.44	.44	.44	.44
SEP 20	.30	.48	.68	.78	.94	1.05	1.09	1.10	1.15	1.16	1.17	1.22
NOV 12	.23	.30	.41	.50	.54	.56	.58	.60	.61	.64	.71	.72
DUBUQUE												
MAY 4	.45	.75	.80	.87	.99	1.01	1.06	1.10	1.20	1.22	1.23	1.23
MAY 15	.25	.32	.35	.37	.41	.43	.45	.48	.48	.48	.48	.48
MAY 22	.19	.30	.32	.33	.34	.35	.49	.54	.58	.58	.58	.58
MAY 26	.47	.73	.80	.82	1.40	1.46	1.54	1.62	1.69	1.70	1.70	1.70
JUN 6	.23	.32	.34	.34	.34	.34	.34	.34	.34	.34	.34	.34
JUL 8	.17	.31	.40	.55	.70	.77	.90	.96	.99	1.01	1.10	1.23
JUL 30	.20	.45	.50	.60	.80	.86	1.20	1.42	1.53	1.62	1.78	1.88
AUG 7	.26	.32	.34	.36	.42	.53	.57	.60	.62	.63	.66	.67
AUG 16	.30	.31	.32	.37	.45	.47	.63	.78	.81	.82	.88	.91
AUG 18	.24	.30	.32	.34	.45	.51	.72	.90	1.00	1.05	1.05	1.05
AUG 30	.15	.25	.31	.39	.57	.90	1.00	1.22	1.40	1.60	1.75	1.82
SEP 6	.20	.30	.32	.34	.47	.53	.57	.61	.64	.67	.74	.75
SEP 9	.45	.85	1.05	1.25	1.76	1.90	2.33	2.60	2.65	2.68	2.69	2.69
SEP 18	.50	.98	1.01	1.14	1.32	1.36	1.37	1.37	1.37	1.41	1.42	1.42
SEP 19	.40	.65	.68	.74	.80	.84	.85	.85	.85	.86	.87	.88
SEP 20	.19	.32	.40	.54	.69	.76	.89	1.17	1.33	1.54	1.70	1.95
SEP 21	.15	.30	.35	.40	.65	.95	1.12	1.44	1.83	2.05	2.30	2.40
OCT 14	.17	.30	.30	.30	.35	.35	.35	.35	.35	.35	.35	.35
OCT 16	.24	.32	.37	.43	.46	.46	.48	.49	.50	.51	.53	.53
SIOUX CITY												
MAY 14	.37	.42	.49	.52	.57	.61	.64	.87	.89	.94	.94	.94
MAY 21	.27	.35	.36	.36	.36	.36	.36	.36	.36	.36	.38	.40
JUN 4	.22	.29	.40	.46	.54	.61	.65	.66	.66	.70	.72	.75
SEP 12	.18	.33	.38	.44	.45	.48	.59	.63	.68	.70	.70	.71
WATERLOO												
MAY 5	.27	.31	.33	.36	.36	.37	.39	.42	.43	.43	.43	.43
MAY 22	.18	.31	.33	.34	.45	.56	.61	.71	.73	.79	.93	1.04
JUN 20	.25	.31	.38	.40	.43	.44	.45	.47	.50	.51	.51	.51
JUN 27	.39	.64	.74	.81	.83	.90	.92	.96	.96	.96	.96	.96
JUN 29	.23	.35	.52	.68	.88	1.04	1.10	1.18	1.25	1.30	1.34	1.39
JUL 8	.35	.69	.95	1.06	*1.60	1.89	*2.10	2.25	2.34	2.36	2.37	2.38
AUG 16	.35	.48	.48	.48	.48	.48	.48	.48	.48	.48	.48	.48
AUG 16	.69	*1.07	*1.22	1.30	1.33	1.36	1.42	1.46	1.46	1.46	1.46	1.46

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes) 5	10	15	20	30	45	60	80	100	120	150	180
IOWA												
WATERLOO												
AUG 29	.16	.28	.44	.47	.53	.60	.66	.68	.73	.76	.88	.89
SEP 14	.23	.45	.46	.46	.46	.46	.46	.46	.46	.46	.46	.46
SEP 30	.27	.38	.48	.60	.79	.87	.90	.94	1.29	1.39	1.44	1.49
KANSAS												
CONCORDIA												
APR 7	.32	.45	.48	.49	.50	.56	.57	.57	.57	.57	.57	.57
MAY 25	.17	.30	.37	.42	.43	.46	.48	.49	.51	.53	.53	.53
MAY 31	.38	.60	.95	1.10	1.16	1.54	1.61	1.63	1.64	1.65	1.67	1.71
JUN 7	.37	.73	1.07	1.30	1.57	1.69	1.71	1.71	1.71	1.71	1.71	1.71
JUN 27	.26	.42	.57	.72	.95	1.22	1.31	1.40	1.46	1.52	1.60	1.61
JUN 30	.38	.65	.70	.72	.72	.72	.72	.72	.72	.76	.86	.86
JUL 26	.40	.70	.80	.85	.90	.92	.95	.99	.99	.99	.99	.99
AUG 20	.25	.43	.44	.44	.44	.44	.45	.45	.45	.45	.46	.46
AUG 21	.60	.93	.96	1.02	1.03	1.27	1.56	2.17	2.41	2.48	2.52	2.55
AUG 24	.30	.40	.42	.43	.44	.71	.77	.83	.87	.89	.92	.94
SEP 3	.15	.27	.36	.47	.60	.82	.87	.92	.94	.96	.96	.96
SEP 20	.17	.26	.32	.44	.60	.88	.98	1.06	1.14	1.21	1.33	1.37
DODGE CITY												
MAY 4	.20	.30	.34	.38	.42	.43	.53	.55	.59	.66	.67	.67
MAY 25	.51	.77	1.23	1.51	1.59	1.76	2.22	2.72	2.72	2.72	2.72	2.72
JUN 3	.29	.38	.39	.40	.40	.44	.44	.44	.45	.45	.45	.45
JUN 4	.29	.38	.39	.40	.40	.44	.44	.44	.45	.45	.45	.45
JUL 3	.26	.38	.45	.48	.54	.61	.65	.75	.82	.86	.89	.89
JUL 4	.25	.49	.54	.55	.58	.61	.63	.67	.68	.72	.73	.76
JUL 14	.20	.38	.53	.54	.55	.55	.55	.65	.66	.67	.68	.71
AUG 9	.34	.55	.67	.68	.68	.68	.68	.68	.68	.68	.68	.68
SEP 20	.26	.33	.50	.56	.77	.98	1.09	1.12	1.14	1.14	1.15	1.15
SEP 29	.28	.32	.46	.60	.62	.62	.62	.62	.62	.62	.62	.63
GOODLAND												
MAY 22	.16	.28	.35	.40	.53	.57	.64	.68	.73	1.02	1.17	1.18
JUN 30	.20	.26	.34	.40	.49	.56	.57	.57	.57	.57	.57	.57
JUL 27	.28	.38	.41	.44	.46	.46	.46	.46	.46	.46	.46	.46
AUG 23	.26	.38	.45	.56	.77	.91	1.05	1.12	1.18	1.23	1.25	1.25
SEP 13	.25	.25	.25	.25	.35	.35	.35	.35	.35	.35	.35	.35
TOPEKA												
MAY 24	.15	.25	.35	.42	.65	.85	.91	.96	.98	.98	.98	.98
MAY 26	.22	.34	.35	.38	.46	.72	.78	.84	.88	.92	.97	.99
JUN 4	.15	.30	.38	.46	.50	.56	.60	.93	.98	1.03	1.04	1.05
JUN 7	.20	.32	.34	.35	.38	.45	.47	.54	.62	.68	.72	.77
JUN 25	.26	.52	.70	.89	.91	.92	.92	.92	.92	.92	.92	.92
JUN 30	.22	.34	.35	.36	.36	.36	.36	.36	.62	.72	.74	.74
JUL 6	.32	.62	.84	.98	1.02	1.04	1.08	1.16	1.17	1.18	1.19	1.19
AUG 30	.30	.42	.52	.66	.78	.85	.89	1.00	1.04	1.06	1.16	1.29
SEP 4	.18	.26	.40	.48	.66	.89	1.16	1.36	1.38	1.39	1.40	1.42
SEP 9	.14	.25	.33	.42	.44	.48	.68	.79	.80	.80	.90	.92
SEP 20	.30	.48	.60	.63	.70	.72	.74	.76	.76	.77	.79	.79
SEP 20	.36	.40	.43	.45	.49	.54	.58	.62	.62	.64	.68	.69
WICHITA												
APR 24	.20	.29	.34	.50	.55	.56	.58	.63	.63	.66	.70	.77
MAY 14	.46	.50	.90	1.05	1.33	1.45	1.53	1.59	1.66	1.70	1.75	1.79
MAY 25	.26	.33	.35	.37	.45	.68	.88	.93	1.00	1.04	1.11	1.16
JUN 4	.76	1.03	1.29	1.45	1.55	1.70	1.85	2.05	2.45	2.86	2.92	3.45
JUL 3	.44	.84	1.18	1.46	1.62	1.80	1.84	1.87	1.90	1.92	1.96	1.98
JUL 23	.16	.30	.44	.52	.52	.52	.52	.52	.52	.52	.52	.52
AUG 31	.13	.24	.37	.44	.59	.73	.80	.94	.97	.99	1.01	1.03
SEP 3	.31	.43	.55	.64	.69	.75	.75	.75	.75	.75	.75	.75
SEP 6	.33	.50	.68	.81	1.02	1.25	1.39	1.40	1.70	1.84	2.01	2.28
SEP 18	.26	.35	.46	.51	.56	.68	.75	.98	1.12	1.14	1.30	1.38
KENTUCKY												
COVINGTON												
APR 11	.20	.40	.47	.51	.52	.53	.54	.56	.57	.57	.73	.82
APR 22	.27	.37	.42	.45	.46	.46	.46	.46	.46	.47	.47	.47
MAY 18	* .45*	.60	.70	.72	.77	.79	.80	.80	.81	.82	.82	.82
JUN 29	.23	.43	.49	.51	.52	.52	.52	.53	.53	.53	.53	.53
JUL 17	.20	.35	.39	.42	.44	.47	.60	.64	.65	.67	.68	.68
JUL 24	.35*	.65*	.87	.92	1.04	1.36*	1.41	1.42	1.42	1.44	1.46	1.49
AUG 22	.24	.32	.39	.50	.56	.57	.57	.57	.57	.57	.57	.57
NOV 25	.30	.38	.48	.53	.60	.63	.68	.69	.73	.73	.73	.73
LEXINGTON												
APR 8	.27	.36	.37	.37	.37	.37	.42	.45	.46	.46	.46	.46
MAY 10	.26	.40	.43	.46	.47	.48	.51	.53	.53	.53	.53	.53
JUN 5	.25	.40	.61	.64	.86	1.31	1.39	1.42	1.42	1.44	1.44	1.44
JUL 2	.32	.50	.53	.53	.54	.57	.62	.91	.96	.97	.97	.97
JUL 9	.45	.48	.48	.48	.55	.55	.60	.60	.60	.60	.60	.60
JUL 10	.23	.32	.33	.34	.36	.36	.36	.38	.66	.69	.70	.70
LOUISVILLE												
MAR 29	.20	.32	.36	.46	.53	.59	.73	.96	1.03	1.12	1.20	1.24
APR 7	.41	.43	.44	.44	.45	.46	.46	.46	.46	.46	.46	.46
MAY 21	.22	.31	.41	.42	.42	.42	.42	.42	.42	.42	.42	.72
JUL 14	.25	.32	.57	.64	.92	1.04	1.18	1.36	1.36	1.36	1.36	1.76
AUG 19	.25	.35	.40	.50	.62	.88	1.02	1.02	1.02	1.02	1.03	1.04
SEP 1	.36	.63	.77	.93	1.27	1.48	2.23	2.48	2.64	2.78	2.87	2.93
SEP 11	.18	.31	.37	.38	.50	.54	.58	.58	.58	.58	.58	.58
SEP 15	.53	.61	.69	.76	.98	1.18	1.24	1.30	1.62	1.76	1.83	1.86
NOV 26	.30	.36	.40	.43	.46	.50	.52	.57	.58	.58	.58	.58
LOUISIANA												
ALEXANDRIA												
JAN 22	.40	.58	.62	.71	.80	.88	.73	1.00	1.14	1.18	1.25	1.28
MAY 22	.21	.37	.40	.42	.43	.43	.44	.44	.44	.44	.44	.44
JUL 14	.22	.32	.39	.49	.75	.90	.97	1.00	1.00	1.00	1.00	1.00
JUL 26	.25	.40	.45	.51	.55	.56	.57	.57	.57	.57	.57	.57
AUG 10	.26	.36	.39	.42	.44	.46	.46	.47	.47	.48	.48	.57
SEP 22	.53	.85	.97	1.25	1.69	1.87	1.90	2.02	2.11	2.24	2.34	2.43
NOV 5	.20	.23	.32	.39	.57	.71	.91	1.11	1.25	1.29	1.45	1.51
DEC 12	.23	.52	.55	.70	.91	1.16	1.38	1.40	1.41	1.51	1.55	1.55

Station and date	Maximum precipitation in inches (5 to 180 minutes) 5	10	15	20	30	45	60	80	100	120	150	180
LOUISIANA												
BATON ROUGE												
JAN 22	.41	.54	.62	.75	.80	.87	.92	.99	1.03	1.08	1.24	1.26
MAR 1	.16	.32	.42	.56	.68	.58	.95	1.00	1.01	1.02	1.23	1.31
APR 19	.20	.37	.47	.52	.66	.73	.76	.77	.80	.80	.81	.81
MAY 23	.24	.33	.45	.53	.58	.59	.61	.62	.62	.62	.62	.62
MAY 28	.25	.40	.46	.62	.80	.99	1.05	1.08	1.12	1.15	1.15	1.15
JUN 22	.48	.75	.87	.96	.98	.98	1.41	1.48	1.48	1.48	1.49	1.50
JUL 7	.35	.38	.45	.49	.50	.50	.50	.51	.52	.52	.54	.54
JUL 11	.33	.41	.53	.58	.61	.64	.65	.66	.66	.66	.66	.66
JUL 28	.33	.44	.48	.61	.64	.64	.64	.64	.64	.64	.64	.64
AUG 5	.34	.52	.67	.69	.70	.73	.76	.76	.76	.76	.76	.76
AUG 11	.26	.36	.42	.44	.45	.48	.49	.61	.63	.63	.63	.63
AUG 18	.41	.56	.71	.78	.81	.83	1.02	1.06	1.06	1.06	1.06	1.06
AUG 20	.35	.59	.73	.79	.85	.87	.90	.91	.92	.93	.96	1.00
AUG 24	.24	.47	.57	.73	.77	.78	.78	.78	.78	.78	.78	.78
AUG 27	.25	.41	.50	.54	.63	.75	.76	.78	.80	.80	.80	.80
SEP 5	.26	.38	.41	.43	.47	.52	.54	.64	.83	.91	.98	.99
NOV 5	.19	.32	.37	.47	.71	.88	.96	1.10	1.26	1.40	1.61	1.65
BOOTHVILLE												
MAR 1 S	* .53*	.74*	.79	.97*	1.04	1.08*	1.15	1.39	1.51*	1.58	1.77*	1.89
MAR 26	.37	.56	.72	.89*	1.32	1.82*	2.08	2.27	2.43*	2.44	2.46*	2.53
APR 27	.25	.47	.52	.57	.76	.77	.78	.80	.80	.80	.81	.81
MAY 21	.13	.23	.30	.34	.57	.64	.66	.70	.72	.78	.82	.84
JUN 8	.19	.38	.41	.54	.75	.91	1.01	1.02	1.03	1.03	1.03	1.03
JUN 11	.29	.42	.47	.60	.92	1.00	1.17	1.26	1.26	1.26	1.26	1.26
JUN 12	.31	.51	.56	.76	1.03	1.28	1.49	1.54	1.63	1.65	1.68	1.69
JUN 24	.33	.62	.73	.81	.81	.82	.82	.83	.83	.85	.87	.87
JUL 2	.31	.60	.67	.90*	1.34	1.49	1.69	1.87	1.91	1.91	1.91	1.91
JUL 6	.38	.68	.76	.93	1.06	1.06	1.45	1.47	1.48	1.49	1.56	1.56
JUL 8	.22	.27	.28	.38	.53	.60	.74	.77	.80	.83	.83	.83
JUL 14	.23	.33	.35	.38	.40	.41	.42	.42	.42	.44	.45	.45
JUL 28	.21	.30	.32	.40	.60	.60	.60	.60	.60	.60	.60	.60
AUG 16	.37	.65	.75	.83	.92	.96	.96	.97	.97	.97	.98	1.00
AUG 17	.23	.36	.42	.47	.52	.55	.59	.61	.62	.62	.64	.64
AUG 24	.20	.30	.35	.48	.55	.63	.83	.92	1.02	1.02	1.02	1.02
AUG 27	.26	.52	.53	.55	.57	.61	.61	.61	.61	.62	.65	.68
BURRWOOD												
						NONE						
LAKE CHARLES												
JAN 22	.47	.77	.89	1.13	1.43	1.59	1.59	1.61	1.70	1.76	1.86	1.96
FEB 11	.27	.46	.61	.64	.69	.71	.71	.71	.71	.71	.71	.71
FEB 24	.20	.36	.38	.42	.42	.44	.45	.47	.47	.48	.49	.49
MAR 1	.62	.75	.81	.86	.98	1.00	1.04	1.11	1.28	1.41	1.61	1.93
MAY 28	.20	.35	.37	.46	.50	.53	.55	.60	.62	.63	.63	.63
JUN 15	.30	.40	.57	.66	.73	.75	.75	.76	.77	.78	.78	.78
AUG 5	.26	.52	.65	.67	.68	.69	.70	.70	.70	.70	.70	.70
AUG 9	.40	.62	.70	.95	1.30	1.38	1.43	1.48	1.49	1.49	1.49	1.53
AUG 10	.26	.31	.32	.32	.32	.33	.35	.36	.37	.40	.40	.40
AUG 20	.23	.32	.36	.43	.50	.50	.50	.50	.50	.50	.50	.50
AUG 22	.45	.90	1.35	1.60	1.87	1.95	1.99	1.99	1.99	2.00	2.00	2.00
SEP 17	.28	.29	.30	.32	.33	.33	.33	.33	.33	.33	.33	.33
SEP 22	.27	.50	.55	.65	.71	.75	1.08	1.27	1.33	1.37	1.43	1.52
NEW ORLEANS												
JAN 22	.45	.66	.73	.98	1.27	1.78	2.17	2.43	2.68	2.89	3.06	3.08
APR 18	.23	.40	.45	.45	.45	.45	.45	.45	.45	.46	.50	.50
MAY 20	.26	.40	.42	.42	.42	.43	.43	.58	.60	.60	.60	.60
MAY 21	.18	.30	.33	.48	.63	.68	.75	.81	.90	.94	.98	.98
MAY 28	.28	.42	.44	.46	.47	.47	.47	.47	.47	.47	.47	.47
JUN 7	.55	.65	.77	.95	1.36	1.41	1.48	1.51	1.55	1.55	1.55	1.55
JUN 15	.37	.45	.70	.78	.88	.90	.91	.91	.91	.91	.91	.91
JUN 16	.28	.33	.37	.42	.43	.43	.43	.43	.43	.43	.43	.43
JUL 16	.40	.65	.70	.75	.77	.81	.81	.81	.81	.81	.81	.81
JUL 22	.29	.47	.48	.50	.68	.81	.81	.81	.81	.81	.81	.81
JUL 28	.30	.49	.56	.75	.80	.80	.80	.80	.80	.80	.80	.80
AUG 8	.26	.40	.41	.41	.42	.43	.44	.44	.47	.51	.55	.57
AUG 11	.30	.60	.70	.76	1.04	1.18	1.31	1.42	1.44	1.44	1.45	1.46
AUG 17	.42	.50	.55	.75	1.10	1.45	1.87	2.07	2.20	2.21	2.23	2.43
AUG 30	.32	.43	.45	.46	.47	.48	.48	.48	.48	.48	.48	.48
SEP 4	.38	.67	.90	1.25	1.60	1.79	1.84	1.91	1.93	1.93	1.93	1.93
NOV 22	.23	.43	.51	.69	.77	.85	.85	.85	.88	.94	.97	.98
SHREVEPORT												
JAN 22	.38	.45	.47	.54	.73	.87	.95	1.02	1.22	1.33	1.43	1.66
FEB 10	.37	.70	.70	.72	.72	.73	.74	.83	.85	.96	1.12	1.21
FEB 11	.43	.70	.72	.88	1.05	1.17	1.22	1.23	1.25	1.26	1.26	1.27
MAY 16	.30	.45	.55	.63	.70	.71	.72	.74	.74	.75	.75	.75
MAY 28	.22	.36	.39	.46	.60	.61	.61	.61	.61	.61	.61	.61
JUN 15	.26	.50	.55	.60	.67	.73	.75	.76	.79	.79	.82	.82
JUN 25	.31	.58	.66	.69	.99	1.08	1.09	1.11	1.12	1.12	1.12	1.12
JUL 15	.27	.53	.68	.76	.86	.89	.91	.91	.91	.91	.91	.91
AUG 7	.16	.30	.33	.38	.53	.69	.75	.79	.81	.81	.81	.81
SEP 22	.22	.42	.45	.47	.58	.62	.66	.72	.83	.91	.98	1.02
DEC 11	.39	.67	.88	1.13	1.60	1.72	2.38	2.58	2.67	2.73	2.80	2.80
MAINE												
CARIBOU												
AUG 7	.18	.30	.46	.55	.65	.65	.67	.67	.67	.67	.67	.67
PORTLAND												
						NONE						
MARYLAND												
BALTIMORE												
JUN 8	.26	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40
JUL 11	.23	.37	.48	.63	.64	.66	.73	.86	.91	1.10	1.15	1.17
AUG 4	.15	.26	.28	.40	.50	.59	.60	.85	1.01	1.12	1.12	1.12
AUG 8	.38	.45	.46	.47	.49	.48	.49	.48	.48	.48	.48	.48
AUG 13	.40	.53	.55	.59	.59	.59	.59	.59	.59	.59	.59	.59
BALTIMORE J												
MAY 16	.33	.44	.45	.45	.47	.48	.49	.53	.68	.70	.87	.87
MAY 27	.35	.35	.35	.35	.35	.35	.36	.42	.43	.44	.44	.45
JUN 8	.25	.36	.43	.51	.63	.64	.70	.70	.70	.71	.78	.78
AUG 4	.22	.41	.48	.65	.74	.97	1.13	1.19	1.26	1.26	1.26	1.26

S Record began February 25, 1965

EXCESSIVE SHORT DURATION RAINFALL

Station and date	5	10	15	20	30	45	60	80	100	120	150	180
	Maximum precipitation in inches (5 to 180 minutes)											
MASSACHUSETTS												
BLUE HILL												
JUN 30	*.28	*.40	*.54	.54	*.56	.60	*.61	.68	.68	*.68	.68	*.68
BOSTON												
						NONE						
NANTUCKET												
JUL 11	.22	.32	.37	.40	.47	.51	.60	.63	.68	.71	.74	.82
PITTSFIELD												
JUL 18	.15	.23	.42	.55	.55	.55	.55	.79	.79	.81	.81	.97
AUG 9	.22	.33	.34	.35	.42	.48	.51	.51	.51	.51	.52	.53
AUG 18	.33	.50	.55	.56	.59	.62	.63	.65	.65	.65	.65	.65
MICHIGAN												
ALPENA												
MAY 6	.25	.41	.45	.47	.65	.70	.72	.77	.85	.92	1.14	1.29
MAY 16	.31	.32	.32	.32	.32	.32	.32	.32	.43	.43	.43	.44
MAY 25	.30	.35	.36	.39	.47	.50	.54	.70	.70	.71	.71	.71
JUN 3	.27	.31	.32	.32	.34	.35	.35	.35	.35	.35	.35	.35
JUN 20	.30	.36	.38	.40	.40	.40	.40	.40	.40	.40	.40	.40
DETROIT												
APR 11	.25	.42	.60	.69	.77	.82	.83	1.14	1.37	1.37	1.37	1.37
JUL 7	.25	.35	.42	.52	.79	.90	.93	.95	.99	1.01	1.01	1.03
JUL 16	.16	.29	.38	.54	.66	.69	.70	.75	.75	.75	.75	.80
AUG 27	.24	.41	.43	.44	.46	.47	.47	.47	.47	.47	.47	.47
SEP 9	.23	.37	.44	.60	.68	.70	.76	.91	.92	.92	.95	.97
SEP 10	.17	.33	.43	.53	.60	.65	.67	.67	.67	.67	.67	.67
SEP 22	.26	.44	.59	.62	.63	.63	.76	.87	.87	.87	.87	.87
DETROIT M WAYNE CO												
APR 11	.40	.73	.83	.90	1.13	1.16	1.35	1.52	1.55	1.55	1.55	1.55
JUL 24	.23	.31	.33	.39	.40	.45	.49	.50	.50	.50	.50	.50
AUG 1	.23	.30	.31	.34	.38	.41	.44	.47	.48	.48	.52	.52
AUG 8	.34	.63	.64	.65	.68	.94	1.06	1.07	1.07	1.07	1.07	1.07
AUG 13	.35	.58	.65	.77	.82	.92	1.05	1.05	1.05	1.05	1.05	1.10
AUG 18	.30	.55	.75	.95	1.03	1.09	1.12	1.12	1.12	1.13	1.14	1.14
DETROIT WILLOW RUN												
APR 11	.55	.83	.98	1.06	1.10	1.23	1.47	1.47	1.47	1.47	1.47	1.47
MAY 26	.20	.31	.34	.37	.37	.37	.49	.50	.50	.50	.50	.50
AUG 13	.25	.30	.33	.37	.39	.39	.39	.39	.39	.39	.39	.39
SEP 4	.16	.27	.43	.48	.69	.70	.71	.71	.71	.71	.71	.71
FLINT												
JUN 1	.48	.55	.56	.59	.60	.61	.66	.68	.68	.68	.68	.68
JUL 2	.20	.40	.42	.48	.60	.60	.60	.60	.60	.60	.60	.60
JUL 28	.30	.45	.48	.50	.54	.56	.57	.57	.57	.57	.60	.60
AUG 8	.23	.43	.44	.44	.45	.51	.54	.55	.55	.55	.56	.56
AUG 18	.38	.65	.75	.90	1.00	1.35	*1.80	1.87	2.05	*2.10	2.20	*2.22
GRAND RAPIDS												
MAY 9	.30	.59	.59	.59	.59	.59	.59	.59	.59	.59	.59	.59
MAY 26	.30	.36	.37	.38	.38	.38	.38	.38	.38	.38	.38	.38
JUN 20	.23	.43	.47	.48	.54	.58	.66	.70	.73	.79	.83	.85
JUL 28	.16	.28	.34	.42	.53	.55	.55	.55	.55	.55	.55	.55
AUG 16	.31	.49	.61	.76	.85	.85	.86	.86	.86	.86	.86	.87
AUG 26	.26	.42	.50	.55	.58	.61	.66	.69	.70	.71	.71	.72
SEP 4	.20	.38	.40	.48	.51	.63	.69	.89	.89	.89	.89	.89
SEP 20	.32	.63	.65	.71	.73	.79	.85	.91	.94	.96	.96	.96
NOV 26	.16	.30	.34	.43	.49	.53	.56	.56	.56	.56	.56	.56
HOUGHTON LAKE												
JUN 6	*.42	*.64	*.64	.64	.64	.65	.67	.67	.68	.68	.68	.68
JUL 9	.13	.23	.35	.43	.57	.67	.73	.78	.81	.83	.99	1.02
AUG 8	.21	.26	.41	.41	.41	.41	.41	.41	.41	.50	.52	.53
AUG 27	.25	.38	.60	.66	.74	.76	.86	.87	.88	.88	.89	.89
SEP 4	.26	.28	.30	.31	.31	.42	.44	.47	.49	.49	.51	.60
SEP 13	.25	.35	.45	.47	.48	.48	.48	.48	.48	.48	.48	.48
SEP 17	.25	.35	.41	.49	.52	.55	.59	.59	.59	.59	.68	.69
LANSING												
MAY 18	.25	.30	.31	.32	.35	.35	.35	.35	.35	.35	.35	.35
AUG 16	.37	.70	.80	.95	1.12	1.18	1.24	1.29	1.30	1.32	1.34	1.35
AUG 26	.20	.38	.41	.43	.47	.51	.56	.58	.58	.60	.60	.60
SEP 4	.28	.55	.60	.80	.90	.98	1.01	1.05	1.06	1.06	1.07	1.07
SEP 14	.30	.45	.52	.57	.65	.79	.86	1.05	1.12	1.13	1.13	1.15
SEP 20	.26	.46	.49	.53	.76	1.07	1.22	1.32	1.32	1.32	1.33	1.50
MARQUETTE U												
JUN 6	.29	.39	.44	.47	.50	.51	.52	.53	.54	.54	.54	.54
JUL 4	.27	.37	.47	.48	.49	.49	.49	.49	.49	.49	.71	.72
AUG 7	.38	.47	.48	.49	.51	.52	.52	.52	.52	.54	.58	.59
MUSKEGON												
APR 11	.27	.47	.60	.73	.78	.82	.82	.82	.82	.82	.82	.82
MAY 9	.29	.46	.61	.73	.90	.93	1.00	1.02	1.11	1.12	1.30	1.30
JUL 23	.22	.32	.46	.55	.57	.57	.72	.77	.78	.78	.78	.78
AUG 17	.33	.43	.53	.56	.57	.57	.60	.61	.65	1.04	1.06	1.06
SEP 9	.30	.56	.70	.78	1.14	1.44	*1.75	2.05	2.38	*2.52	2.67	*2.72
OCT 21	.21	.31	.41	.47	.54	.72	.80	.82	.82	.83	.83	.83
SAULT STE MARIE												
MAY 9	.15	.25	.30	.34	.50	.54	.59	.66	.69	.70	.71	.71
MAY 25	.30	.38	.38	.39	.40	.40	.40	.40	.40	.40	.40	.40
JUL 9	.23	.41	.47	.50	.56	.68	.76	.80	.82	.83	.83	.84
JUL 21	.25	.36	.37	.48	.63	.75	.93	1.17	1.26	1.32	1.44	1.51
AUG 12	.28	.37	.39	.42	.50	.63	.69	.76	.81	.82	1.25	1.43
AUG 21	.17	.31	.33	.34	.35	.35	.35	.35	.35	.35	.35	.35
SEP 10	.30	.44	.47	.48	.59	.62	.64	.64	.64	.65	.65	.65
MINNESOTA												
DULUTH												
JUN 6	.20	.34	.40	.41	.42	.43	.43	.43	.43	.43	.43	.43
JUN 19	.16	.22	.30	.40	.54	.60	.64	.66	.78	.80	.80	.80
JUN 27	.23	.38	.43	.54	.55	.55	.55	.55	.55	.59	.62	.86
JUL 16	*.60	.95	1.10	1.17	1.24	1.31	1.32	1.32	1.32	1.32	1.32	1.32
AUG 6	.16	.30	.31	.31	.31	.36	.49	.49	.49	.50	.50	.51

Station and date	5	10	15	20	30	45	60	80	100	120	150	180
	Maximum precipitation in inches (5 to 180 minutes)											
MINNESOTA												
INTERNATIONAL FALLS												
JUN 4	.27	.36	.40	.47	.79	1.02	1.16	1.18	1.20	1.20	1.20	1.20
AUG 12	.28	.43	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45
AUG 26	.24	.40	.52	.57	.63	.93	1.00	1.05	1.13	1.17	1.25	1.25
SEP 4	.20	.35	.40	.46	.51	.61	.63	.65	.65	.65	.66	.66
MINNEAPOLIS												
JUN 19	.32	.44	.51	.51	.51	.51	.53	.68	.68	.68	.68	.68
JUL 8	.30	.54	.58	.69	.71	.84	.96	1.15	1.19	1.22	1.27	1.28
JUL 30	.17	.31	.31	.31	.32	.33	.35	.45	.58	.61	.61	.61
AUG 2	.30	.54	.66	.71	.75	.75	.75	.75	.75	.75	.75	.75
AUG 21	.28	.46	.59	.66	.77	.87	.99	1.15	1.22	1.26	1.30	1.37
ROCHESTER												
MAY 5	.25	.30	.32	.36	.41	.42	.42	.42	.42	.42	.42	.42
MAY 25	.31	.35	.37	.39	.42	.52	.59	.64	.66	.66	.70	.82
JUL 9	.28	.45	.52	.62	.82	1.02	1.45	1.57	1.64	1.74	1.83	1.91
JUL 15	.26	.33	.50	.62	.84	1.02	1.04	1.04	1.04	1.04	1.04	1.04
JUL 30	.22	.32	.42	.48	.52	.54	.58	.68	.72	.73	.73	.73
AUG 3	.28	.33	.45	.49	.54	.57	.61	.61	.61	.61	.61	.61
ST CLOUD												
MAY 5	.25	.41	.45	.48	.50	.63	.69	.73	.73	.73	.73	.73
MAY 6	.19	.32	.42	.59	.76	.76	.76	.76	.76	.76	.76	.76
MAY 24	.20	.38	.40	.44	.46	.47	.49	.53	.58	.60	.66	.72
JUN 4	.52	.98	1.18	1.38	1.67	2.07	2.23	2.35	2.36	2.36	2.36	2.36
JUN 5	.29	.50	.51	.52	.81	1.04	1.10	1.12	1.13	1.13	1.13	1.13
JUN 7	.33	.54	.61	.64	.93	1.31	1.37	1.45	1.46	1.46	1.46	1.47
JUL 1	.16	.31	.34	.35	.36	.37	.37	.37	.43	.44	.45	.45
JUL 16	.25	.47	.48	.50	.51	.51	.51	.51	.51	.51	.51	.51
JUL 23	.40	.65	.75	.82	.86	.86	.86	.86	.86	.86	.86	.86
JUL 30	.53	.84	.86	.87	.88	.88	.89	.89	.89	.89	.89	.89
AUG 5	.21	.40	.46	.56	.69	.97	1.03	1.05	1.05	1.05	1.05	1.05
AUG 7	.17	.30	.32	.42	.48	.50	.51	.55	.61	.65	.71	.75
MISSISSIPPI												
JACKSON												
JAN 9	.33	.46	.50	.53	.55	.56	.59	.60	.62	.63	.65	.66
JAN 22	.30	.58	.65	.75	.81	.87	.93	1.01	1.07	1.10	1.18	1.18
FEB 10	.27	.41	.43	.45	.52	.57	.65	.71	.77	.80	.91	1.00
FEB 11	.55	.80	.83	.85	.89	.95	1.01	1.15	1.60	1.80	1.95	1.98
APR 12	.42	.55	.63	.75	.83	.84	.84	.84	.84	.84	.84	.84
MAY 27	.20	.31	.35	.39	.49	.57	.60	.63	.63	.63	.63	.63
AUG 12	.35	.56	.58	.65	.68	.68	.69	.69	.70	.70	.70	.70
AUG 23	.53	.98	1.03	1.08	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
SEP 10	.30	.58	.65	.81	1.01	1.39	1.60	2.00	2.75	3.07	3.20	3.22
SEP 11	.26	.50	.65	.75	1.16	1.40	1.59	1.74	1.87	1.95	2.05	2.05
SEP 11	.35	.60	.65	.69	.87	1.20	1.25	1.27	1.29	1.38	1.76	1.84
SEP 22	.35	.60	.64	.66	.66	.66	.66	.66	.66	.68	.72	.78
MERIDIAN												
JAN 22	.17	.25	.37	.46	.55	.59	.63	.68	.76	.80	.91	.97
FEB 10	.21	.39	.52	.58	.64	.70	.81	1.11	1.15	1.31	1.31	1.31
FEB 11	.47	.57	.63	.68	1.10	1.28	1.53	1.66	1.72	1.77	1.83	1.85
MAR 1	.28	.42	.47	.49	.55	.60	.69	.81	.89	.97	1.07	1.17
MAR 12	.20	.33	.38	.43	.56	.65	.73	.85	.94	1.07	1.10	1.11
APR 26	.28	.38	.42	.43	.43	.43	.48	.49	.49	.49	.49	.49
JUN 7	.45	.63	.76	.82	.88	1.33	1.38	1.38	1.38	1.38	1.38	1.38
JUN 12	.18	.32	.34	.36	.38	.38	.38	.38	.38	.38	.38	.38
JUN 13	.22	.33	.39	.55	.69	.74	.83	.99	1.14	1.37	1.46	1.57
JUN 27	.50	.70	.72	.77	.82	.84	.89	.90	.90	.90	.91	.91
JUL 4	.25	.30	.31	.32	.33	.33	.33	.33	.33	.35	.44	.45
JUL 7	.25	.45	.55	.70	1.02	1.20	1.20	1.20	1.25	1.25	1.30	1.30
JUL 7	.25	.35	.45	.56	.75	.95	1.15	1.20	1.20	1.20	1.20	1.20
JUL 10	.28	.32	.33	.33	.34	.35	.35	.35	.35	.35	.35	.35
JUL 25	.29	.50	.52	.52	.52	.52	.52	.52	.52	.52	.52	.52
SEP 1	.22	.32	.36	.37	.43	.43	.43	.43	.43	.43	.43	.43
OCT 6	.38	.69	.72	.74	.90	.95	1.00	1.03	1.05	1.12	1.27	1.29
DEC 12	.14	.24	.35	.44	.58	.65	.82	1.09	1.17	1.33	1.50	1.53
VICKSBURG												
JAN 22	.24	.47	.58	.61	.66	.71	.77	.84	.85	.87	.90	.91
FEB 9	.26	.29	.36	.53	.58	.62	.63	.64	.66	.67	.67	.67
FEB 11	.33	.59	.71	.73	.73	.73	.88	.96	1.40	1.60	1.70	1.74
MAR 1	.33	.43	.56	.58	.60	.63	.65	.66	.67	.68	.69	.69
MAR 29	.50	.79	.94	1.00	1.09	1.17	1.22	1.26	1.31	1.34	1.39	1.49
APR 12	.48	.69	.82	.89	.93	.94	.94	.94	.94	.94	.94	.94
MAY 27	.14	.22	.25	.33	.42	.63	.90	1.04	1.18	1.22	1.22	1.22
JUN 5	.21	.42	.54	.56	.58	.76	.81	.83	.86	.89	.91	.91
JUN 14	.24	.39	.44	.45	.62	.64	.64	.64	.64	.64	.64	.64
JUL 1	.22	.34	.42	.48	.50	.50	.50	.50	.50	.50	.50	.50
JUL 24	.34	.56	.76	.91	.99	1.01	1.01	1.03	1.05	1.06	1.11	1.17
AUG 13	.32	.57	.78	.85	.93	1.07	1.08	1.09	1.10	1.10	1.10	1.10
SEP 21	.36	.45	.48	.52	.69	.78	.80	.81	.83	.83	.84	.84
SEP 22	.30	.41	.47	.48	.48	.48	.54	.68	.71	.83	.84	.84
MISSOURI												
COLUMBIA												
APR 5	.30	.48	.56	.66	.80	.84	.87	.89	.89	.94	1.03	1.09
APR 10	.24	.32	.33	.33	.34	.34	.34	.34	.34	.34	.34	.34
APR 11	.26	.27	.29	.33	.52	.54	.54	.54	.55	.55	.89	1.02
JUN 3	.25	.46	.59	.66	1.12	1.46	2.03	2.10	2.25	2.28	2.29	2.29
JUN 4	.38	.55	.57	.59	.61	.63	.66	.70	.72	.72	.72	.72
JUN 22	.24	.31	.46	.54	.65	.73	.75	.79	.80	.81	.98	1.01
AUG 6	.32	.44	.63	.71	.72	.74	.76	.81	.85	.89	.96	1.00
AUG 24	.36	.41	.42	.43	.44	.49	.51	.52	.52	.52	.52	.52
SEP 14	.26	.31	.34	.35	.54	.63	.69	.70	.70	.70	.70	.70
SEP 15	.32	.54	.57	.59	.60	.82	.84	.86	.87	1.45	1.49	1.53
SEP 19	.36	.59	.59	.60	.76	.77	.79	.80	.80	.80	.80	.81
OCT 15	.20	.31	.38	.54	.56	.59	.59	.59	.59	.60	.61	.61
KANSAS CITY												
MAR 16	.16	.26	.33	.44	.57	.76	.94	1.03	1.15	1.22	1.31	1.36
MAY 8	.19	.22	.31	.41	.44	.46	.54	.63	.64	.67	.67	.67
MAY 26	.25	.33	.36	.39	.40	.41	.43	.46	.47	.48	.49	.49
JUN 5	.31	.61	.67	.71	.72	.74	.74	.74	.75	.98	1.23	1.35
JUN 29	.27	.33	.44	.60	.88	.90	.90	.90	.98	.98	1.10	1.10
JUN 30	.26	.37	.44	.52	.56	.60	.80	.90	.90	.90	.90	.92
JUL 1	.17	.31	.38	.42	.49	.64	.91	1.13	1.26	1.41	1.65	1.70
JUL 11	.19	.32	.44	.50	.65	.67	.68	.74	.99	1.09	1.16	1.26
JUL 13	.24	.30	.30	.30	.31	.31	.31	.31	.31	.31	.31	.31
JUL 17	.24	.42	.49	.50	.51	.52	.54	.54	.54	.55	.55	.55

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
MISSOURI												
KANSAS CITY												
JUL 19	.16	.28	.36	.42	.53	.67	.80	.86	.93	.98	1.01	1.12
JUL 19	.15	.26	.37	.40	.54	.72	.74	.75	.79	.80	.86	.92
JUL 20	.18	.32	.46	.54	.63	.66	.70	.74	.76	.78	.80	.82
JUL 27	.27	.40	.60	.71	.85	.98	1.03	1.11	1.18	1.28	1.37	1.40
AUG 5	.28	.55	.70	.73	.73	.73	.74	.74	.74	.74	.74	.74
AUG 15	.25	.49	.64	.76	.77	.77	.77	.77	.77	.77	.77	.77
AUG 24	.13	.30	.41	.45	.56	.65	.67	.68	.68	.68	.68	.68
AUG 27	.13	.26	.29	.35	.45	.66	.84	.99	1.02	1.02	1.03	1.03
AUG 30	.21	.32	.39	.57	.62	.79	.92	1.03	1.19	1.24	1.27	1.40
SEP 4	.20	.34	.38	.42	.48	.52	.58	.62	.72	.79	.81	.81
SEP 15	.23	.42	.64	.84	.98	1.29	1.53	1.55	1.56	1.56	1.56	1.71
SEP 20	.20	.40	.54	.62	.86	1.28	1.36	1.50	1.64	1.72	1.85	1.87
SEP. 20	.14	.24	.34	.44	.51	.51	.53	.58	.58	.58	.58	.58
OCT 14	.18	.32	.42	.56	.65	.68	.71	.80	.80	.80	.80	.80
ST LOUIS												
MAY 25	.14	.26	.38	.43	.48	.50	.55	.60	.62	.62	.62	.62
JUN 8	.19	.31	.40	.42	.50	.51	.51	.53	.53	.53	.53	.53
JUL 7	.20	.35	.44	.48	.70	.84	.88	.93	1.00	1.31	1.32	1.32
AUG 1	.20	.30	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32
SPRINGFIELD												
JAN 2	.20	.40	.52	.54	.56	.60	.62	.62	.64	.66	.67	.67
MAY 26	.22	.40	.46	.58	.64	.65	.69	.77	.85	.90	.96	.96
JUN 3	.24	.46	.70	.76	.85	1.24	1.31	1.33	1.37	1.37	1.37	1.37
JUN 10	.29	.41	.45	.47	.48	.48	.50	.51	.51	.51	.51	.51
JUN 10	.27	.45	.60	.62	.66	.68	.68	.68	.70	.74	.81	.83
JUN 23	.25	.40	.61	.67	.70	.70	.71	.71	.71	.71	.71	.71
JUL 6	.26	.39	.50	.56	.60	.65	.71	.73	.74	.74	.74	.74
AUG 27	.28	.50	.65	.74	.89	.89	.91	.93	.93	.93	.96	1.03
MONTANA												
BILLINGS												
JUL 12	.36	.56	.56	.56	.56	.56	.56	.56	.56	.56	.56	.56
GLASGOW												
JUN 14	.28	.43	.55	.62	.72	.87	.90	.95	1.01	1.03	1.06	1.06
JUN 25	.27	.36	.39	.41	.42	.42	.42	.42	.42	.42	.42	.42
JUN 30	.34	.52	.60	.66	.67	.67	.67	.69	.69	.70	.71	.71
GREAT FALLS												
JUN 24	.48	.56	.57	.57	.59	.60	.61	.62	.66	.70	.70	.70
HAVRE												
JUN 16	.29	.34	.35	.35	.36	.36	.36	.36	.36	.36	.36	.36
JUL 7	.25	.47	.53	.53	.53	.53	.53	.53	.53	.53	.53	.83
JUL 7	.21	.33	.37	.38	.40	.45	.49	.51	.53	.55	.56	.57
JUL 9	.34	.50	.62	.68	.74	.76	.76	.76	.76	.76	.76	.76
AUG 23	.39	.66	.98	1.13	*1.53	1.70	*1.74	1.76	1.76	1.76	1.76	1.76
HELENA												
JUN 12	.25	.38	.38	.38	.38	.38	.38	.48	.55	.58	.61	.71
KALISPELL												
						NONE						
MISSOULA												
						NONE						
NEBRASKA												
GRAND ISLAND												
APR 7	.15	.25	.35	.45	.55	.58	.61	.66	.71	.73	.77	.78
MAY 7	.26	.35	.45	.55	.64	.69	.85	1.14	1.34	1.43	1.50	1.51
MAY 24	.27	.33	.43	.48	.54	.69	.88	.96	1.28	1.43	1.44	1.44
JUN 13	.55	*.95	*1.15	1.30	1.42	1.44	1.45	1.45	1.45	1.45	1.45	1.45
JUN 25	.26	.35	.50	.68	.80	.81	.81	.82	.82	.82	.82	.82
JUN 30	.35	.44	.49	.52	.53	.54	.55	.59	.63	.69	.81	.89
AUG 29	.44	.83	.99	1.10	1.31	2.01	2.15	2.16	2.20	2.22	2.25	2.36
SEP 9	.46	.64	.73	.78	.91	.92	.93	.97	1.01	1.01	1.02	1.03
SEP 29	.30	.34	.36	.41	.54	.60	.65	.66	.72	.86	.91	1.10
LINCOLN U												
APR 5	.23	.32	.37	.41	.47	.62	.77	.80	1.01	1.17	1.22	1.38
APR 8	.22	.34	.43	.53	.64	.65	.68	.74	.76	.97	1.12	1.14
MAY 22	.46	.67	.79	.80	.81	.81	.81	.81	.83	.85	.85	.85
JUN 2	.40	.72	.94	1.28	1.43	1.62	1.73	1.81	1.89	1.94	2.00	2.00
JUN 12	.34	.53	.72	.74	.76	.93	1.01	1.04	1.04	1.04	1.05	1.05
JUL 6	.30	.54	.64	.69	.73	.74	.78	.78	.79	.79	.79	.79
JUL 18	.25	.30	.31	.33	.35	.38	.40	.41	.42	.46	.54	.59
AUG 6	.30	.50	.58	.63	.64	.66	.66	.66	.66	.66	.66	.66
AUG 29	.32	.41	.43	.44	.45	.50	.52	.54	.54	.56	.65	.67
SEP 6	.27	.34	.41	.55	.74	.81	.84	.86	.90	.96	.98	.98
SEP 8	.31	.47	.62	.70	.77	.78	.78	.78	.78	.78	.78	.78
NORFOLK												
MAY 8	.30	.54	.58	.60	.63	.66	.66	.67	.67	.67	.67	.67
JUN 25	.48	.62	.65	.70	.75	.80	.83	.93	.98	1.00	1.05	1.57
JUL 11	.28	.28	.28	.29	.30	.30	.30	.30	.30	.30	.30	.30
JUL 19	.30	.55	.62	.73	.95	1.12	1.52	1.67	1.92	1.97	2.11	2.22
NORTH PLATTE												
APR 2	.21	.37	.40	.43	.48	.50	.58	.97	1.08	1.11	1.12	1.14
JUN 29	.28	.32	.35	.36	.36	.41	.50	.62	.62	.83	.86	.86
JUL 1	.50	.68	.78	.89	.94	.94	.94	.94	.94	.94	.94	.94
JUL 3	.33	.53	.65	.83	1.13	1.22	1.26	1.27	1.27	1.27	1.27	1.27
JUL 9	.36	.50	.51	.66	.89	.96	1.00	1.02	1.08	1.12	1.21	1.21
JUL 21	.40	.55	.57	.69	.91	.96	.96	.96	.96	.96	.96	.96
JUL 26	.16	.32	.35	.42	.48	.51	.51	.51	.51	.51	.51	.51
OMAHA												
APR 24	.23	.40	.44	.53	.63	.67	.69	.69	.74	.75	.76	.78
JUN 29	.35	.60	.74	.90	1.31	1.53	1.73	1.95	2.05	2.15	2.20	2.37
JUL 1	.41	.51	.56	.70	.84	.94	1.04	1.06	1.06	1.06	1.06	1.06
JUL 18	.29	.40	.48	.52	.55	.55	.56	.57	.57	.58	.58	.58
JUL 30	.27	.32	.38	.40	.43	.52	.55	.57	.57	.57	.57	.57
SEP 7	.69	1.29	1.34	1.71	2.17	2.43	*3.13	3.52	3.88	*4.08	5.13	*5.18
NEBRASKA												
SCOTTSBLUFF												
JUN 18	.23	.40	.48	.56	.76	.90	.97	1.00	1.01	1.01	1.02	1.02
JUN 24	.18	.32	.46	.50	.65	.74	.74	.74	.74	.74	.74	.74
JUL 25	.26	.37	.40	.41	.43	.47	.47	.47	.47	.47	.48	.48
VALENTINE												
JUL 5	.28	.49	.53	.68	1.01	1.24	1.28	1.30	1.32	1.34	1.34	1.34
NEVADA												
ELKO												
AUG 14	*.27	*.37	*.47	.52	.60	.62	.64	.73	.73	.73	.73	.73
ELY												
						NONE						
LAS VEGAS												
						NONE						
RENO												
AUG 14	.25	.37	.59	.61	.62	.63	.76	.78	.83	.84	.84	.84
WINNEMUCCA												
						NONE						
NEW HAMPSHIRE												
CONCORD												
AUG 7	.19	.30	.40	.48	.52	.55	.80	.81	.83	.90	1.19	1.19
NEW JERSEY												
ATLANTIC CITY												
JUL 5	.16	.32	.36	.48	.64	.72	.76	.77	.77	.78	.80	.81
NEWARK												
JUL 17	.22	.33	.35	.35	.36	.36	.36	.37	.39	.40	.41	.41
AUG 2	.25	.37	.40	.45	.56	.60	.60	.64	.64	.64	.64	.69
AUG 8	.50	.69	.74	.75	.78	.79	.79	.79	.79	.79	.79	.79
SEP 24	.16	.28	.33	.36	.52	.68	.74	.90	.93	.96	1.04	1.10
TRENTON U												
JUN 2	.20	.34	.46	.51	.57	.67	.82	.89	.94	.94	.94	.94
JUN 24	.27	.38	.47	.48	.48	.48	.48	.48	.48	.48	.48	.48
JUL 11	.15	.26	.38	.47	.69	.93	1.05	1.16	1.29	1.35	1.42	1.47
JUL 17	.67	*1.17	1.43	1.65	1.99	2.08	2.20	2.31	2.39	2.43	2.46	2.50
AUG 8	.35	.60	.68	.68	.69	.70	.70	.70	.70	.70	.70	.70
AUG 9	.30	.41	.50	.64	.92	1.11	1.41	1.61	1.85	1.89	1.96	1.99
AUG 19	.32	.38	.42	.49	.55	.58	.58	.58	.58	.58	.58	.58
NEW MEXICO												
ALBUQUERQUE												
						NONE						
CLAYTON												
JUN 4	.20	.40	.45	.48	.50	.51	.51	.51	.51	.51	.51	.51
AUG 17	.20	.32	.37	.40	.45	.45	.47	.48	.48	.48	.48	.48
OCT 17 T	M	M	M	M	M	M	1.13	1.20	1.36	1.55	1.78	1.95
RATON												
MAY 12	.20	.30	.35	.37	.44	.47	.54	.55	.55	.58	.58	.59
MAY 22	.27	.50	.65	.69	.85	1.23	1.24	1.25	1.26	1.26	1.26	1.26
JUN 15	.43	.77	.89	1.08	1.46	1.74	*1.88	2.23	2.59	*2.64	3.29	*3.33
JUN 16	.27	.35	.42	.53	.71	.81	.93	1.07	1.09	1.09	1.14	1.14
JUL 14	.22	.40	.42	.43	.47	.49	.51	.53	.53	.54	.58	.58
ROSWELL												
JUN 10	.24	.48	.52	.65	.78	.83	.86	.92	.98	.98	.98	.98
SILVER CITY												
						NONE						
NEW YORK												
ALBANY												
MAY 27	.29	.31	.33	.36	.38	.38	.38	.38	.38	.38	.38	.42
JUL 5	.22	.36	.38	.40	.42	.48	.49	.52	.53	.53	.53	.53
JUL 13	.52	.91	1.10	1.12	1.16	1.15	1.16	1.22	1.32	1.33	1.33	1.33
AUG 13	.22	.42	.58	.74	.88	1.02	1.16	1.21	1.24	1.26	1.28	1.29
BINGHAMTON												
MAY 22	.16	.29	.40	.54	.56	.56	.56	.56	.56	.56	.56	.56
AUG 18	.30	.44	.52	.53	.53	.53	.56	.72	.72	.72	.72	.72
AUG 26	.29	.54	.62	.70	1.00	1.30	1.50	1.51	1.51	1.51	1.51	1.51
SEP 23	.15	.25	.34	.40	.57	.70	.72	.72	.72	.72	.76	.76
BUFFALO												
JUL 7	.23	.35	.36	.38	.38	.40	.40	.61	.74	.78	.78	.78
JUL 22	.20	.35	.35	.41	.45	.46	.70	.81	.83	.83	.85	.86
AUG 7	.24	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35
NEW YORK CENT PK												
AUG 26	.31	.53	.75	.77	.79	.79	.79	.79	.79	.79	.79	.79
NEW YORK LA GUARDIA												
AUG 9	.20	.34	.39	.45	.59	.70	.74	.78	.79	.79	.82	.83
SEP 24	.25	.35	.41	.42	.52	.54	.55	.56	.56	.56	.59	.59
ROCHESTER												
NOV 3	.22	.31	.40	.42	.44	.51	.58	.61	.75	.81	.83	.85
SYRACUSE												
APR 12	.23	.38	.40	.59	.75	.86	1.09	1.19	1.26	1.27	1.32	1.33
MAY 27	.26	.33	.44	.48	.51	.52	.54	.54	.54	.54	.54	.54
JUN 10	.26	.32	.36	.40	.42	.44	.46	.46	.46	.46	.46	.46

T Clock malfunction
M No record

EXCESSIVE SHORT DURATION RAINFALL

Station and date	5	10	15	20	30	45	60	80	100	120	150	180
	Maximum precipitation in inches (5 to 180 minutes)											
NORTH CAROLINA												
ASHEVILLE												
MAY 22	.15	*.30	.31	.33	.47	.58	.65	.67	.75	.98	1.06	1.15
JUN 2	*.25	.34	.38	.38	.38	.38	.38	.38	.38	.38	.38	.38
JUL 4	.23	.33	.34	.35	.35	.35	.35	.35	.35	.35	.35	.35
JUL 5	.22	.35	*.46	.48	.48	.49	.49	.49	.49	.49	.49	.49
JUL 27	*.40	*.71	*.87	1.14	*1.31	1.33	*1.34	1.34	1.34	*1.35	1.35	1.35
AUG 21	*.42	.52	.60	.60	.60	.61	.61	.61	.61	.61	.61	.61
SEP 10	.22	.36	.50	.70	.80	.86	.88	.90	.90	.90	.90	.90
SEP 24	.27	.40	.42	.44	.47	.49	.50	.51	.51	.51	.51	.51
CAPE HATTERAS R												
FEB 7	.15	.25	.37	.45	.68	.77	.87	.90	.93	.95	.98	1.02
MAY 28	.20	.30	.30	.30	.30	.30	.30	.30	.45	.49	.50	.50
JUN 12	.26	.41	.46	.48	.49	.49	.51	.52	.52	.54	.59	.71
JUN 15	.33	.40	.42	.43	.58	.63	.66	.67	.82	.87	1.00	1.10
JUN 16	.17	.29	.33	.38	.57	.71	.79	.92	1.03	1.12	1.26	1.34
JUL 5	.31	.55	.59	.74	.95	1.15	1.18	1.19	1.29	1.35	1.60	1.83
JUL 29	.29	.46	.58	.85	1.10	1.46	1.69	1.91	2.08	2.23	2.51	3.27
AUG 2	.28	.54	.59	.69	.89	1.04	1.16	1.21	1.22	1.22	1.23	1.25
SEP 17	.40	.70	.90	1.18	1.45	1.81	1.95	1.96	1.97	1.97	1.97	1.97
DEC 13	.25	.31	.35	.41	.50	.54	.59	.64	.79	.85	.92	1.01
CHARLOTTE												
APR 15	.19	.32	.35	.37	.43	.49	.57	.65	.70	.71	.73	.74
APR 27	.26	.34	.40	.45	.48	.49	.50	.51	.58	.69	.79	.81
MAY 21	.26	.36	.48	.58	.66	.72	.83	.84	.84	.84	.84	.84
JUN 15	.27	.42	.49	.69	.73	.75	.82	1.12	1.39	1.40	1.40	1.41
JUL 28	.22	.35	.50	.57	.86	1.10	1.29	1.64	1.90	1.96	2.24	2.29
AUG 7	.28	.29	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30
AUG 16	.26	.43	.62	.81	1.05	1.32	1.37	1.38	1.42	1.43	1.43	1.43
AUG 21	.19	.34	.45	.57	.64	.77	.91	.91	.92	1.01	1.13	1.15
OCT 7	.19	.33	.36	.38	.40	.42	.43	.43	.44	.49	.56	.61
NOV 21	.16	.30	.32	.44	.47	.53	.56	.57	.59	.63	.65	.69
GREENSBORO												
APR 27	.33	.40	.41	.50	.54	.58	.58	.60	.61	.79	.79	.84
MAY 12	.23	.31	.33	.33	.34	.34	.34	.34	.34	.34	.34	.34
JUN 3	.27	.43	.54	.58	.58	.63	.65	.65	.65	.65	.65	.65
JUN 11	.27	.49	.65	.83	1.12	1.37	1.42	1.52	1.61	1.64	1.68	1.77
JUN 24	.24	.38	.51	.55	.61	.62	.62	.62	.62	.62	.62	.62
JUN 29	.25	.31	.32	.32	.32	.32	.32	.32	.32	.37	.37	.37
JUL 4	.44	.73	1.00	1.16	1.26	1.26	1.29	1.41	1.43	1.43	1.49	1.50
JUL 7	.40	.73	.94	1.05	1.16	1.18	1.18	1.18	1.20	1.20	1.20	1.20
JUL 10	.14	.28	.36	.41	.45	.47	.48	.56	.57	.57	.57	.57
JUL 29	.32	.57	.82	1.05	1.20	1.21	1.21	1.22	1.22	1.22	1.22	1.22
AUG 19	.19	.33	.40	.41	.43	.44	.44	.45	.46	.46	.46	.46
AUG 21	.49	.88	1.03	1.16	1.88	2.38	2.49	2.50	2.51	2.51	2.51	2.51
SEP 17	*.67	*1.07	*1.38	1.66	1.83	1.92	1.93	1.94	1.95	1.95	1.95	1.95
OCT 1	.29	.50	.65	.77	.90	1.19	1.23	1.30	1.32	1.36	1.39	1.41
RALEIGH												
MAY 27	.25	.48	.52	.60	.83	.92	.94	.95	1.00	1.01	1.22	1.25
JUN 9	.27	.42	.46	.65	.77	.92	1.12	1.17	1.20	1.22	1.23	1.23
JUN 12	.15	.25	.30	.43	.57	.66	.82	.89	.95	.98	1.15	1.23
JUL 4	.30	.40	.42	.46	.76	.91	1.33	1.53	1.53	1.81	1.83	1.83
JUL 7	.37	.41	.44	.45	.48	.50	.55	.59	.62	.64	.64	.64
AUG 1	.23	.36	.40	.50	.80	.85	.89	.89	.89	.89	.89	.89
AUG 4	.28	.55	.60	.80	1.03	1.04	1.14	1.14	1.14	1.14	1.14	1.14
SEP 11	.26	.37	.48	.48	.48	.48	.48	.48	.63	.75	.81	.84
SEP 17	.19	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30
SEP 24	.15	.30	.35	.35	.38	.38	.42	.43	.45	.46	.47	.48
WILMINGTON												
APR 16	.26	.29	.30	.32	.37	.42	.47	.50	.55	.55	.55	.55
MAY 12	.30	.44	.49	.62	.68	.75	.77	.77	.77	.77	.77	.77
JUN 9	.25	.38	.44	.50	.52	.52	.52	.52	.52	.52	.52	.52
JUN 12	.30	.55	.65	.84	.95	1.01	1.07	1.47	1.77	2.01	2.53	2.55
JUN 14	.40	.60	.65	.94	1.24	1.25	1.40	1.49	1.49	1.54	1.67	1.78
JUN 15	.26	.40	.45	.55	.72	.75	.97	1.00	1.05	1.07	1.14	1.16
JUN 30	.25	.37	.45	.49	.53	.54	.55	.57	.59	.61	.63	.63
JUL 6	.36	.53	.58	.70	1.02	1.16	1.17	1.17	1.17	1.17	1.17	1.17
JUL 9	.35	.65	.78	.98	1.30	1.55	1.98	2.30	2.61	2.77	2.81	2.84
JUL 12	.37	.62	.68	.83	1.11	1.43	1.53	1.56	1.66	1.71	1.78	1.84
JUL 26	.37	.43	.43	.44	.44	.46	.46	.46	.47	.47	.47	.47
AUG 11	.35	.65	.80	1.03	1.35	1.73	1.88	1.98	2.01	2.05	2.07	2.12
AUG 17	.31	.54	.59	.67	.89	1.03	1.35	1.77	2.21	2.31	2.82	2.96
AUG 18	.37	.42	.42	.42	.43	.43	.44	.44	.44	.44	.44	.44
AUG 20	.42	.67	.73	.86	1.01	1.07	1.09	1.09	1.09	1.09	1.09	1.09
AUG 23	.42	.84	.97	1.12	1.50	1.70	1.80	1.85	2.20	2.31	2.38	2.40
SEP 17	.23	.33	.37	.47	.68	.79	.86	.94	.94	.94	.94	.94
OCT 7	.29	.49	.52	.61	.76	.92	1.07	1.14	1.19	1.20	1.93	2.03
WINSTON SALEM						NONE						
NORTH DAKOTA												
BISMARCK												
MAY 1	.22	.34	.42	.44	.45	.46	.49	.51	.52	.52	.52	.52
MAY 5	.25	.50	.68	.74	.88	1.03	1.08	1.14	1.20	1.27	1.34	1.40
JUN 13	.46	.49	.49	.50	.52	.54	.60	.64	.66	.69	.72	.81
JUL 20	.26	.44	.56	.61	.62	.62	.62	.62	.62	.62	.62	.62
JUL 22	.38	.66	.77	.78	.79	.80	.81	.81	.81	.81	.81	.81
FARGO												
MAY 24	.22	.37	.37	.38	.40	.40	.40	.40	.40	.40	.40	.40
JUL 22	.26	.46	.58	.66	.87	.88	.89	.90	.92	.93	1.10	1.12
JUL 29	.34	.60	.82	.96	1.18	1.26	1.26	1.26	1.26	1.26	1.26	1.26
AUG 29	.16	.26	.36	.41	.47	.51	.54	.55	.55	.55	.55	.55
WILLISTON												
MAY 31	.16	.27	.32	.42	.52	.54	.72	.84	.90	.98	1.10	1.21
JUN 30	.22	.42	.58	.59	.59	.59	.60	.60	.60	.60	.60	.60
JUL 11	.22	.44	.45	.46	.48	.50	.56	.65	.68	.68	.68	.68
OHIO												
AKRON												
MAY 6	.23	.39	.46	.48	.49	.49	.49	.49	.49	.49	.49	.49
MAY 26	.24	.47	.68	.71	.75	.78	.82	.84	.86	.88	.90	.90
JUN 23	.18	.32	.33	.33	.33	.33	.33	.33	.33	.37	.41	.41
JUL 9	.40	.60	.68	.69	.70	.74	.77	.80	.86	.89	.92	.94
AUG 25	.25	.36	.42	.51	.67	.88	1.08	1.12	1.13	1.13	1.15	1.15
AUG 27	.36	.49	.58	.60	.63	.66	.68	.70	.70	.70	.70	.70
OHIO												
AKRON												
NOV 16	.36	.64	.68	.71	.74	.76	.80	.80	.80	.80	.80	.80
CINCINNATI OBS												
APR 8	.18	.29	.37	.45	.62	.97	1.03	1.04	1.04	1.04	1.05	1.05
JUN 29	.23	.45	.47	.49	.51	.55	.55	.55	.66	.66	.66	.66
JUL 19	.18	.29	.39	.47	.53	.56	.57	.59	.61	.61	.61	.61
JUL 24	.38	.68	.68	.68	.68	.68	.69	.73	.74	.76	.81	.94
SEP 11	.30	.45	.60	.74	.84	.93	.96	1.02	1.05	1.08	1.16	1.25
NOV 26	.23	.31	.34	.37	.43	.48	.54	.56	.57	.57	.57	.57
CINCINNATI U												
APR 22	.25	.42	.43	.44	.46	.58	.60	.62	.64	.64	.64	.64
JUN 11	*.40	*.80	.87	1.05	*1.33	1.60	*1.60	1.60	1.60	*1.60	1.60	*1.60
JUN 27	.20	.35	.35	.40	.47	.48	.48	.48	.52	.52	.52	.52
JUL 17	.26	.34	.35	.35	.38	.45	.56	.67	.72	.78	.81	.81
JUL 24	.20	.33	.40	.48	.49	.52	.54	.60	.62	.67	.68	.80
SEP 11	.40	.75	.78	1.07	1.30	1.37	1.39	1.44	1.48	1.52	1.60	*1.67
SEP 15	.35	.42	.44	.45	.46	.48	.50	.55	.60	.65	.72	.79
SEP 22	.30	.50	.52	.53	.53	.53	.53	.53	.53	.53	.53	.53
NOV 26	.25	.35	.45	.47	.55	.58	.64	.67	.70	.71	.71	.71
CLEVELAND												
MAY 16	.28	.34	.39	.42	.42	.42	.42	.42	.42	.42	.42	.42
MAY 26	.34	.45	.46	.47	.49	.50	.65	.74	.76	.77	.78	.79
JUN 1	.26	.34	.39	.40	.40	.40	.40	.40	.40	.40	.40	.40
JUL 3	.37	.55	.67	.88	.88	.97	1.12	1.12	1.12	1.12	1.12	1.12
JUL 7	.25	.26	.26	.26	.26	.26	.26	.26	.26	.34	.54	.54
JUL 9	.34	.44	.46	.46	.46	.46	.72	.74	.74	.75	.82	.84
AUG 1	.16	.31	.40	.41	.42	.43	.44	.44	.44	.44	.44	.44
AUG 27	.25	.33	.33	.33	.39	.40	.40	.40	.40	.40	.40	.40
COLUMBUS												
APR 12	.17	.27	.43	.54	.60	.60	.60	.60	.60	.60	.60	.60
MAY 23	.16	.31	.41	.47	.51	.57	.62	.72	.79	.82	.85	.87
MAY 26	.40	.62	.73	.76	.77	.77	.96	1.19	1.19	1.19	1.19	1.19
JUN 2	.21	.33	.36	.37	.38	.39	.39	.39	.39	.39	.41	.51
JUN 6	.23	.32	.36	.37	.40	.44	.50	.52	.52	.76	.91	.97
JUL 9	.21	.41	.61	.77	1.09	1.35	1.47	1.50	1.51	1.51	1.51	1.51
AUG 17	.30	.44	.55	.66	.87	.87	.87	.87	.87	.87	.90	.90
AUG 18	.21	.32	.38	.42	.45	.45	.45	.45	.45	.45	.45	.45
SEP 15	.20	.29	.40	.49	.59	.68	.78	.90	.97	1.00	1.02	1.06
DAYTON												
MAY 16	.25	.35	.37	.37	.38	.38	.38	.38	.38	.38	.38	.38
MAY 25	.40	.62	.80	.88	.88	.88	.88	.90	.95	.95	.95	.95
SEP 15	.18	.32	.43	.55	.71	.86	1.08	1.26	1.30	1.38	1.75	1.82
MANSFIELD												
MAY 25	.23	.30	.34	.40	.50	.55	.85	.89	.91	1.00	1.00	1.00
MAY 26	.25	.42	.67	.79	1.01	1.07	1.17	1.19	1.55	1.63	1.67	1.80
MAY 26	.29	.39	.40	.42	.43	.46	.48	.53	.53	.53	.53	.53
JUL 9	.39	.55	.62	.64	.66	.66	.80	.81	.84	.85	.86	.86
AUG 27	.18	.31	.44	.48	.51	.55	.57	.58	.60	.60	.60	.60
TOLEDO												
MAY 9	.25	.45	.53	.55	.56	.56	.57	.58	.63	.66	.67	.68
JUN 6	.32	.58	.60	.61	.62	.65	.70	.70	.70	.70	.70	.71
AUG 1	.23	.45	.52	.62	.79	1.22	1.57	1.62	1.70	1.72	1.72	1.72
AUG 16	.18	.33	.35	.36	.42	.42	.42	.65	.69	.69	.69	.69
AUG 25	.30	.58	.75	.82	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AUG 27	.50	.85	.93	1.05	1.09	1.15	1.19	1.20	1.22	1.25	1.30	1.31
SEP 15	.23	.33	.40	.47	.65	.92	1.30	1.40	1.63	1.70	1.73	1.75
YOUNGSTOWN												
APR 7	.13	.19	.31	.35	.54	.59	.59	.59	.59	.59	.59	.59
MAY 16	.40	.55	.66	.69	.72	.73	.73	.73	.73	.73	.73	.73
JUL 9	.20	.27	.40	.46	.51	.55	.62	.70	.71	.73	.75	.86
JUL 14	.25	.35	.39	.45	.56	.60	.62	.62	.62	.62	.62	.62
AUG 1	.19	.29	.45	.50	.56	.65	.69	.69	.69	.69	.70	.77
OKLAHOMA												
OKLAHOMA CITY												
APR 5	.25	.47	.62	.79	.84	.84	.92	.92	.92	.92	.92	.92
APR 8	.32	.62	.62	.73	.89	.93	.96	.96	.96	1.00	1.00	1.00
JUN 2	.20	.37	.41	.43	.47	.55	.78	.81	.81	.81	.90	.91
JUN 25	.19	.37	.46	.58	.68	.78	.85	.92	.92	.92	.92	.92
JUL 27	.24	.40	.52	.58	.64	.75	.79	.86	.87	.90	.90	.96
AUG 6	.40	.57	.80	.89	.90	.96	1.06	1.08	1.11	1.12	1.12	1.12
SEP 17	.27	.47	.48	.52	.64	.69	.70	.71	.73	.78	.79	.81
SEP 19	.18	.30	.30	.31	.50	.65	.66	.72	.83	.83	.85	.93
SEP 21	.51	.75	.85	.90	.92	.93	.98	.99	.99	.99	.99	.99
TULSA												
APR 14	.40	.43	.44	.45	.53	.58	.62	.64	.64	.64	.64	.64
MAY 9	.17	.33	.42	.53	.68	.75	.87	1.03	1.10	1.15	1.20	1.23
JUN 12	.18	.32	.36	.43	.66	.94	1.14	1.14	1.14	1.14	1.14	1.14
JUN 21	.45	.69	.72	.78	.78	.80	.80	.80	.80	.80	.80	.80
JUN 22	.24	.43	.46	.49	.51	.55	.57	.59	.59	.59	.63	.89
JUL 6	.40	.75	.90	1.00	1.05	1.09	1.09	1.09	1.10	1.10	1.12	1.13
AUG 15	.26	.49	.50	.51	.53	.56	.56	.64	.84	1.12	1.18	1.21
AUG 31	.35	.62	.71	.74	.93	.95	1.00	1.08	1.13	1.11	1.20	1.22
SEP 17	.35	.52	.54	.55	.55	.55	.55	.55	.55	.55	.55	.55
SEP 19	.22	.42	.48	.60	.95	1.14	1.19	1.22	1.30	1.36	1.46	1.48
SEP 21	.20	.37	.41	.45	.72	.91	1.04	1.21	1.34	1.42	1.47	1.49
DEC 24	.24	.31	.35	.38	.52	.62	.71	.84	.99	1.16	1.46	1.55
OREGON												
ASTORIA						NONE						
BURNS U						NONE						
EUGENE						NONE						
MEACHAM												
AUG 1	*.32	*.53	*.67	.73	*.75	.75	*.75	.75	.75	*.75	.75	*.75

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
OREGON												
MEDFORD						NONE						
PENDLETON						NONE						
PORTLAND U						NONE						
SALEM												
JUN 14	*.15	*.28	*.33	.42	*.43	.53	*.54	.56	.61	*.65	.67	*.67
SEXTON SUMMIT						NONE						
PACIFIC AREA												
CANTON ISLAND												
JAN 23	.32	.62	.66	.70	.70	.70	.70	.72	.74	.74	.74	.74
MAR 9	.20	.37	.43	.45	.50	.50	.50	.50	.54	.54	.74	.77
MAY 10	.27	.48	.53	.57	.65	.65	.65	.65	.65	.65	.65	.65
JUL 2	.20	.33	.33	.33	.33	.33	.33	.33	.33	.33	.33	.33
AUG 18	.17	.33	.33	.33	.35	.36	.36	.36	.36	.36	.36	.36
AUG 21	.28	.48	.52	.63	.75	.87	1.04	1.04	1.04	1.04	1.04	1.09
OCT 6	.20	.38	.40	.42	.45	.46	.46	.46	.46	.46	.46	.52
OCT 12	*.59	*.86	*.93	1.00	1.11	1.16	1.18	1.18	1.19	1.19	1.28	1.29
OCT 18	.31	.54	.61	.84	1.20	1.36	1.38	1.38	1.38	1.39	1.56	1.56
NOV 10	.29	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30
NOV 13	.23	.35	.44	.55	.70	.79	.82	.86	.89	.91	.94	.96
NOV 17	.42	.57	.61	.61	.61	.62	.67	1.02	1.05	1.05	1.05	1.05
NOV 20	.25	.32	.35	.41	.55	.59	.61	.62	.62	.62	.62	.62
NOV 28	*.65	*.97	*1.11	1.33	*1.86	2.35	*2.85	3.27	3.85	*3.96	4.10	*4.18
NOV 30	.27	.29	.30	.31	.34	.34	.39	.40	.41	.41	.41	.43
DEC 3	.45	.79	.94	1.24	1.72	2.15	2.68	3.07	3.31	3.40	3.48	3.53
DEC 19	.26	.47	.53	.65	.89	.90	.90	.90	.90	.90	.90	.90
JOHNSON ISLAND												
MAY 15	.29	.30	.31	.36	.47	.60	.71	.78	.82	.87	1.10	1.15
MAY 17	.29	.57	.69	.85	1.02	1.14	1.20	1.34	1.37	1.38	1.49	1.51
MAY 21	.12	.24	.32	.41	.44	.44	.44	.59	.61	.71	.79	.82
OCT 24	.19	.28	.40	.54	.74	.90	.96	1.03	1.19	1.53	1.69	1.76
KOROR												
JAN 9	.24	.31	.34	.34	.34	.34	.34	.37	.37	.37	.37	.37
FEB 17	.25	.42	.52	.56	.57	.59	.59	.60	.61	.63	.67	.76
FEB 18	.30	.50	.72	.91	1.19	1.41	1.76	2.00	2.08	2.09	2.13	2.43
MAR 2	.27	.38	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41
MAR 19	.25	.37	.53	.62	.78	.89	.99	1.12	1.16	1.23	1.30	1.33
MAR 21	.19	.31	.47	.54	.61	.61	.61	.61	.61	.61	.61	.61
MAR 22	.18	.28	.40	.47	.56	.66	.73	.83	.91	.95	1.00	1.30
APR 16	.29	.51	.65	.74	.83	.89	.92	.97	1.31	1.66	1.77	1.80
APR 19	.25	.35	.38	.41	.41	.41	.41	.41	.41	.45	.45	.45
APR 20	.30	.48	.58	.67	.79	.86	.87	.87	.87	.92	.92	1.02
APR 29	.20	.34	.34	.34	.36	.36	.37	.44	.66	.66	.69	.77
APR 30	.22	.35	.43	.47	.47	.47	.47	.47	.47	.47	.47	.54
MAY 16	.30	.49	.56	.61	.67	.87	.87	1.05	1.27	1.27	1.27	1.27
MAY 17	.26	.37	.39	.45	.55	.64	.64	.67	.69	.72	.77	.82
MAY 19	.18	.29	.40	.53	.71	.73	.73	.74	.77	.77	.96	1.00
MAY 30	.17	.27	.33	.37	.52	.60	.65	.68	.70	.74	.81	.84
JUN 1	.42	.71	.99	1.24	1.41	1.48	1.53	1.57	1.61	1.75	2.22	2.81
JUN 7	.23	.39	.52	.63	.78	.88	.93	.98	1.01	1.02	1.07	1.27
JUN 12	.19	.32	.39	.43	.44	.45	.45	.45	.47	.47	.63	.67
JUN 13	.19	.35	.45	.51	.63	.74	.90	1.05	1.10	1.13	1.17	1.26
JUN 16	.33	.53	.65	.77	1.14	1.36	1.41	1.48	1.50	1.54	1.62	1.74
JUN 17	.28	.47	.55	.58	.66	.70	.71	.74	.82	1.27	1.31	1.31
JUN 21	.22	.34	.42	.43	.49	.58	.61	.61	.74	.75	.94	1.02
JUL 2	.41	*.78	*1.10	1.30	1.54	1.64	1.76	1.86	1.94	2.03	2.17	2.29
JUL 3	.29	.39	.42	.43	.49	.65	.89	1.28	1.44	1.49	1.61	1.67
JUL 7	.30	.47	.57	.63	.69	.69	.70	.73	.73	1.16	1.23	1.25
JUL 9	.36	.66	.85	.90	.91	.93	.94	.97	1.04	1.05	1.06	1.09
JUL 15	.33	.54	.66	.75	.99	1.15	1.42	1.64	2.15	2.51	2.72	2.87
JUL 25	.21	.36	.44	.48	.49	.54	.83	.83	.83	1.02	1.08	1.14
JUL 29	.19	.33	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37
JUL 29	.31	.50	.56	.58	.58	.58	.58	.58	.58	.65	.76	1.14
AUG 20	.27	.45	.61	.64	.69	.89	.98	1.12	1.13	1.14	1.18	1.22
AUG 21	.27	.43	.49	.51	.56	.82	1.00	1.09	1.12	1.12	1.12	1.12
AUG 23	.34	.60	.83	.90	1.07	1.16	1.34	1.80	1.97	2.01	2.03	2.06
AUG 27	.27	.41	.56	.70	.91	1.06	1.09	1.12	1.13	1.59	1.70	1.70
AUG 28	.46	.65	1.03	1.11	1.18	1.19	1.32	1.44	1.44	1.44	1.45	1.46
AUG 28	.23	.32	.43	.49	.63	.85	.93	1.17	1.25	1.41	1.49	1.52
AUG 29	.23	.30	.33	.37	.43	.45	.46	.47	.51	.55	.57	.58
AUG 30	.32	.49	.59	.78	1.02	1.16	1.46	1.65	1.67	1.70	1.75	1.85
SEP 7	.37	.60	.74	.86	1.17	1.27	1.27	1.27	1.27	1.27	1.27	1.28
SEP 7	.27	.44	.62	.72	.82	.86	1.01	1.08	1.08	1.15	1.21	1.22
SEP 8	.28	.36	.37	.37	.37	.38	.38	.38	.38	.42	.42	.42
SEP 21	.38	.62	.78	.99	1.10	1.15	1.15	1.46	1.57	1.59	1.60	1.61
SEP 27	.29	.32	.32	.33	.33	.33	.33	.33	.45	.51	.51	.51
SEP 28	.31	.59	.87	1.02	1.22	1.49	1.73	2.06	2.18	2.27	2.39	2.53
OCT 3	.22	.36	.50	.54	.61	.62	.64	.64	.64	.64	.64	.64
OCT 11	.35	.60	.73	.91	1.13	1.17	1.23	1.25	1.25	1.25	1.25	1.25
OCT 27	.27	.39	.39	.41	.41	.41	.41	.41	.41	.41	.41	.41
NOV 3	.20	.33	.42	.45	.46	.47	.47	.47	.49	.54	.58	.58
NOV 4	.26	.52	.71	.81	.85	.87	.87	.87	.87	.87	.87	.87
NOV 18	.19	.35	.42	.47	.66	.70	.71	.71	.71	.71	.71	.71
NOV 25	.42	.57	.61	.62	.62	.93	.95	.97	.97	.97	.97	.97
DEC 16	.21	.29	.39	.43	.50	.51	.52	.55	.56	.56	.60	.61
DEC 20	.20	.38	.42	.44	.47	.56	.74	.76	.77	.77	.88	.89
DEC 22	.25	.35	.41	.45	.45	.45	.45	.45	.45	.59	.60	.61
DEC 26	.18	.32	.32	.34	.34	.35	.42	.42	.52	.52	.52	.52
MAJURO												
JAN 1	.23	.37	.44	.50	.65	.74	.75	.76	.77	.77	.78	.78
JAN 2	.18	.29	.36	.39	.47	.51	.51	.51	.51	.51	.51	.52
JAN 3	.22	.36	.50	.52	.62	.87	.94	1.09	1.21	1.30	1.58	1.76
JAN 13	.16	.31	.44	.54	.61	.64	.67	.71	.75	.77	.79	.80
JAN 23	.20	.34	.41	.42	.48	.50	.50	.52	.57	.60	.61	.63
FEB 14	.24	.47	.63	.68	.79	.88	.95	.97	.99	1.12	1.16	1.37
MAR 5	.27	.42	.44	.45	.45	.52	.62	.64	.66	.68	.88	.89
APR 11	.15	.21	.33	.40	.53	.58	.61	.64	.65	.65	.65	.65
APR 11	.23	.44	.62	.80	1.19	1.37	1.46	1.52	1.57	1.63	1.72	1.77
APR 12	.22	.31	.38	.46	.53	.57	.57	.62	.88	.97	.97	.99
MAY 12	.21	.31	.47	.58	.69	.76	.80	.84	.87	.93	.95	.96
MAY 14	.35	.61	.88	1.01	1.15	1.36	1.42	1.43	1.43	1.44	1.48	1.49
MAY 20	.24	.34	.36	.38	.42	.45	.47	.47	.48	.50	.53	.54
JUN 3	.29	.56	.73	.91	.99	1.12	1.19	1.22	1.23	1.26	1.26	1.26
PACIFIC AREA												
MAJURO												
JUN 14	.33	.55	.60	.66	.70	.74	.82	.86	1.44	1.53	1.58	1.61
JUN 16	.27	.41	.61	.75	.85	.85	.89	.90	.91	.91	.91	.91
JUL 1	.23	.32	.41	.44	.45	.46	.46	.46	.46	.46	.46	.46
JUL 15	.32	.38	.39	.40	.42	.60	.66	.69	.71	.72	.74	.78
JUL 15	.30	.47	.55	.55	.56	.57	.57	.57	.57	.75	.77	.77
JUL 17	.40	.62	.78	.99	1.43	1.69	1.75	1.78	1.89	1.97	2.06	2.12
JUL 24	.24	.44	.54	.57	.63	.67	.72	.77	.95	1.01	1.10	1.12
JUL 26	.27	.36	.37	.40	.44	.48	.52	.58	.64	.67	.71	.89
AUG 9	.28	.49	.56	.59	.60	.61	.61	.61	.61	.61	.61	.61
AUG 18	.34	.61	.76	.84	1.00	1.21	1.42	1.55	1.63	1.66	1.68	1.69
AUG 22	.23	.35	.44	.47	.57	.63	.67	.69	.72	.73	.79	.89
SEP 1	.22	.38	.42	.43	.47	.47	.47	.51	.52	.52	.52	.54
SEP 1	.39	.57	.61	.62	.67	.84	.86	.86	.86	.90	.91	.93
SEP 2	.34	.48	.55	.65	.70	.71	.71	.71	.71	.71	.71	.71
SEP 14	.23	.39	.45	.50	.63	.69	.70	.71	.80	.87	.89	.89
SEP 17	.24	.45	.64	.67	.70	.80	.80	.80	.80	.80	1.02	1.21
SEP 26	.46	*.84	*1.10	1.22	1.39	1.64	1.92	2.46	2.73	2.96	3.00	3.00
OCT 4	.22	.26	.33	.44	.51	.57	.63	.68	.69	.70	.70	.70
OCT 5	.35	.59	.72	.81	.94	1.02	1.09	1.35	1.49	1.50	1.50	1.68
OCT 10	.38	.61	.77	.91	1.01	1.03	1.03	1.04	1.04	1.07	1.07	1.07
OCT 12	.18	.35	.51	.57	.65	.68	.72	.75	.76	.79	.83	.86
OCT 22	.29	.47	.63	.66	.67	.68	.68	.68	.75	.80	.80	.80
OCT 31	.21	.39	.54	.70	1.04	1.32	1.35	1.35	1.35	1.35	1.36	.00
OCT 31	.23	.33	.41	.53	.71	1.01	1.33	1.62	1.68	1.71	1.74	1.76
NOV 7	.24	.33	.43	.53	.64	.98	1.07	1.08	1.09	1.09	1.09	1.09
NOV 11	.29	.46	.57	.63	.66	.82	.84	.84	.84	.86	1.20	1.52
NOV 19	.30	.47	.66	.92	1.28	1.72	1.93	2.06	2.09	2.10	2.12	2.13
NOV 19	.22	.44	.55	.66	.78	.90	.95	1.02	1.06	1.08	1.10	1.13
DEC 2	.31	.59	.73	.77	.79	.82	.87	.88	.88	.88	.94	.95
DEC 2	.15	.26	.36	.42	.48	.50	.53	.54	.54	.54	.58	.68
DEC 7	.18	.32	.41	.47	.54	.59	.67	.86	1.20	1.24	1.29	1.38
MARCUS ISLAND												
JAN 25	.10	.20	.30	.38	.53	.73	.94	1.18	1.40	1.71	2.04	2.29
AUG 11	.22	.37	.44	.45	.45	.45	.45	.45	.45	.45	.45	.45
OCT 2	.30	.37	.46	.49	.60	.60	.60	.60	.60	.60	.67	.67
PONAPE												
JAN 6	.25	.38	.45	.57	.76	1.15	1.29	1.37	1.40	1.46	1.60	1.63
JAN 16	.26	.35	.39	.39	.44	.47	.50	.50	.51	.54	.54	.77
JAN 20	.25	.36	.40	.43	.50	.58	.62	.66	.71	.74	.75	.88
JAN 21	.26	.41	.48	.50	.65	.88	1.02	1.43	1.67	1.76	1.78	1.85
FEB 12	.24	.31	.31	.31	.31	.31	.35	.35	.35	.35	.35	.35
FEB 12	.27	.42	.53	.55	.55	.55	.55	.55	.55	.62	.62	.62
FEB 28	.25	.38	.47	.52	.62	.84	.88	.92	.99	1.19	1.36	1.36
MAR 1	.28	.46	.52	.55	.58	.61	.62	.77	1.02	1.08	1.10	1.14
MAR 23	.17	.26	.33	.43	.60	.87	.90	.91	.92	.94	1.04	1.05
APR 10	.26	.32	.34	.34	.34	.34	.55	.59	.59	.59	.68	.68
APR 11	.31	.53	.74	.99	1.13	1.31	1.52	1.62	1.71	1.74	1.74	1.77
APR 15	.17	.27	.36	.46	.52	.57	.71	.89	1.12	1.19	1.30	1.60
APR 25	.26	.40	.43	.44	.45	.45	.45	.45	.45	.45	.45	.45
APR 29	.20	.25	.32	.42	.57	.63	.66	.67	.67	.67	.67	.91
MAY 19	.18	.31	.43	.49	.58	.70	.73	.74	.74	.74	.79	.84
MAY 27	.22	.31	.35	.41	.47	.50	.51	.51	.51	.61	.62	.62
MAY 30	.19	.31	.40	.50	.59	.66	.66	.66	.66	.66	.66	.66
JUN 7	.18	.32	.32	.32	.32	.32	.32	.32	.32	.38	.38	.38
JUN 8	.28	.50	.59	.61	.69	.83	.85	.89	.89	.89	.89	.91
JUN 8	.21	.38	.49	.52	.53	.55	.86	.96	.98	.98	.98	1.02
JUN 14	.39	.59	.66	.85	.92	.95	.96	1.02	1.28	1.30	1.39	1.87
JUN 21	.10	.20	.29	.38	.51	.61	.72	.77	.79	.80	.96	1.00
JUN 22	.27	.47	.68	.82	.97	1.28	1.46	1.65	1.67	1.67	1.67	1.67
JUN 24	.20	.35	.42	.46	.50	.55	.63	.68	.76	.82	.86	.87
JUN 29	.22	.41	.60	.70	.78	.81	.82	.83	.83	.83	.89	.90
JUN 30	.20	.35	.41	.42	.45	.59	.80	.80	.80	.82	.87	1.13
JUL 1	.20	.34	.41	.52	.70	.89	1.07	1.28	1.29	1.29	1.70	1.72
JUL 3	.29	.46	.64	.67	.71	.85	.90	.96	.99	.99	.99	.99
JUL 3	.22	.36	.44	.44	.44	.47	.47	.47	.47	.47	.47	.47
JUL 9	.30	.46	.54	.55	.64	.76	.77	.77	1.02	1.04	1.04	1.04
JUL 11	.27	.42	.54	.57	.65	.67	.67	.67	.67	.67	.67	.75
JUL 12	.20	.33	.40	.41	.41	.43	.47	.53	.57	.73	.76	.79
JUL 14	.23	.33	.44	.51	.61	.75	.81	.87	.97	1.03	1.15	1.28
JUL 16	.24	.43	.60	.72	.89	1.04	1.10	1.11	1.11	1.11	1.25	1.36
JUL 16	.35	.58	.78	.95	1.02	1.20	1.32	1.44	1.58	1.73	1.91	1.99
JUL 20	.35	.60	.84	1.04	1.19	1.32	1.52	1.78	1.93	2.08	2.15	2.70
JUL 24	.24	.42	.61	.73	.82	.89	.97	1.17	1.28	1.39	1.54	1.69
JUL 27	.17	.30	.40	.54	.73	.82	.84	.88	1.00	1.04	1.06	1.09
JUL 29	.25	.36	.42	.46	.55	.67	.76	.86	.87	.92	1.04	1.18
AUG 8	.24	.38	.42	.48	.53	.55	.55	.55	.56	.60	.60	.62
AUG 13	.18	.31	.41	.45	.45	.76	.77	.77	.83	.85	.85	.88
AUG 15	.23	.40	.51	.58	.71	.76	.78	.78	.78	.85	.87	.87
AUG 17	.27	.44	.53	.67	.82	.83	.84	.84	.84	.84	.84	.85
AUG 24	.21	.29	.44	.55	.74	.90	1.06	1.07	1.08	1.09	1.09	1.09
SEP 8	.20	.30	.35	.37	.38	.38	.39	.39	.40	.41	.65	.66
SEP 12	.15	.27	.35	.43	.55	.56	.59	.59	.59	.59	.59	.59
SEP 14	.31	.56	.83	.98	1.23	1.44	1.61	1.71	1.89	2.18	2.52	2.55
SEP 14	.19	.34	.51	.62	.74	.77	.78	.78	.78	.78	.78	.83
SEP 20	.27	.29	.33	.35	.35	.35	.35	.35	.37	.39	.52	.57
SEP 21	.34	.55	.74	.88	1.28	1.62	1.77	1.91	1.95	1.99	2.07	2.14
SEP 26	.19	.32	.36	.38	.43	.48	.53	.60	.67	.69	.70	.71
OCT 1	.22	.32	.34	.35	.35	.35	.35	.35	.35	.35	.35	.35
OCT 2	.18	.29	.36	.40	.41	.43	.50	.68	.69	.69	.69	.69
OCT 7	.31	.48	.63	.70	.82	.88	1.01	1.07	1.14	1.17	1.19	1.20
OCT 9	.30	.50	.66	.83	1.16	1.46	1.54	1.61	1.67	1.70	1.73	1.75
OCT 12	.21	.31	.32	.34	.38	.39	.61	.61	.61	.68	.79	.79
OCT 12	.21	.32	.39	.42	.47	.51	.60	.71	.74	.75	.79	.78
OCT 13	.19	.25	.39	.49	.68	.76	.78	.82	.86	.89	.91	.94
OCT 14	.20	.32	.36	.37	.38	.38	.38	.38	.38	.38	.38	.38
OCT 19	.26	.38	.54	.59	.63	.68	.77	.80	.81	.81	.81	.81
OCT 21	.16	.25	.32	.41	.47	.48	.48	.48	.48	.48	.48	.48
NOV 12	.39	.57	.65	.77	1.21	1.47	1.54	1.57	1.60	1.60	1.68	1.68
NOV 25	.49	.58	.75	.80	.91	1.00	1.04	1.09	1.38	1.42	1.58	1.60
NOV 25	.22	.37	.42	.46	.60	.73	.74	.74	.74	.75	.75	.75
DEC 12	*.55	.80	.83	.83	.84	.84	1.01	1.06	1.23	1.52	1.95	2.11
DEC 29	.20	.30	.33	.35	.38	.41	.50	.83	.86	.89	1.20	1.31
TRUK												
JAN 17	.55	.85	1.27	1.52	2.00	2.38	2.55	2.77	3.03	3.29	3.47	3.79
FEB 3	.37	.50	.57	.61	.67	.72	.74	1.16	1.46	1.47	1.55	1.55
FEB 12	.25	.34	.38	.40	.43	.47	.48	.77	.83	.83	.83	.88
FEB 16	.18	.27	.38	.43	.43	.43	.43	.43	.45	.45	.45	.45
MAR 1	.17	.27	.35	.48	.65	.99	1.17	1.34	1.39	1.76	1.79	1.84
MAR 5	.14	.25	.37	.45	.53	.73	.99	1.01	1.07	1.17	1.27	1.36
MAR 5	.16	.28	.41	.54	.70	.92	.99	1.06	1.16	1.24	1.33	1.37
MAR 16	.26	.37	.39	.39	.39	.52	.52	.52	.58	.58	.58	.58
MAR 24	.37	.68	.86	.95	1.14	1.32	1.62	1.83	1.98	2.12	2.26	2.35

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
PACIFIC AREA												
TRUK												
APR 24	.30	.47	.60	.62	.79	.86	.87	.95	1.11	1.13	1.16	1.17
APR 24	.32	.47	.54	.56	.56	.56	.56	.56	.63	.72	.73	.73
MAY 14	.22	.27	.38	.50	.57	.62	.65	.66	.66	.66	.66	.66
MAY 16	.21	.37	.47	.48	.69	.81	.89	.90	.93	.94	.94	.96
MAY 20	.35	.41	.42	.42	.42	.42	.42	.42	.42	.47	.48	.49
MAY 27	.27	.45	.63	.72	.84	.89	.96	.98	.98	.98	.98	.98
MAY 29	.42	.60	.70	.78	.98	1.15	1.25	1.50	1.50	1.51	1.57	1.58
JUN 1	.37	.51	.62	.67	.77	.89	.95	1.03	1.07	1.11	1.16	1.18
JUN 5	.41	.50	.57	.62	.68	.70	.71	.71	.84	.94	1.09	1.09
JUN 13	.30	.48	.57	.59	.61	.63	.65	.66	.67	.67	.70	.71
JUN 14	.52	.72	.85	.88	.88	.88	.89	.88	.88	.88	.88	.88
JUN 14	.25	.46	.55	.55	.55	.55	.55	.55	.57	.57	.57	.58
JUN 16	.27	.38	.47	.51	.54	.55	.56	.56	.56	.56	.56	.56
JUL 4	.23	.32	.35	.35	.35	.35	.37	.37	.37	.37	.37	.46
JUL 7	.12	.22	.28	.37	.53	.60	.76	.83	.85	.85	.85	.85
JUL 8	.21	.29	.34	.41	.57	.75	.90	.94	1.09	1.12	1.15	1.17
JUL 12	.23	.30	.38	.40	.42	.43	.43	.44	.45	.45	.54	.55
JUL 13	.27	.39	.42	.42	.43	.45	.46	.65	.67	.69	.72	.74
JUL 14	.24	.32	.35	.37	.40	.44	.46	.57	.54	.56	.58	.59
JUL 15	.49	.84	1.07	1.26	1.51	1.64	1.66	1.73	1.76	1.77	1.79	1.80
JUL 16	.23	.41	.59	.71	.77	.96	1.11	1.13	1.14	1.14	1.18	1.25
JUL 17	.18	.31	.42	.47	.49	.58	.59	.66	.67	.68	.73	.73
JUL 18	.15	.26	.35	.43	.65	.72	.75	1.12	1.22	1.32	1.46	1.74
JUL 22	.26	.31	.36	.38	.39	.40	.40	.40	.40	.40	.40	.41
JUL 28	.20	.30	.38	.45	.53	.62	.64	.68	.71	.73	.74	.76
AUG 1	.31	.42	.50	.56	.64	.69	.76	.84	.86	.88	.90	.91
AUG 19	.26	.36	.44	.50	.53	.63	.63	.64	.64	.64	.64	.64
AUG 21	.22	.34	.41	.47	.63	.84	1.07	1.16	1.19	1.34	1.57	1.61
AUG 24	.27	.44	.55	.61	.63	.66	.67	.67	.79	.79	.79	.79
AUG 30	.22	.39	.39	.40	.40	.40	.40	.40	.40	.40	.40	.40
AUG 31	.47	.62	.74	.80	.85	.86	.93	1.30	1.41	1.43	1.43	1.44
SEP 5	*.71	1.12	1.34	1.36	1.38	1.40	1.45	1.50	1.53	1.57	1.59	1.60
SEP 7	.33	.46	.61	.79	1.06	1.22	1.29	1.37	1.40	1.40	1.41	1.74
SEP 11	.23	.35	.39	.41	.42	.42	.43	.44	.45	.55	.58	.61
SEP 15	.61	.90	1.01	1.08	1.13	1.66	1.81	1.93	2.07	2.12	2.20	2.32
SEP 16	.21	.32	.35	.37	.41	.47	.53	.64	.73	.80	.87	.94
SEP 25	.19	.31	.46	.50	.52	.52	.52	.52	.52	.52	.52	.52
SEP 27	.23	.29	.32	.40	.48	.49	.49	.49	.49	.49	.51	.53
OCT 4	.27	.47	.65	.76	1.03	1.12	1.12	1.12	1.12	1.13	1.16	1.28
OCT 11	.27	.43	.56	.65	.72	.83	.90	.99	1.05	1.17	1.30	1.41
OCT 14	.15	.23	.33	.42	.48	.62	.71	.74	.78	.97	1.09	1.13
NOV 17	.26	.31	.31	.31	.31	.31	.31	.31	.31	.31	.31	.31
NOV 25	.22	.36	.47	.50	.55	.59	.62	.66	.66	.68	.70	.71
NOV 30	.20	.29	.33	.42	.46	.46	.46	.46	.46	.46	.46	.46
DEC 12	.28	.50	.70	.77	.95	1.08	1.14	1.19	1.21	1.22	1.22	1.23
WAKE												
APR 14	.17	.28	.37	.47	.62	.73	.85	.87	.90	.90	.91	.95
SEP 27	.15	.28	.38	.43	.45	.45	.45	.45	.47	.47	.47	.47
OCT 12	.15	.28	.40	.55	.77	.83	.96	1.06	1.11	1.18	1.22	1.26
OCT 13	.37	.48	.53	.57	1.02	1.08	1.12	1.22	1.27	1.37	1.41	1.46
NOV 27	.20	.40	.50	.55	.77	.93	1.03	1.18	1.24	1.26	1.41	1.43
YAP R												
JAN 13	.16	.31	.39	.44	.44	.44	.45	.47	.55	.65	.75	.75
FEB 19	.23	.33	.38	.39	.39	.44	.44	.45	.56	.68	.94	.96
MAR 3	.24	.41	.49	.54	.57	.63	.65	.65	.66	.67	.68	.78
MAR 4	.14	.27	.40	.48	.56	.58	.70	.92	1.02	1.06	1.14	1.22
MAR 10	.18	.32	.39	.44	.50	.57	.61	.62	.65	.66	.67	.75
MAR 29	.22	.43	.43	.43	.43	.48	.49	.49	.49	.49	.53	.53
APR 24	.26	.31	.34	.36	.36	.36	.36	.36	.36	.36	.44	.45
MAY 19	.27	.34	.34	.34	.34	.37	.42	.42	.42	.42	.42	.50
MAY 30	.30	.57	.82	.92	.99	1.05	1.28	1.30	1.30	1.34	1.34	1.41
JUN 16	.17	.33	.49	.64	.94	1.19	1.26	1.43	1.60	1.68	1.77	1.78
JUN 21	.25	.43	.55	.59	.62	.65	.67	.68	.73	.81	.89	.93
JUL 14	.18	.32	.47	.54	.59	.76	.78	.80	.81	.81	.81	.81
AUG 10	.25	.39	.48	.60	.87	.94	.96	.96	.96	.96	.96	.96
AUG 19	.37	.47	.48	.51	.51	.54	.69	.69	.76	1.08	1.22	1.22
AUG 22	.25	.32	.40	.45	.61	.70	.75	.79	.80	.81	.83	.84
AUG 27	.25	.33	.37	.38	.38	.38	.38	.38	.38	.39	.40	.42
AUG 27	.37	.67	.92	1.07	1.41	1.60	1.63	1.65	1.72	1.84	2.02	2.15
AUG 28	.24	.41	.49	.50	.50	.53	.54	.54	.54	.54	.54	.54
SEP 1	.14	.21	.29	.37	.54	.63	.67	.69	.71	.74	.77	.85
SEP 9	.16	.31	.34	.37	.37	.37	.37	.37	.37	.37	.37	.37
SEP 11	.17	.31	.42	.49	.58	.75	1.00	1.02	1.04	1.11	1.44	1.44
SEP 21	.22	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40
SEP 21	.24	.46	.64	.80	.99	1.06	1.09	1.25	1.35	1.35	1.35	1.35
SEP 24	.22	.44	.54	.59	.63	.67	.68	.68	.68	.68	.89	.89
OCT 1	.23	.38	.51	.63	.75	.76	.77	.77	.77	.79	.79	.86
OCT 5	.25	.44	.50	.51	.53	.54	.54	.54	.54	.54	.54	.54
OCT 19	.20	.36	.46	.50	.55	.65	.82	.82	.82	.83	.85	.89
NOV 1	.31	.56	.76	.91	1.02	1.05	1.18	1.23	1.24	1.29	1.31	1.35
NOV 5	.18	.35	.51	.60	.75	.79	.91	.97	.98	.98	1.25	1.28
NOV 22	.26	.42	.45	.50	.52	.57	.57	.57	.57	.57	.57	.57
PENNSYLVANIA												
ALLENTOWN												
AUG 26	.25	.43	.48	.53	.56	.63	.63	.63	.63	.63	.63	.63
AUG 28	.45	.85	.92	.92	.93	.93	.93	.93	.93	.93	.93	.93
SEP 24	.18	.27	.33	.35	.60	.64	.65	.66	.66	.68	.85	.90
ERIE												
MAY 4	.14	.28	.42	.45	.51	.57	.63	.73	.79	.86	.94	1.01
MAY 16	.29	.58	.61	.63	.71	.83	.97	1.12	1.25	1.29	1.39	1.40
JUN 18	.24	.33	.35	.37	.44	.73	.81	.84	.84	.84	.84	.84
JUL 7	.18	.34	.50	.63	.68	.68	.68	.68	.68	.68	.68	.68
JUL 9	.16	.30	.41	.50	.59	.87	1.02	1.04	1.05	1.11	1.16	1.17
HARRISBURG												
MAY 16	.16	.32	.33	.38	.39	.40	.40	.40	.40	.42	.44	.44
MAY 25	.16	.31	.40	.46	.50	.50	.50	.50	.50	.50	.50	.50
JUN 2	.22	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32
JUN 8	.27	.50	.58	.67	.84	.94	.94	.94	.95	.96	.96	.96
JUN 23	.21	.39	.50	.59	.64	.74	.74	.74	.74	.74	.74	.74
JUL 5	.34	.55	.64	.70	.71	.71	.71	.71	.71	.71	.74	.74
JUL 10	.29	.55	.78	.79	.80	.80	.80	.80	.80	.80	.80	.80
SEP 1	.24	.39	.40	.41	.41	.41	.41	.41	.41	.41	.41	.41
PHILADELPHIA												
JUN 24	.30	.52	.55	.67	.82	.86	.96	.97	1.00	1.03	1.03	1.03
JUL 5	.18	.33	.36	.44	.66	.72	.82	.91	.96	.98	.98	.99
JUL 11	.23	.30	.31	.35	.40	.44	.45	.46	.46	.46	.47	.49
AUG 9	.27	.54	.65	.87	.90	.97	1.12	1.31	1.40	1.42	1.73	1.83
PENNSYLVANIA												
PHILADELPHIA												
SEP 24	.19	.32	.38	.42	.43	.43	.43	.43	.43	.43	.43	.44
SEP 24	.28	.45	.55	.68	.90	.93	.96	.97	.98	1.01	1.05	1.08
PITTSBURGH												
JUN 6	.22	.39	.48	.50	.50	.50	.50	.50	.50	.50	.50	.50
JUL 14	.22	.36	.36	.40	.52	.53	.53	.53	.54	.54	.56	.56
AUG 25	.35	.42	.43	.44	.44	.45	.45	.45	.47	.47	.48	.48
NOV 16	.21	.36	.37	.40	.41	.42	.45	.45	.45	.45	.45	.45
PITTSBURGH U												
JUN 23	.20	.32	.39	.42	.45	.48	.48	.48	.48	.48	.48	.48
AUG 25	.25	.28	.29	.29	.30	.31	.31	.51	.53	.54	.56	.57
READING U												
MAY 27	.29	.40	.45	.48	.51	.64	.96	.98	.99	.99	.99	.99
JUL 3	.57	.73	.74	.74	.74	.75	.75	.75	.75	.75	.75	.75
SEP 1	.28	.53	.57	.60	.61	.62	.63	.63	.64	.65	.66	.66
SEP 24	.36	.46	.48	.48	.48	.56	.84	.85	.89	1.02	1.06	1.13
WILKES BARRE												
AUG 2	.20	.33	.43	.52	.54	.61	.62	.63	.63	.63	.65	.66
RHODE ISLAND												
BLOCK ISLAND												
AUG 2	.50	*.90	*1.20	1.41	*1.85	2.00	2.15	2.37	2.48	2.62	2.79	2.95
PROVIDENCE												
						NONE						
SOUTH CAROLINA												
CHARLESTON												
APR 26	*.25	*.47	*.57	.65	*.77	.80	*.98	1.05	1.12	*1.17	1.20	*1.27
MAY 27	*.35	.40	.42	.43	.45	.45	.45	.45	.45	.45	.45	.45
JUN 3	.28	.41	.48	.60	*.88	.90	.90	.91	.91	.91	.91	.91
JUN 11	*.54	*1.05	*1.20	1.50	*1.81	1.85	*1.91	1.94	1.96	*2.15	2.27	*2.28
JUN 26	.25	.37	.40	.41	.51	.51	.52	.53	.53	.53	.53	.53
JUL 6	.28	.43	.65	.76	.81	.90	.90	.92	.92	.94	1.00	1.00
JUL 10	.32	.39	.40	.40	.41	.41	.41	.41	.41	.41	.41	.41
JUL 16	.29	.48	.67	.76	.81	1.05	1.26	1.28	1.30	1.31	1.33	1.33
JUL 29	.28	.52	.78	.96	1.33	1.49	1.69	1.81	1.82	1.94	1.94	1.94
AUG 4	.22	.40	.45	.64	.77	.83	.99	1.08	1.13	1.25	1.54	1.55
AUG 7	.43	.69	1.00	1.19	1.38	1.47	1.57	1.58	1.60	1.62	1.63	1.64
SEP 2	.45	.72	.75	.87	1.08	1.18	1.27	1.33	1.37	1.37	1.37	1.37
SEP 18	.32	.60	.65	.80	.86	.87	.87	.91	.92	.92	.92	.92
SEP 24	.23	.42	.43	.43	.44	.46	.47	.48	.48	.48	.48	.48
OCT 7	.36	.52	.52	.53	.53	.53	.53	.55	.60	.60	1.03	1.03
OCT 18	.20	.37	.44	.60	.78	1.00	1.23	1.35	1.60	1.80	2.03	2.15
CHARLESTON U												
APR 26	.31	.48	.68	.90	1.05	1.27	1.32	1.39	1.41	1.42	1.49	1.50
MAY 19	.30	.45	.54	.57	.58	.59	.59	.59	.59	.59	.59	.63
JUN 3	.14	.26	.35	.41	.44	.45	.45	.45	.45	.51	.54	.54
JUN 9	.21	.31	.33	.35	.35	.35	.36	.36	.36	.48	.57	.60
JUN 11	.30	.40	.41	.42	.42	.42	.44	.45	.47	.51	.54	.54
JUN 13	.45	.75	1.09	1.36	1.43	1.43	1.65	1.89	1.92	1.94	2.00	2.00
JUN 16	.24	.27	.37	.48	.54	.56	.58	.61	.64	.65	.66	.66
JUN 25	.19	.28	.44	.49	.57	.65	.69	.78	.80	.81	.84	.84
JUN 26	.45	.73	1.04	1.34	1.57	1.66	1.71	1.74	1.75	1.75	1.75	1.75
JUL 16	.29	.48	.53	.55	.58	.71	.74	.75	.77	.77	.77	.77
JUL 20	.30	.38	.40	.41	.41	.41	.41	.41	.41	.41	.41	.41
JUL 29	.39	.65	.84	.89	.94	1.00	1.10	1.19	1.26	1.29	1.34	1.34
AUG [illegible]	.30	.54	.67	.77	1.03	1.10	1.43	1.91	1.96	1.98	1.98	1.98
AUG 18	.19	.34	.43	.44	.53	.56	.60	.63	.63	.63	.63	.63
SEP 24	.22	.34	.42	.48	.54	.63	.64	.67	.68	.69	.71	.72
OCT 18	.37	.47	.68	.83	.96	1.07	1.18	1.47	1.80	2.04	2.22	2.37
COLUMBIA												
MAR 17	.23	.33	.34	.36	.39	.43	.46	.49	.63	.69	.72	.79
APR 7	.60	.75	.78	.80	.82	.82	.82	.82	.82	.82	.82	.82
APR 15	.23	.35	.45	.53	.67	.72	.82	.88	.90	.91	.92	.98
JUN 4	.22	.44	.54	.70	.80	.81	.83	.84	.85	.85	.85	.85
JUN 12	.27	.45	.55	.79	.90	.92	1.00	1.09	1.10	1.10	1.10	1.10
JUN 14	.22	.43	.54	.55	.58	.61	.71	.79	.83	.83	.90	.91
JUN 30	.25	.44	.45	.46	.48	.49	.50	.50	.50	.50	.54	.55
JUL 15	.36	.60	.63	.66	.68	.80	.87	.93	.94	.95	.95	.95
JUL 19	.36	.40	.41	.42	.44	.45	.45	.45	.45	.45	.45	.45
AUG 1	.22	.40	.48	.57	.70	.71	.74	.74	.75	.75	.75	.82
AUG 5	.30	.50	.70	.80	.99	1.08	1.12	1.14	1.15	1.15	1.15	1.15
AUG 8	.15	.30	.35	.37	.38	.39	.41	.41	.41	.41	.41	.41
AUG 18	.65	1.00	1.25	1.55	*2.40	2.81	*3.90	4.85	5.02	*5.03	5.03	*5.03
AUG 20	.39	.74	.94	1.14	1.20	1.37	1.38	1.39	1.39	1.39	1.39	1.39
SEP 2	.39	.56	.78	.86	1.10	1.33	1.57	1.86	2.55	2.83	3.38	3.52
OCT 7	.25	.40	.45	.50	.65	.80	.93	1.11	1.20	1.25	1.33	1.35
FLORENCE												
						NONE						
GNVLE SPARTANBURG												
APR 6	.23	.42	.51	.52	.54	.58	.60	.60	.62	.64	.65	.65
APR 25	.20	.30	.35	.40	.45	.50	.70	.85	1.00	1.20	1.34	1.42
JUN 8	.25	.42	.56	.68	.87	.96	1.09	1.15	1.20	1.24	1.25	1.27
JUN 14	.26	.47	.70	.92	1.18	1.47	*1.50	1.52	1.54	1.54	1.61	1.61
JUL 16	.21	.38	.47	.51	.53	.59	.60	.60	.60	.60	.60	.60
JUL 18	.20	.30	.35	.37	.37	.37	.37	.37	.37	.37	.37	.37
AUG 16	.23	.38	.54	.71	.82	.87	.87	.87	.87	.87	.87	.87
AUG 24	.22	.34	.41	.44	.47	.48	.48	.49	.50	.52	.54	.56
AUG 27	.39	.52	.55	.55	.55	.56	.70	1.00	1.03	1.33	1.33	1.36
OCT 1	.19	.28	.35	.40	.49	.64	.69	.78	.84	.93	1.03	1.11
SOUTH DAKOTA												
ABERDEEN												
JUL 1	.45	*.78	*.82	.90	*1.00	1.07	*1.14	1.21	1.22	1.22	1.22	1.22
JUL 8	.40	.51	.52	.53	.54	.56	.60	.65	.68	.69	.71	.71
AUG 5	.30	.45	.47	.48	.48	.48	.49	.48	.48	.48	.48	.48
SEP 12	.19	.34	.36	.38	.46	.69	.75	.81	.83	.83	.85	.85

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
SOUTH DAKOTA												
HURON												
MAY 20	.42	.79	.95	1.02	1.06	1.13	1.16	1.17	1.19	1.22	1.27	1.65
JUN 22	.31	.43	.44	.45	.47	.47	.59	.59	.59	.59	.60	.60
AUG 17	.21	.29	.38	.46	.51	.51	.51	.51	.51	.52	.53	.54
RAPID CITY												
JUN 23	.16	.31	.41	.50	.53	.54	.57	.58	.59	.60	.61	.62
JUN 29	.45	.70	.75	.82	.93	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SIOUX FALLS												
MAY 8	.29	.36	.43	.46	.73	.80	1.04	1.10	1.45	1.61	1.70	1.89
MAY 20	.11	.22	.31	.39	.56	.70	.72	.72	.72	.72	.82	.94
JUL 30	.40	.41	.41	.41	.41	.41	.41	.41	.44	.44	.44	.44
OCT 17	.31	.36	.37	.38	.40	.48	.66	.66	.66	.66	.66	.66
TENNESSEE												
BRISTOL												
JUN 3	.32	.57	.77	.86	1.15	1.26	1.40	1.45	1.45	1.45	1.45	1.45
JUL 4	*.54	.79	.86	.94	1.15	1.18	1.24	1.24	1.24	1.24	1.24	1.24
JUL 10	.28	.55	.66	.66	.71	.79	.83	.86	.92	.94	.95	.97
JUL 29	.26	.40	.42	.44	.64	.66	.66	.66	.66	.66	.66	.66
AUG 25	.26	.43	.50	.52	.54	.55	.55	.55	.55	.55	.55	.55
CHATTANOOGA												
MAY 18	.23	.34	.42	.45	.47	.48	.49	.49	.50	.52	.53	.53
JUN 4	.20	.40	.45	.47	.48	.49	.50	.55	.57	.60	.60	.60
JUN 7	.40	.75	.84	.92	1.00	1.06	1.22	1.28	1.34	1.38	1.41	1.45
AUG 7	.25	.41	.41	.41	.42	.42	.42	.42	.42	.42	.42	.42
AUG 23	.18	.30	.38	.41	.42	.43	.46	.60	.71	.72	.73	.76
AUG 25	.32	.45	.55	.61	.61	.61	.61	.61	.61	.61	.61	.61
SEP 12	.23	.45	.59	.70	.84	1.06	1.19	1.44	1.62	1.78	1.88	1.90
NOV 21	.18	.24	.30	.35	.55	.80	.96	1.12	1.13	1.14	1.14	1.14
KNOXVILLE												
MAR 25	.20	.36	.42	.45	.49	.62	.74	.90	1.15	1.35	1.48	1.74
APR 6	.32	.45	.50	.65	.90	1.00	1.00	1.00	1.00	1.01	1.19	1.20
MAY 18	.24	.28	.33	.43	.63	.65	.65	.65	.65	.65	.67	.70
MAY 20	.19	.35	.42	.55	.61	.61	.61	.61	.61	.61	.61	.61
JUN 3	.30	.45	.46	.50	.51	.52	.56	.61	.61	.61	.61	.61
JUN 11	.37	.49	.56	.71	.96	1.08	1.10	1.17	1.24	1.27	1.35	1.39
JUN 24	.25	.40	.47	.51	.67	.68	.68	.68	.68	.81	1.03	1.05
JUL 7	.29	.53	.58	.61	.73	.73	.76	.76	.82	1.00	1.00	1.00
JUL 10	.22	.38	.41	.42	.43	.43	.43	.43	.43	.43	.43	.43
AUG 17	.25	.26	.27	.27	.28	.28	.28	.28	.28	.28	.28	.28
MEMPHIS												
FEB 11	.47	.53	.56	.58	.61	.66	.68	.73	.80	.85	.89	.90
MAR 17	.28	.41	.45	.50	.53	.54	.60	.61	.62	.62	.62	.62
MAR 28	.17	.24	.32	.41	.44	.46	.47	.52	.53	.53	.56	.59
MAY 19	.30	.50	.56	.58	.58	.59	.59	.59	.59	.59	.59	.59
MAY 27	.40	.49	.64	.66	.71	.85	1.04	1.31	1.53	1.76	2.30	2.78
JUL 3	.16	.25	.30	.35	.52	.53	.53	.53	.53	.53	.53	.53
AUG 7	.42	.66	.78	.88	.94	.98	1.00	1.01	1.10	1.16	1.28	1.34
AUG 8	.33	.61	.73	.77	.85	1.00	1.28	1.30	1.30	1.30	1.30	1.30
SEP 5	.16	.29	.40	.48	.59	.68	.69	.69	.69	.69	.69	.69
SEP 10	.19	.28	.35	.47	.65	.72	.74	.79	.91	.97	1.13	1.27
SEP 21	.16	.28	.35	.43	.49	.54	.59	.79	.94	.99	1.06	1.12
NASHVILLE												
MAR 17	.30	.32	.34	.35	.35	.40	.40	.43	.43	.43	.43	.43
APR 8	.50	.60	.70	.75	1.20	1.48	1.65	1.68	1.72	1.77	1.82	1.85
MAY 19	.16	.32	.38	.46	.68	.74	.79	.81	.85	.87	.88	.98
JUL 2	.32	.37	.39	.40	.40	.42	.43	.45	.45	.45	.45	.45
JUL 7	.22	.32	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35
JUL 17	.25	.30	.48	.48	.48	.55	.56	.56	.56	.56	.56	.56
JUL 25	.15	.25	.40	.45	.45	.45	.45	.45	.45	.45	.45	.45
AUG 7	.19	.36	.41	.51	.68	.78	.80	.82	.89	.93	1.01	1.05
AUG 27	.22	.37	.42	.55	.63	.64	.64	.64	.81	.82	.82	.82
SEP 19	.23	.44	.49	.57	.67	.72	.73	.74	.74	.78	.80	.81
SEP 30	.26	.44	.48	.63	.84	.94	1.10	1.26	1.30	1.34	1.38	1.47
NOV 21	.20	.27	.40	.54	.60	.65	.68	.75	.80	.83	.88	.94
TEXAS												
ABILENE												
APR 25	.29	.44	.46	.50	.78	1.08	1.31	1.38	1.41	1.41	1.53	1.59
APR 26	.37	.39	.42	.43	.45	.46	.47	.47	.47	.47	.47	.47
MAY 10	.40	.50	.60	.62	.64	.66	.68	.70	.72	.78	.89	.92
MAY 12	.66	1.02	1.06	1.18	1.35	1.38	1.41	1.50	1.53	1.58	1.68	1.78
JUN 4	.24	.42	.48	.56	.66	.69	1.02	1.26	1.38	1.39	1.39	1.39
SEP 20	.21	.40	.44	.50	.54	.56	.56	.63	.69	.74	.80	.85
OCT 18	.26	.40	.48	.56	.68	.78	.94	1.19	1.24	1.34	1.41	1.50
AMARILLO												
JUN 9	.32	.53	.58	.62	.72	.74	.74	.74	.74	.74	1.42	1.44
JUN 10	.24	.37	.39	.41	.43	.47	.50	.62	.74	.85	.98	1.09
JUN 24	.52	.88	.96	1.03	1.30	1.46	1.51	1.53	1.55	1.59	1.70	1.76
JUN 25	.22	.36	.46	.50	.68	1.00	1.14	1.25	1.33	1.39	1.42	1.42
JUL 9	.18	.30	.32	.39	.54	.57	.58	.58	.58	.58	.58	.58
AUG 22	.28	.47	.65	.80	1.02	1.09	1.16	1.19	1.20	1.20	1.20	1.20
OCT 17	.18	.30	.40	.46	.52	.63	.66	.67	.69	.73	.79	.80
AUSTIN												
JAN 21	.20	.32	.44	.52	.56	.65	.81	1.00	1.05	1.22	1.30	1.60
APR 26	.20	.30	.37	.43	.46	.53	.57	.64	.71	.76	.77	.77
MAY 11	.25	.42	.60	.72	.91	1.12	1.27	1.36	1.49	1.66	1.70	1.86
MAY 16	.79	*1.44	*1.87	2.23	*2.60	2.73	2.81	2.85	2.85	2.88	2.92	2.99
MAY 18	.44	.67	.74	.89	1.31	1.40	1.45	1.49	1.57	1.64	1.68	1.74
MAY 28	.20	.30	.37	.44	.57	.86	.97	1.02	1.05	1.07	1.09	1.09
AUG 10	.21	.38	.51	.60	.75	.81	.84	.85	.88	.88	.88	.90
SEP 22 T	.30	.60	.85	.90	1.07	M	1.44	1.59	1.77	2.18	2.47	2.78
OCT 18	.16	.30	.40	.52	.76	.92	1.01	1.10	1.13	1.16	1.21	1.24
BROWNSVILLE												
MAY 19	.34	.48	.51	.53	.54	.64	.67	.70	.81	.89	.89	.89
JUL 30	.18	.30	.38	.38	.39	.42	.44	.45	.45	.46	.61	.62
JUL 30	.35	.57	.65	.65	.65	.77	.77	.77	.77	.77	.77	.77
AUG 3	.29	.40	.46	.54	.63	.76	.85	.87	.88	.90	.90	.90
AUG 4	.20	.38	.46	.57	.60	.62	.65	.68	.69	.69	.69	.69
SEP 18	.22	.31	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35
SEP 23	.31	.46	.60	.66	.92	1.10	1.11	1.12	1.12	1.20	1.21	1.21
SEP 23	.28	.34	.35	.35	.36	.48	.53	.59	.63	.65	.67	.69
SEP 24	.30	.51	.61	.72	.86	1.01	1.20	1.23	1.24	1.25	1.90	2.28
TEXAS												
BROWNSVILLE												
NOV 11	.21	.36	.39	.42	.50	.54	.57	.59	.59	.59	.59	.62
NOV 12	.20	.30	.32	.33	.35	.37	.38	.38	.39	.39	.44	.50
NOV 29	.26	.39	.44	.46	.47	.51	.51	.53	.57	.59	.59	.61
CORPUS CHRISTI												
FEB 4	.24	.40	.49	.52	.55	.57	.58	.58	.61	.75	.77	.80
FEB 16	.30	.51	.59	.71	.77	1.12	1.44	1.55	1.83	1.88	1.92	2.01
MAR 30	.22	.35	.40	.41	.42	.43	.43	.43	.44	.47	.50	.50
APR 19	.17	.33	.46	.55	.59	.59	.63	.63	.70	.76	.76	.76
MAY 17	.20	.30	.36	.41	.52	.64	.89	1.13	1.20	1.21	1.29	1.40
MAY 19	.20	.30	.36	.41	.56	.68	.74	.78	.83	.83	.85	.87
JUN 28	.21	.38	.42	.42	.42	.42	.42	.42	.42	.42	.42	.42
JUL 15	.16	.23	.33	.41	.53	.57	.58	.59	.62	.63	.63	.63
JUL 25	.28	.42	.45	.47	.47	.47	.47	.47	.47	.47	.47	.47
NOV 11	.16	.30	.42	.55	.62	.65	.67	.74	.77	.77	.77	.77
DEC 2	.22	.40	.43	.46	.49	.50	.50	.51	.59	.60	.61	.61
DALLAS												
MAR 29	.32	.43	.43	.52	.69	.72	.74	.76	.88	.92	.92	.92
APR 14	.23	.29	.35	.38	.42	.44	.45	.45	.45	.45	.45	.45
APR 26	.25	.32	.34	.36	.39	.42	.50	.57	.65	.70	.75	.78
MAY 10	.27	.42	.47	.58	.92	1.05	1.30	1.49	1.56	1.57	1.69	1.70
MAY 10	.41	.75	.85	1.00	1.37	1.79	1.95	2.06	2.10	2.13	2.18	2.30
MAY 15	.18	.27	.32	.36	.61	.72	.92	.93	.95	.99	1.06	1.15
MAY 19	.36	.53	.56	.62	.63	.64	.67	.70	.71	.71	.71	.71
JUN 5	.23	.33	.34	.36	.38	.39	.42	.42	.43	.43	.43	.43
JUN 13	.27	.45	.51	.68	.75	.75	.75	.75	.75	.78	.78	.78
JUN 22	.27	.30	.31	.33	.34	.35	.36	.39	.39	.39	.39	.39
AUG 22	.25	.36	.37	.43	.50	.51	.53	.54	.55	.56	.56	.57
AUG 31	.21	.36	.45	.53	.65	.67	.68	.77	.79	.81	.82	.83
SEP 21	.20	.32	.45	.55	.82	.97	1.41	1.52	1.82	2.02	2.20	2.34
SEP 21	.31	.43	.46	.57	.69	.74	.74	.75	.75	.75	.75	.75
SEP 21	.30	.42	.43	.44	.52	.60	.65	.74	.79	.79	.79	.79
OCT 18	.19	.34	.38	.43	.44	.55	.57	.60	.63	.66	.76	.85
DEL RIO												
APR 25	.55	.85	.86	.92	.93	.94	.95	.95	.95	1.00	1.00	1.01
APR 27	.25	.36	.36	.38	.38	.38	.39	.39	.39	.39	.39	.39
MAY 17	.21	.41	.50	.57	.69	.75	.75	.75	.75	.75	.75	.75
JUN 11	.20	.35	.37	.48	.53	.55	.60	.72	.73	.76	.79	.79
JUL 26	.20	.33	.36	.36	.37	.38	.38	.38	.38	.38	.38	.38
SEP 18	.25	.40	.41	.46	.54	.57	.58	.58	.60	.60	.62	.63
OCT 18	.23	.33	.35	.38	.40	.41	.41	.43	.43	.43	.43	.43
NOV 8	.25	.33	.48	.51	.58	.60	.71	.75	.78	.85	.90	.98
EL PASO												
						NONE						
FORT WORTH												
FEB 8	.18	.32	.40	.49	.64	.67	.70	.85	1.01	1.07	1.23	1.37
MAR 29	.26	.29	.29	.30	.30	.30	.30	.30	.30	.30	.30	.30
APR 14	.17	.30	.35	.40	.44	.46	.47	.47	.47	.47	.47	.47
APR 26	.21	.40	.42	.44	.47	.55	.60	.68	.76	.84	.99	1.01
MAY 10	.18	.33	.39	.47	.71	.89	1.07	1.17	1.28	1.30	1.30	1.30
MAY 10	.46	.87	.95	1.12	1.53	1.87	2.33	2.60	2.67	2.78	2.89	2.95
MAY 15	.22	.35	.38	.43	.52	.56	.65	.72	.72	.75	.82	.85
JUN 13	.20	.38	.43	.48	.51	.53	.53	.53	.54	.54	.54	.54
AUG 24	.21	.36	.39	.46	.60	.66	.70	.73	.75	.75	.76	.79
AUG 31	.23	.39	.44	.44	.45	.46	.46	.50	.51	.52	.54	.55
SEP 21	.22	.40	.50	.65	.95	1.15	1.35	1.60	1.80	1.94	2.28	2.40
SEP 21	.30	.60	.75	.92	1.21	1.25	1.27	1.27	1.28	1.28	1.29	1.29
OCT 18	.33	.59	.64	.68	.81	.84	.90	.93	.99	1.03	1.20	1.22
GALVESTON U												
JUN 6	.19	.34	.42	.48	.61	.73	.74	.78	.78	.78	.78	.79
JUN 29	.28	.56	.72	.89	1.23	1.32	1.32	1.32	1.32	1.32	1.32	1.32
AUG 4	.26	.45	.57	.67	.71	.71	.73	1.10	1.16	1.41	1.45	1.45
AUG 5	.19	.27	.35	.42	.57	.78	.90	1.00	1.04	1.07	1.19	1.28
AUG 22	.38	.63	.77	.87	.99	.96	.96	.96	.96	.96	.96	.96
SEP 1	.25	.42	.65	.80	1.01	1.09	1.11	1.20	1.21	1.21	1.21	1.22
SEP 19	.20	.33	.35	.36	.36	.36	.36	.36	.36	.36	.39	.39
SEP 22	.23	.41	.53	.65	.75	.79	.80	1.01	1.03	1.04	1.07	1.12
OCT 18	.16	.30	.45	.48	.64	.72	.77	.80	.83	.86	.90	.94
DEC 3	.48	.87	1.13	1.21	1.34	1.58	1.73	1.86	2.02	2.14	2.28	2.39
DEC 18	.28	.45	.47	.54	.65	.74	.82	.88	.99	1.21	1.34	1.46
HOUSTON U												
JAN 22	.47	.80	.89	.91	.96	1.00	1.05	1.12	1.17	1.25	1.29	1.34
FEB 11	.28	.46	.50	.51	.53	.54	.54	.54	.54	.55	.55	.56
APR 19	.16	.27	.35	.40	.42	.43	.43	.44	.44	.45	.45	.45
MAY 18	.20	.37	.46	.64	.73	.83	.87	1.11	1.23	1.33	1.64	1.81
JUL 5	.33	.47	.55	.65	.74	.86	.87	.87	.87	.87	.87	.87
JUL 22	.30	.56	.57	.58	.58	.58	.58	.58	.58	.58	.58	.58
JUL 29	.24	.42	.58	.77	.90	.95	.95	.96	.96	.96	1.02	1.07
AUG 11	.24	.36	.47	.49	.72	.93	1.03	1.03	1.03	1.04	1.04	1.04
SEP 20	.25	.29	.34	.36	.37	.38	.38	.38	.38	.38	.38	.38
SEP 22	.45	.69	.85	.96	1.06	1.66	2.05	2.46	2.70	2.86	2.89	2.93
OCT 18	.27	.50	.72	.94	1.32	1.66	1.84	1.89	1.95	2.01	2.10	2.19
DEC 3	.17	.26	.40	.48	.66	.88	1.04	1.14	1.18	1.23	1.32	1.39
LUBBOCK												
JUL 15	.20	.35	.42	.47	.62	.74	.77	.77	.77	.77	.77	.77
JUL 28	.19	.31	.39	.44	.46	.46	.62	.70	.70	.70	.70	.70
SEP 18	.30	.50	.63	.70	.96	1.19	1.25	1.39	1.42	1.45	1.53	1.68
SEP 18	.20	.34	.38	.42	.53	.69	.79	.78	.78	.78	.78	.97
SEP 20	.38	.52	.62	.70	.98	1.15	1.36	1.38	1.38	1.38	1.38	1.38
MIDLAND												
MAY 13	.46	.51	.54	.58	.59	.59	.59	.59	.66	.66	.96	1.25
JUN 11	.26	.38	.52	.59	.60	.60	.60	.61	.63	.66	.71	.71
AUG 15	*.67	*1.19	*1.60	1.89	*2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09
OCT 17	.49	.86	.90	.92	.97	1.06	1.13	1.20	1.34	1.36	1.40	1.41
PORT ARTHUR												
MAR 1	.30	.40	.42	.42	.43	.43	.43	.43	.43	.43	.43	.44
MAY 20	.35	.62	.84	1.01	1.28	1.50	1.61	1.66	1.69	1.75	1.84	1.88
JUN 6	.34	.56	.71	.82	1.02	1.16	1.24	1.54	1.68	1.69	1.71	1.73
JUL 5	.25	.40	.43	.45	.45	.45	.45	.45	.45	.45	.45	.45
JUL 14	.26	.41	.51	.57	.63	.71	.76	.77	.77	.77	.77	.77
JUL 29	.28	.41	.42	.43	.43	.43	.46	.46	.46	.46	.46	.46
AUG 5	.45	.61	.74	.78	.80	.80	.82	.83	.85	.85	.85	.85
SEP 5	.32	.49	.61	.67	.72	.72	.72	.72	.72	.72	.72	.72
SEP 16	.32	.44	.48	.48	.51	.53	.53	.53	.53	.53	.53	.53
SEP 19	.27	.30	.31	.32	.33	.33	.34	.34	.34	.34	.34	.34
SEP 21	.24	.40	.54	.63	.65	.65	.74	.97	1.04	1.12	1.25	1.46

T Clock malfunction
M No record

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
TEXAS												
SAN ANGELO												
MAY 14	.34	.51	.60	.72	.84	.94	1.08	1.37	1.50	1.57	1.64	1.65
JUN 5	.22	.28	.31	.40	.59	.89	.96	1.02	1.14	1.16	1.19	1.21
AUG 21	.30	.54	.58	.70	.90	.93	.94	.96	.97	.97	.97	.97
AUG 25	.22	.29	.34	.38	.64	.70	.76	.98	.98	.98	.98	.98
SEP 1	.21	.31	.37	.41	.44	.48	.60	.64	.67	.67	.68	.68
OCT 4	.15	.29	.32	.42	.49	.52	.54	.57	.63	.67	.70	.71
OCT 18	.26	.43	.48	.72	.79	1.02	1.13	1.16	1.18	1.20	1.27	1.32
SAN ANTONIO												
JAN 21	.20	.33	.45	.54	.66	.72	.79	.80	.80	.80	.80	.82
MAR 30	.20	.33	.41	.42	.43	.45	.46	.49	.56	.58	.59	.62
APR 26	.39	.52	.58	.64	.73	.73	.73	.75	.80	.84	.86	.87
MAY 9	.22	.33	.45	.50	.54	.56	.58	.62	.66	.67	.71	.84
MAY 11	.22	.32	.43	.58	.68	.74	.77	.77	.77	.78	.84	.84
JUN 5	.30	.52	.73	.90	1.14	1.36	1.39	1.42	1.46	1.47	1.48	1.50
JUN 19	.21	.34	.41	.49	.60	.68	.70	.70	.70	.70	.70	.70
AUG 6	.20	.32	.39	.45	.49	.67	.86	.87	.87	.87	.87	.87
OCT 17	.28	.29	.29	.29	.29	.29	.29	.29	.29	.29	.29	.29
DEC 2	.19	.31	.41	.47	.61	.84	.96	1.06	1.14	1.21	1.33	1.45
VICTORIA												
MAY 17	.34	.52	.55	.57	.60	.65	.74	.78	.79	.79	.79	.79
MAY 18	.47	.65	.65	.65	.65	.65	.65	.65	.65	.65	.65	.65
JUN 6	.48	.58	.74	1.03	1.29	1.47	1.70	1.80	1.80	1.80	1.80	1.80
JUN 21	.35	.42	.43	.47	.47	.47	.47	.47	.47	.47	.47	.47
SEP 22	.60	.85	.87	.95	1.57	1.64	1.66	1.67	1.67	1.67	1.67	1.67
SEP 23	.50	.75	.87	1.00	1.07	1.08	1.09	1.12	1.12	1.12	1.12	1.12
OCT 18	.30	.55	.80	1.10	1.25	1.67	1.91	2.18	2.23	2.26	2.27	2.30
WACO												
MAR 16	.35	.57	.58	.59	.61	.61	.61	.61	.61	.61	.61	.61
MAR 30	.20	.34	.36	.42	.57	.62	.71	.80	.85	.87	1.08	1.23
APR 26	.31	.41	.42	.43	.44	.45	.46	.70	.73	.76	.80	.85
MAY 9	.60	*1.20	1.40	1.50	1.90	2.01	2.34	2.82	3.05	3.25	3.30	3.30
MAY 10	.40	.74	.86	.99	1.18	1.48	1.62	1.91	2.11	2.17	2.28	2.38
MAY 14	.45	.70	.72	.73	.77	.80	.83	.87	1.16	1.33	1.46	1.53
MAY 16	.29	.58	.69	.80	1.05	1.14	1.16	1.17	1.20	1.21	1.22	1.23
MAY 19	.30	.55	.65	.85	.95	1.00	1.05	1.05	1.05	1.05	1.05	1.05
MAY 23	.26	.32	.32	.32	.32	.32	.32	.32	.32	.40	.63	.63
MAY 28	.35	.55	.65	.80	1.30	1.45	1.50	1.55	1.55	1.55	1.63	1.63
SEP 1	.25	.50	.55	.66	.70	.74	.78	.80	.80	.83	.89	.93
SEP 19	.33	.47	.49	.51	.55	.55	.55	.55	.55	.55	.55	.55
OCT 18	.35	.60	.65	.77	.90	1.15	1.20	1.21	1.26	1.28	1.36	1.45
NOV 3	.22	.40	.45	.47	.62	.66	.75	1.05	1.30	1.40	1.53	1.70
WICHITA FALLS												
APR 10	.13	.25	.34	.42	.44	.44	.44	.44	.44	.44	.44	.44
APR 14	.27	.36	.43	.53	.60	.64	.64	.64	.64	.64	.64	.64
APR 14	.35	.55	.59	.61	.62	.62	.62	.62	.62	.62	.62	.62
MAY 10	.35	.60	.67	.72	.74	.75	.78	.84	.87	.89	.94	.94
MAY 13	.25	.44	.53	.55	.57	.58	.61	.61	.73	.76	.78	.80
MAY 19	.20	.31	.40	.42	.44	.48	.52	.60	.60	.61	.65	.74
MAY 26	.25	.37	.46	.53	.65	.71	.73	.75	.75	.75	.75	.75
JUN 13	.27	.42	.56	.64	.86	.89	.93	1.23	1.36	1.38	1.38	1.38
SEP 18	.26	.44	.60	.77	1.10	1.13	1.13	1.13	1.14	1.14	1.15	1.15
OCT 18	.13	.25	.35	.40	.50	.75	.95	1.13	1.26	1.30	1.42	1.51
UTAH												
MILFORD						NONE						
SALT LAKE CITY						NONE						
WENDOVER						NONE						
VERMONT												
BURLINGTON												
JUN 23	.39	.53	.62	.67	.68	.68	.68	.68	.68	.68	.68	.68
AUG 6	.22	.34	.40	.41	.42	.42	.43	.43	.43	.43	.43	.43
AUG 8	.32	.56	.74	.81	.83	.86	.87	.88	.88	.89	.89	.90
AUG 18	.39	.46	.47	.48	.49	.53	.55	.59	.60	.60	.61	.61
VIRGINIA												
LYNCHBURG												
JUL 7	.23	.35	.46	.47	.48	.49	.52	.58	.59	.59	.59	.59
AUG 6	.35	.60	.77	.88	.99	1.04	1.07	1.08	1.16	1.20	1.21	1.21
AUG 17	.20	.27	.40	.43	.44	.45	.45	.45	.45	.45	.45	.45
AUG 19	.27	.32	.35	.36	.36	.36	.36	.36	.36	.36	.36	.36
OCT 1	.24	.42	.54	.67	.76	.84	.84	.84	.84	.84	.85	.92
NORFOLK												
MAY 26	.25	.40	.48	.51	.53	.53	.53	.53	.53	.53	.53	.53
AUG 18	.45	.75	.91	.97	.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AUG 23	.25	.36	.40	.49	.67	.72	.73	.70	.73	.70	.70	.73
RICHMOND												
APR 27	.26	.42	.47	.51	.54	.56	.58	.68	.74	.78	.82	.82
JUL 4	.28	.43	.57	.64	.72	.85	.94	1.09	1.10	1.10	1.10	1.10
JUL 5	.25	.35	.44	.48	.49	.49	.49	.49	.49	.49	.49	.49
JUL 7	.26	.41	.47	.48	.49	.50	.51	.51	.51	.51	.51	.51
JUL 25	.60	.89	1.13	1.41	1.72	2.04	2.43	2.55	2.58	2.59	2.63	2.65
AUG 26	.20	.34	.36	.36	.37	.37	.37	.37	.37	.37	.37	.37
SEP 13	.31	.57	.78	1.02	1.23	1.44	1.64	1.86	1.92	1.93	1.95	1.98
SEP 16	.31	.41	.45	.53	.85	1.03	1.05	1.06	1.06	1.06	1.06	1.06
SEP 24	.19	.28	.43	.45	.49	.53	.57	.67	.69	.72	.73	.73
ROANOKE												
MAY 7	.50	.54	.64	.68	.68	.68	.68	.68	.68	.68	.68	.68
MAY 25	.40	.40	.40	.40	.54	.64	.64	.85	1.03	1.03	1.03	1.03
JUL 4	.20	.40	.46	.60	.78	.93	1.06	1.06	1.06	1.06	1.06	1.06
JUL 7	.30	.40	.44	.50	.59	.59	.60	.60	.60	.60	.60	.60
JUL 11	.15	.30	.44	.49	.78	1.02	1.24	1.44	1.76	1.80	1.81	1.81
JUL 19	.38	.42	.44	.46	.48	.54	.60	.62	.62	.62	.62	.62
SEP 23	.20	.30	.34	.38	.42	.44	.44	.44	.44	.44	.44	.44
VIRGINIA												
WASH NATL AP												
MAR 5	.22	.32	.35	.37	.41	.49	.54	.60	.69	.72	.78	.84
JUN 2	.30	.36	.41	.46	.51	.62	.65	.65	.66	.66	.66	.66
JUN 24	.22	.32	.34	.36	.37	.38	.39	.38	.38	.38	.38	.38
JUL 18	.40	.78	.84	1.04	1.30	1.39	1.43	1.45	1.45	1.45	1.45	1.45
AUG 1	.34	.44	.48	.54	.77	.78	.79	.83	.89	.89	.89	1.06
AUG 18	.28	.45	.48	.53	.56	.57	.57	.57	.57	.57	.57	.57
AUG 26	.30	.55	.62	.70	.80	.86	.88	.89	.89	.89	.90	.90
SEP 12	.26	.45	.46	.48	.51	.51	.54	.54	.56	.56	.58	.58
WASHINGTON												
OLYMPIA						NONE						
SEATTLE TACOMA						NONE						
SPOKANE						NONE						
STAMPEDE PASS						NONE						
TATOOSH ISLAND R						NONE						
WALLA WALLA U												
AUG 25	.28	.50	.62	.72	.91	.93	.93	.93	.93	.93	.93	1.05
YAKIMA						NONE						
WEST INDIES												
SAN JUAN P.R.												
APR 27	.34	.44	.57	.65	.78	.84	.86	.86	.86	.86	.86	.99
MAY 13	.22	.36	.42	.43	.45	.45	.45	.45	.50	.70	.71	.73
MAY 14	.40	.75	.92	.95	1.04	1.14	1.14	1.20	1.23	1.25	1.25	1.25
MAY 17	.32	.60	.81	.82	.84	1.02	1.06	1.11	1.16	1.23	1.35	1.40
MAY 18	.25	.40	.50	.55	.59	.69	.72	.75	.75	.76	.83	.89
MAY 19	.22	.36	.44	.60	.66	.72	.72	.72	.76	.76	.76	.76
MAY 19	.15	.24	.35	.43	.61	.63	.66	.70	.70	.73	.73	.73
JUN 15	.43	.72	.91	1.15	1.43	1.84	1.95	2.26	2.55	2.72	2.74	2.74
JUN 28	.25	.44	.60	.75	.92	.98	.98	.98	.98	.98	.98	.98
JUL 1	.30	.34	.41	.44	.45	.74	.81	.82	1.08	1.15	1.23	1.23
JUL 15	.29	.47	.62	.77	.86	.88	.89	.89	.89	.90	.90	.90
AUG 10	.26	.43	.59	.62	.66	.76	.78	.91	1.32	1.33	1.33	1.33
AUG 22	.17	.28	.42	.48	.69	.75	.83	.84	.85	.86	.86	.87
SEP 23	.25	.45	.65	.75	.82	.82	.84	.84	.85	.86	.86	1.04
NOV 25	.27	.46	.68	.85	.92	.96	.99	1.02	1.06	1.07	1.15	1.16
DEC 10	.29	.52	.61	.68	.71	.71	.88	1.17	1.18	1.21	1.22	1.23
DEC 11	.30	.42	.48	.53	.60	.69	.73	.78	.81	.91	.92	.93
WEST VIRGINIA												
BECKLEY												
MAY 6	.23	.34	.35	.35	.37	.42	.44	.46	.46	.46	.46	.48
JUN 24	.21	.33	.34	.35	.36	.38	.38	.38	.38	.38	.38	.38
JUL 5	.26	.37	.37	.38	.40	.44	.44	.44	.44	.44	.44	.44
AUG 21	.20	.35	.40	.43	.45	.47	.49	.50	.52	.53	.53	.53
SEP 15	.25	.30	.34	.34	.34	.34	.34	.34	.34	.34	.34	.34
CHARLESTON												
APR 8	.25	.30	.31	.32	.35	.38	.42	.46	.49	.53	.56	.63
MAY 23	.35	.60	.67	.70	.73	.75	.77	.79	.80	.80	.81	.81
JUN 2	.23	.35	.37	.38	.41	.43	.44	.70	.74	.78	.88	.88
AUG 1	.28	.28	.28	.33	.33	.33	.33	.33	.33	.33	.33	.33
AUG 7	.25	.40	.41	.42	.42	.44	.45	.45	.50	.55	.55	.55
AUG 18	.17	.30	.41	.48	.49	.51	.54	.55	.55	.55	.55	.55
AUG 19	.23	.32	.35	.36	.37	.38	.38	.38	.38	.38	.38	.38
AUG 25	.53	.57	.68	.86	.91	.91	.92	.93	.93	.93	.93	.93
SEP 24	.37	.52	.62	.64	.69	.73	.83	.89	.89	.90	.91	.92
ELKINS												
APR 25	.23	.31	.34	.38	.39	.45	.53	.55	.59	.59	.59	.59
JUN 12	.25	.26	.26	.26	.26	.27	.27	.27	.27	.27	.27	.27
JUN 23	.25	.34	.35	.36	.37	.37	.37	.37	.37	.37	.37	.37
AUG 27	.33	.47	.49	.49	.49	.49	.49	.49	.49	.49	.49	.51
HUNTINGTON												
MAY 5	.27	.27	.27	.27	.27	.27	.27	.27	.29	.29	.29	.29
JUN 7	.26	.50	.55	.56	.60	.60	.60	.60	.60	.60	.60	.60
JUN 11	.35	.54	.60	.75	.85	.87	.90	.90	.90	.90	.90	.90
JUN 29	.26	.47	.52	.52	.52	.60	.62	.62	.62	.62	.62	.62
JUL 3	.25	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45
JUL 7	.27	.34	.34	.34	.34	.34	.34	.35	.35	.35	.35	.35
JUL 11	.30	.50	.53	.57	.65	.65	.65	.70	.71	.71	.71	.71
JUL 23	.27	.45	.50	.59	.70	.86	.93	.97	1.17	1.22	1.24	1.30
AUG 7	.32	.47	.49	.49	.49	.49	.49	.49	.49	.49	.49	.49
AUG 7	.35	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36
AUG 16	.27	.48	.50	.62	.67	.67	.67	.67	.67	.67	.67	.67
AUG 22	.25	.30	.35	.40	.45	.45	.46	.46	.46	.46	.46	.46
AUG 31	.40	.61	.63	.65	.67	.70	.73	.74	.74	.75	.75	.76
NOV 27	.26	.31	.36	.40	.46	.50	.56	.60	.65	.68	.70	.70
PARKERSBURG U												
JUL 5	.21	.37	.45	.52	.53	.53	.53	.53	.53	.53	.67	.81
JUL 18	.17	.31	.37	.39	.55	.55	.57	.57	.57	.57	.57	.57
AUG 17	.21	.33	.41	.42	.42	.42	.42	.42	.42	.42	.42	.42
WISCONSIN												
GREEN BAY												
MAY 8	.17	.31	.33	.40	.53	.62	.64	.70	.81	.84	.87	.87
MAY 15	.53	.54	.55	.55	.55	.55	.58	.59	.61	.68	.69	.78
JUN 20	.35	.50	.52	.55	.58	.59	.61	.65	.70	.72	.73	.74
AUG 6	.32	.34	.35	.42	.57	.55	.55	.55	.55	.55	.55	.55
SEP 14	.23	.39	.40	.42	.46	.46	.46	.46	.46	.46	.46	.46
SEP 20	.26	.45	.50	.58	.63	.65	.64	.73	.74	.77	.82	.84
SEP 30	.25	.35	.40	.42	.44	.44	.45	.45	.45	.45	.45	.45

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
WISCONSIN												
LA CROSSE												
MAY 25	.29	.35	.38	.39	.41	.44	.49	.53	.66	.78	.91	.99
JUN 20	.35	.37	.38	.38	.39	.40	.40	.40	.40	.40	.40	.40
JUN 22	.33	.52	.55	.57	.61	.66	.68	.69	.69	.69	.69	.69
JUN 22	.29	.43	.46	.53	.69	.76	.81	.87	.87	.88	.89	.89
JUL 8	.44	.70	.79	.84	.90	.94	.99	1.05	1.11	1.17	1.25	1.37
SEP 9	.28	.35	.38	.42	.61	.73	.86	.93	.97	.99	1.02	1.02
SEP 19	.29	.35	.39	.44	.51	.54	.59	.68	.76	.82	.93	.97
MADISON												
MAY 25	.39	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40
JUN 22	.20	.35	.52	.53	.53	.53	.53	.53	.53	.53	.53	.53
JUL 17	.20	.31	.35	.47	.60	.63	.64	.64	.64	.64	.64	.64
AUG 8	.30	.48	.60	.67	1.02	1.40	1.70	2.28	2.40	2.40	2.45	2.50
AUG 18	.45	.86	1.17	1.23	1.24	1.25	1.26	1.28	1.30	1.32	1.32	1.32
SEP 7	.17	.32	.40	.50	.71	.83	.86	.94	.95	.97	1.00	1.00
SEP 9	.37	.45	.71	.78	.79	1.10	1.36	1.40	1.40	1.41	1.41	1.42
NOV 26	.33	.38	.39	.39	.40	.40	.40	.40	.40	.40	.40	.40
MILWAUKEE												
JUL 16	.14	.24	.34	.40	.52	.72	.87	1.13	1.19	1.25	1.31	1.32
AUG 16	.26	.50	.60	.63	.63	.63	.63	.63	.63	.63	.63	.63
AUG 25	.36	.63	.74	.76	.80	.85	.87	.90	.91	.91	.91	.91
SEP 9	.32	.50	.66	.74	.84	1.01	1.14	1.20	1.22	1.28	1.29	1.32
SEP 18	.26	.37	.39	.43	.43	.43	.46	.50	.52	.53	.53	.53
SEP 20	.26	.46	.46	.46	.46	.47	.47	.47	.47	.51	.54	.57
WYOMING												
CASPER												
MAY 23	.20	.35	.54	.60	.66	.78*	.82	.84	.84	.84	.84	.84
CHEYENNE												
JUN 9	.18	.30	.42	.52	.70	.79	.80	.83	.85	.86	.86	.87
JUN 24	.25	.34	.50	.53	.53	.53	.53	.53	.53	.53	.53	.53
AUG 3	.40	.60	.77	.77	.77	.77	.77	M	M	M	M	.90
AUG 18	.19	.32	.46	.50	.50	.50	.50	.50	.50	.50	.50	.50
LANDER						NONE						
SHERIDAN												
JUN 23	.22	.30	.34	.36	.40	.40	.40	.40	.40	.40	.40	.40
CORRECTED DATA 1964												
ARKANSAS												
TEXARKANA												
JUN 16	.25	.49	.50	.61	.94	1.23	1.45	1.54	1.55	1.57	1.58	1.58
JUL 22	.26	.45	.69	.76	.88	.90	1.00	1.02	1.02	1.02	1.02	1.02

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

* Maximum of record for this duration and station. Period of record is that compiled in Weather Bureau Technical Paper No. 2, revised, plus 1962 and 1963 data. New records are denoted only for 5, 10, 15, 30, 60, 120, and 180 minutes. The continuity of record at stations that have changed location is described on page 2 of the above reference.

M No record

SUNSHINE, AMOUNT AND PERCENT

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible
ALABAMA																										
BIRMINGHAM	175	55	160	52	130	35	200	51	296	69	253	59	187	43	214	52	197	53	259	74	165	53	212	68	2446	55
MONTGOMERY	187	59	160	52	121	33	204	52	292	68	188	44	276	63	286	69	227	61	224	64	145	46	186	60	2495	56
ALASKA																										
ANCHORAGE	98	48	98	39	89	24	238	54	251	46	153	27	155	27	190	39	68	18	138	44	109	50	91	52	1676	37
JUNEAU	75	34	92	35	185	50	225	52	222	43	210	39	202	37	259	54	150	39	36	11	112	47	33	16	1800	40
NOME	77	46	174	73	136	37	215	47	208	36	230	36	162	26	100	20	44	11	95	32	32	17	62	48	1534	34
ARIZONA																										
PHOENIX	261	82	262	85	320	86	301	77	391	91	407	95	375	86	388	94	337	91	324	92	193	62	202	65	3760	85
TUCSON	263	82	263	85	300	81	337	87	402	94	393	92	323	74	362	88	308	83	325	92	215	68	194	62	3682	83
YUMA	256	80	275	89	350	94	355	91	413	96	409	96	364	84	365	88	352	95	337	96	182	58	209	67	3866	87
ARKANSAS																										
FORT SMITH	194	62	199	65	169	46	276	70	268	62	309	71	323	73	308	74	259	70	247	71	130	42	136	44	2817	63
LITTLE ROCK	172	55	183	60	143	38	253	64	285	66	334	77	326	74	329	79	231	62	234	67	122	39	160	52	2771	62
CALIFORNIA																										
EUREKA U	104	35	181	61	224	60	162	41	286	64	213	47	212	46	224	53	200	53	162	47	134	45	150	52	2250	50
FRESNO	115	37	222	73	297	80	288	73	420	96	414	94	415	93	393	94	349	94	337	97	170	56	123	41	3545	80
LOS ANGELES U	206	65	236	77	178	48	204	52	217	50	163	38	318	72	296	71	257	69	271	77	126	40	194	63	2667	60
RED BLUFF	134	45	238	80	247	67	207	52	405	91	409	91	431	95	346	81	356	95	309	89	120	40	142	49	3344	75
SACRAMENTO	98	32	243	81	221	60	264	67	411	93	422	95	435	96	386	91	341	91	337	97	187	62	124	42	3469	78
SAN DIEGO	247	77	256	83	257	69	258	66	280	65	203	47	296	68	296	72	273	73	273	77	175	55	202	65	3014	68
SAN FRANCISCO U	164	53	242	80	247	67	213	54	346	79	230	52	303	67	291	69	216	58	253	73	189	62	186	63	2879	65
COLORADO																										
DENVER	220	73	234	78	276	74	258	65	283	64	275	61	307	68	301	71	229	61	308	89	240	80	198	68	3128	70
GRAND JUNCTION	170	56	210	70	245	66	206	52	288	65	280	63	311	69	309	73	236	63	298	86	150	50	152	52	2854	64
PUEBLO	235	77	218	72	261	70	278	70	326	74	326	74	349	77	332	79	259	70	314	90	247	81	217	73	3361	76
CONNECTICUT																										
HARTFORD	175	59	188	63	210	57	248	62	329	73	329	72	301	65	228	53	188	50	220	64	164	56	181	64	2762	62
NEW HAVEN	169	57	187	63	200	54	240	60	330	73	356	79	328	71	279	65	214	57	267	78	186	63	179	62	2936	66
FLORIDA																										
APALACHICOLA U	196	60	136	44	171	46	258	67	354	84	242	58	232	54	236	58	196	53	237	67	178	56	160	50	2596	58
JACKSONVILLE	221	68	158	51	215	58	268	69	375	88	226	54	250	58	248	60	178	48	215	61	205	64	198	63	2757	63
KEY WEST	230	68	217	68	335	90	332	87	363	88	296	72	325	78	302	75	251	68	227	63	265	80	243	74	3384	76
LAKELAND U	224	68	211	67	217	58	318	83	362	86	267	64	264	62	282	69	220	60	243	68	254	79	223	69	3085	69
PENSACOLA	222	69	148	48	169	45	271	70	327	77	254	60	232	54	259	63	218	59	259	73	173	54	161	51	2692	61
TAMPA	227	69	186	59	213	57	291	75	344	82	259	62	216	51	223	55	200	54	207	58	230	71	223	69	2818	63
GEORGIA																										
ATLANTA	185	58	154	50	152	41	243	62	326	76	170	40	188	43	258	62	177	48	244	69	169	54	188	61	2453	55
MACON	204	64	161	52	169	45	212	54	372	87	191	45	243	56	299	72	172	46	240	68	174	55	205	66	2641	59
SAVANNAH	225	70	162	53	211	57	245	63	360	84	217	51	281	65	258	63	195	53	226	64	155	49	166	53	2701	61
HAWAII																										
LIHUE	171	50	181	57	205	55	139	37	160	39	187	46	227	55	272	68	225	61	173	48	84	25	106	32	2128	48
HONOLULU	226	66	263	82	335	90	295	78	225	55	330	82	353	86	347	87	309	84	271	75	189	57	159	47	3302	74
KAHULUI	210	61	187	58	272	73	263	69	242	59	279	75	290	70	304	77	297	81	273	75	167	50	203	60	2987	67
HILO	158	46	162	50	99	26	108	29	82	20	182	45	215	53	200	51	196	53	131	36	54	16	31	9	1618	36
IDAHO																										
BOISE	62	21	183	62	326	88	232	57	308	67	353	77	389	83	339	78	297	79	291	85	128	44	164	59	3070	69
POCATELLO	94	32	209	71	307	83	190	47	261	57	346	75	382	82	344	80	276	74	304	89	127	43	110	39	2949	66
ILLINOIS																										
CAIRO U	170	55	204	67	162	44	231	59	304	69	326	74	339	76	343	82	232	62	267	77	146	48	156	52	2880	65
CHICAGO MIDWAY	143	48	165	56	134	36	202	50	315	70	355	78	350	76	276	64	198	53	214	62	100	34	72	25	2524	58
MOLINE	147	49	178	60	156	42	168	42	288	64	314	69	329	72	261	61	174	47	215	62	125	42	98	34	2452	55
PEORIA	123	41	179	60	165	45	181	45	318	71	303	67	291	64	251	59	179	48	229	66	156	52	124	43	2500	56
SPRINGFIELD	124	41	184	61	170	46	173	43	288	65	318	71	326	72	279	66	233	62	258	75	156	52	132	45	2641	59
INDIANA																										
EVANSVILLE	149	49	206	68	164	44	198	50	289	66	256	58	321	71	310	74	245	66	278	80	156	51	145	49	2717	61
FORT WAYNE	125	42	157	53	141	38	206	51	310	69	333	74	339	74	247	58	187	50	210	61	130	44	77	27	2463	55
INDIANAPOLIS	171	57	207	69	161	43	199	50	340	76	337	75	355	78	303	71	223	60	225	65	135	45	103	35	2759	62
IOWA																										
DES MOINES	151	51	186	63	206	56	183	46	276	61	280	62	317	69	269	63	140	37	234	68	138	47	144	50	2524	57
SIOUX CITY	184	62	217	73	205	55	194	48	287	63	227	50	287	62	280	65	130	35	279	81	184	63	133	47	2605	58
KANSAS																										
CONCORDIA	160	53	188	63	221	60	224	56	287	64	296	66	369	81	303	71	172	46	261	75	191	64	153	52	2825	63
DODGE CITY	189	62	226	75	261	70	279	71	302	69	295	67	367	82	292	69	265	71	302	87	187	61	211	71	3176	71
TOPEKA	173	57	202	67	184	50	236	59	296	67	278	62	335	74	300	71	217	58	272	79	186	62	131	45	2810	63
WICHITA	171	56	204	67	228	61	258	65	249	57	266	60	348	78	290	69	229	61	260	75	130	43	117	39	2749	62
KENTUCKY																										
LOUISVILLE	148	48	190	63	174	47	243	61	331	75	294	66	322	72	290	69	215	58	240	69	129	43	144	48	2719	61
LOUISIANA																										
SHREVEPORT	203	64	151	47	160	43	225	58	189	44	285	67	356	82	303	73	243	65	252	71	145	46	167	53	2679	60
MAINE																										
PORTLAND	171	59	178	61	233	63	261	65	289	63	296	64	313	67	258	60	244	65	196	57	139	48	147	53	2724	61
MARYLAND																										
BALTIMORE	184	61	203	67	196	53	190	48	238	53	269	60	238	52	227	54	223	60	237	68	191	63	134	46	2529	57
MASSACHUSETTS																										
BLUE HILL OBS R	147	51	161	56	177	49	215	55	284	65	309	70	299	67	268	65	200	55	225	68	161	57	139	51	2583	60
BOSTON	168	57	174	59	197	53	243	60	304	67	329	72	322	70	279	65	224	60	230	67	171	58	157	55	2796	63
NANTUCKET	132	44	158	53	243	65	225	56	285	63	297	66	274	60	284	67	199	53	215	62	120	41	148	52	2580	58
MICHIGAN																										
ALPENA	118	41	116	40	213	58	233	57	342	74	385	82	347	74	249	57	185	49	146	43	68	24	44	16	2445	55
DETROIT	126	43	141	48	118	32	190	47	283	63	342	75	332	72	215	50	220	59	170	50	103	35	55	19	2295	51
GRAND RAPIDS	88	30	104	35	94	26	187	47	277	61	323	70	306	66	207	48	160	43	175	51	104	36	84	30	2109	47
LANSING	142	48	165	56	166	45	187	46	272	60	321	70	314	68	212	49	167	44	164	48	80	27	58	21	2245	50
MARQUETTE U	128	46	165	57	204	55	224	55	308	66	357	76	342	72	283	65	160	42	162	48	82	29	52	19	2468	55
SAULT STE MARIE	93	33	114	39	215	58	233	57	278	60	308	65	297	62	223	51	118	31	116	34	86	30	62	23	2141	48
MINNESOTA																										
DULUTH	161	58	175	58	189	51	194	48	235	50	302	64	320	67	274	62	107	28	177	52	107	38	65	24	2305	52
MINNEAPOLIS	158	55	175	60	186	50	147	36	181	39	328	70	338	72	260	60	101	27	204	60	124	43	100	36	2298	51

SUNSHINE, AMOUNT AND PERCENT

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible
MISSISSIPPI																										
JACKSON	190	59	162	52	162	44	240	62	288	67	282	66	269	62	267	65	202	54	253	72	171	54	176	56	2659	60
VICKSBURG U	215	67	173	56	187	50	285	73	318	74	347	81	343	79	306	74	210	56	245	69	132	42	186	60	2946	66
MISSOURI																										
COLUMBIA	168	55	182	61	175	47	214	54	290	65	328	74	323	71	292	69	241	65	270	78	200	66	183	62	2863	64
KANSAS CITY	185	61	218	73	253	68	248	63	308	69	289	65	345	76	317	75	240	64	257	74	197	65	145	49	3002	67
ST LOUIS	134	44	175	58	173	47	215	54	286	65	275	62	318	71	297	70	199	53	246	71	154	51	150	51	2621	59
SPRINGFIELD	165	54	201	66	169	45	264	67	289	66	247	56	254	57	275	65	218	58	225	65	127	41	159	53	2592	58
MONTANA																										
BILLINGS	174	62	173	60	256	69	204	50	256	55	293	62	364	77	324	74	150	40	235	69	145	51	143	53	2718	61
GREAT FALLS	137	49	130	45	307	83	276	67	332	71	359	75	422	88	364	83	162	43	238	71	126	45	146	55	2998	67
HAVRE	152	56	168	59	278	75	233	57	309	65	326	68	418	86	356	80	218	58	234	70	132	48	115	44	2939	66
HELENA	111	39	156	54	253	68	226	55	281	60	331	70	388	81	306	70	155	41	232	69	109	38	85	32	2632	59
MISSOULA	48	17	79	28	262	71	194	47	259	55	290	61	387	81	300	68	174	46	211	62	77	27	81	30	2360	53
NEBRASKA																										
LINCOLN U	149	50	159	53	-	-	-	-	234	52	212	47	289	63	261	61	124	33	258	75	175	59	144	50	-	-
NORTH PLATTE	175	59	178	60	244	66	239	60	309	69	241	53	327	71	307	72	167	45	287	83	171	58	141	49	2786	63
OMAHA	183	61	183	61	177	48	173	43	263	58	273	60	321	70	315	74	146	39	274	80	176	59	156	54	2639	59
VALENTINE	142	49	222	75	227	61	219	55	281	62	253	55	361	78	345	80	184	49	274	80	200	68	168	60	2876	64
NEVADA																										
ELY	187	62	256	85	296	80	272	68	336	76	348	78	350	77	324	76	305	82	317	92	187	62	199	68	3376	76
LAS VEGAS	245	79	264	87	311	84	288	73	375	86	369	84	356	80	374	89	356	96	322	92	186	60	196	65	3641	82
RENO	215	71	289	96	332	89	354	89	283	63	357	80	430	95	400	94	360	97	342	99	254	84	214	73	3829	86
WINNEMUCCA	75	25	210	70	286	77	170	43	261	58	277	61	342	75	307	72	285	76	289	84	127	43	129	45	2758	62
NEW HAMPSHIRE																										
CONCORD	154	53	182	62	227	61	277	69	306	67	284	62	307	66	226	52	195	52	193	56	149	51	128	46	2629	59
MT WASHINGTON OBS	79	27	77	26	120	32	194	47	201	43	155	33	144	30	107	24	154	40	82	24	60	20	60	21	1431	32
NEW JERSEY																										
ATLANTIC CITY	143	47	181	60	191	51	161	40	286	64	298	67	266	59	290	68	260	70	253	73	167	55	164	56	2658	60
TRENTON U	166	55	199	66	207	56	206	52	316	71	286	64	284	62	252	59	202	54	247	72	165	55	160	55	2689	60
NEW MEXICO																										
ALBUQUERQUE	240	77	239	78	276	74	282	72	353	81	323	74	329	74	332	80	288	77	306	87	214	69	220	72	3402	76
ROSWELL	265	83	246	80	285	77	310	79	328	76	297	69	229	74	312	75	269	72	291	83	189	60	204	66	3226	73
NEW YORK																										
ALBANY	140	48	161	54	193	52	225	56	260	57	267	58	273	59	208	48	157	42	168	49	93	32	82	29	2225	50
BINGHAMTON	99	33	89	30	169	46	186	46	356	79	325	71	366	79	240	56	205	55	162	47	101	34	67	24	2362	53
BUFFALO	84	29	90	31	139	37	184	46	307	68	300	65	316	68	234	54	172	46	125	37	67	23	51	18	2068	46
NEW YORK U	139	46	170	57	209	56	232	58	329	73	316	70	315	69	278	65	208	55	238	69	151	51	123	43	2707	61
ROCHESTER	90	31	98	33	187	51	190	47	326	72	330	72	342	74	261	61	178	47	128	37	62	21	49	17	2239	50
SYRACUSE	104	36	85	29	153	41	189	47	273	60	258	56	276	59	204	47	200	53	132	39	82	28	67	24	2022	45
NORTH CAROLINA																										
ASHEVILLE	192	61	178	58	193	52	265	67	278	64	227	52	235	53	265	63	209	56	248	71	191	62	204	67	2684	60
CAPE HATTERAS R	186	59	194	64	262	71	293	75	326	75	305	70	305	69	317	76	266	72	223	64	169	55	147	48	2992	67
CHARLOTTE	200	64	186	61	184	50	253	65	356	82	262	60	268	61	304	73	230	62	277	79	198	64	219	72	2936	66
GREENSBORO	203	65	174	57	195	53	204	52	288	66	201	46	201	45	287	69	221	59	251	72	177	58	195	64	2597	58
RALEIGH	187	60	182	60	199	54	227	58	313	72	234	54	216	49	264	63	266	71	277	79	196	63	181	60	2741	62
WILMINGTON	227	72	204	67	197	53	261	67	353	82	313	72	284	65	281	68	196	53	232	66	176	56	180	58	2903	65
NORTH DAKOTA																										
BISMARCK	183	65	231	80	219	59	154	38	281	60	287	60	349	73	320	73	141	38	271	80	137	49	147	55	2720	61
FARGO	220	79	180	62	211	57	140	34	233	50	287	61	338	71	269	61	155	41	246	73	119	42	89	33	2487	56
WILLISTON	126	46	182	64	218	59	177	43	267	57	297	62	380	78	319	72	143	38	252	75	119	43	144	55	2624	59
OHIO																										
CINCINNATI OBS	154	51	177	59	158	43	207	52	294	66	254	57	286	63	253	60	181	49	211	61	160	53	135	46	2470	55
CLEVELAND	106	36	128	43	142	38	187	47	272	60	284	63	342	74	233	54	167	45	158	46	88	30	87	30	2194	49
COLUMBUS	117	39	138	46	115	31	175	44	296	66	287	64	307	67	239	56	200	53	201	58	145	48	109	37	2329	52
DAYTON	171	57	169	56	163	44	199	50	335	75	360	80	365	80	307	72	232	62	216	63	141	47	109	37	2767	62
TOLEDO	148	50	147	49	110	30	194	49	299	66	327	72	349	76	235	55	221	59	201	58	132	45	86	30	2449	55
OKLAHOMA																										
OKLAHOMA CITY	207	66	223	73	250	67	291	74	254	58	297	68	325	74	336	81	271	73	245	70	167	54	153	50	3019	68
TULSA	199	64	224	73	177	48	304	77	295	68	337	77	370	83	346	83	298	80	287	82	190	62	159	53	3186	72
OREGON																										
PORTLAND	79	28	113	39	268	73	213	52	293	63	308	66	377	80	310	71	243	65	136	40	70	25	61	23	2470	55
PACIFIC AREA																										
JOHNSTON	207	59	257	79	290	78	346	92	320	80	341	87	321	79	312	79	304	83	209	57	138	41	152	44	3198	72
TAGUAC GUAM R	176	50	215	66	322	86	324	87	278	70	192	50	156	39	206	53	158	43	197	54	186	60	232	66	2641	60
MARCUS ISLAND	129	39	158	50	224	60	222	58	349	85	367	90	365	87	289	72	306	83	243	68	272	82	176	53	3099	70
KOROR R	243	67	211	63	190	51	271	73	208	54	125	33	100	26	230	60	172	47	234	63	179	51	125	35	2289	52
MAJURO	227	62	175	52	296	79	211	57	161	42	173	46	157	41	249	65	191	52	171	46	180	51	208	57	2398	54
PONAPE R	153	42	116	35	226	60	87	24	82	21	135	36	63	16	159	41	105	29	134	36	105	30	197	54	1562	35
TRUK MOEN ISLAND	195	54	223	65	278	74	227	62	243	63	201	53	136	35	252	66	172	47	155	42	190	54	207	57	2480	56
YAP R	110	31	168	51	169	45	212	57	177	46	149	39	54	14	142	37	88	24	64	17	167	48	252	70	1750	40
PENNSYLVANIA																										
HARRISBURG	148	49	183	61	206	56	197	49	267	60	295	66	305	67	268	63	207	55	228	66	129	43	140	48	2571	58
PHILADELPHIA	147	49	175	58	187	51	183	46	267	59	298	66	273	60	278	65	204	55	234	68	143	48	149	51	2538	57
PITTSBURGH	92	31	117	39	139	38	163	41	241	54	277	61	309	68	228	53	227	61	191	55	110	37	84	29	2177	49
PITTSBURG WB CITY	69	23	135	45	173	47	151	38	234	52	273	61	303	66	232	55	190	51	189	55	109	36	86	30	2142	48
READING U	137	46	166	55	170	46	181	46	290	65	297	66	304	67	245	57	193	52	219	63	140	47	128	44	2469	55
SCRANTON	115	39	131	44	171	46	198	49	302	67	330	73	327	71	283	66	177	47	193	56	105	35	100	35	2432	55
RHODE ISLAND																										
PROVIDENCE	156	53	176	59	189	51	225	56	301	67	335	74	317	69	265	62	203	54	224	65	166	56	171	60	2726	61
SOUTH CAROLINA																										
CHARLESTON	180	56	160	52	148	40	213	55	386	90	230	54	243	56	218	53	151	41	203	58	144	46	173	58	2449	55
COLUMBIA	200	63	169	55	174	47	254	65	365	85	255	59	287	65	311	75	250	67	260	74	177	56	191	62	2891	65
GNVLE SPARTANBURG	184	59	164	53	187	50	231	59	319	73	205	47	232	53	286	69	204	55	262	75	164	53	185	60	2622	59
SOUTH DAKOTA																										
HURON	148	51	200	68	200	54	175	43	278	61	252	54	321	68	289	67	129	34	276	81	206	71	155	56	2629	59
RAPID CITY	164	57	208	71	242	65	219	54	229	50	198	43	296	63	284	66	174	46	277	81	156	54	150	54	2596	58
TENNESSEE																										
CHATTANOOGA	196	63	173	56	161	43	244	62	316	73	248	57	262	59	260	62	201	54	242	69	143	46	151	50	2597	58
KNOXVILLE	142	46	136	45	141	38	222	56	252	58	244	56	200	45	177	42	180	48	209	60	161	52	144	47	2207	50
MEMPHIS	191	61	194	63	143	38	268	68	266	61	269	62	324	73	325	78	272	73	285	81	164	53	168	55	2868	64
NASHVILLE	165	53	173	57	155	42	231	59	284	65	297	68	307	69	316	76	228	61	285	82	146	47	151	50	2738	62

SUNSHINE, AMOUNT AND PERCENT

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible
TEXAS																										
ABILENE	221	69	174	56	220	59	262	67	189	44	292	68	381	87	316	77	267	72	253	72	208	66	141	45	2924	66
AMARILLO	259	83	251	82	271	73	298	76	346	80	305	70	367	83	337	81	285	77	287	82	215	69	191	63	3410	77
AUSTIN	209	65	142	46	154	41	167	43	114	27	248	59	376	87	315	77	232	63	207	58	123	39	106	34	2393	54
BROWNSVILLE	231	61	140	44	193	52	272	71	255	61	326	79	344	82	275	68	271	73	224	63	185	57	150	46	2865	65
CORPUS CHRISTI	209	64	145	46	159	43	181	47	115	28	266	64	304	71	253	62	247	67	215	60	164	51	105	32	2363	53
DALLAS	203	64	168	55	169	45	222	57	147	34	253	59	338	77	315	76	285	77	238	68	118	38	153	49	2609	59
EL PASO	253	79	243	78	302	81	310	80	376	88	392	92	373	86	359	87	317	86	325	92	228	72	214	68	3691	83
GALVESTON U	189	58	153	49	195	53	260	67	220	52	297	71	316	74	215	53	232	63	247	69	170	53	162	51	2656	60
HOUSTON	239	74	163	52	224	60	271	70	217	51	295	70	294	68	250	61	243	66	255	72	183	57	177	56	2811	63
PORT ARTHUR	203	63	151	48	183	49	218	56	160	38	292	69	331	77	266	65	259	70	251	71	231	72	175	55	2720	61
SAN ANTONIO	228	70	145	45	222	60	160	41	94	22	241	57	360	84	335	82	297	80	256	72	157	49	124	39	2619	59
UTAH																										
SALT LAKE CITY	72	24	201	67	282	76	236	59	316	70	345	76	389	85	364	85	274	73	308	89	154	52	138	48	3079	69
VERMONT																										
BURLINGTON	148	52	158	54	240	65	241	60	313	68	306	66	308	66	243	56	227	61	127	37	73	25	60	22	2443	55
VIRGINIA																										
LYNCHBURG	179	58	170	56	211	57	209	53	288	66	267	61	294	66	279	66	248	67	244	70	171	56	200	67	2759	62
NORFOLK	169	55	152	50	230	62	214	54	295	67	264	60	234	52	270	64	261	70	232	67	196	64	146	49	2663	60
RICHMOND	186	60	188	62	206	56	204	52	289	66	264	60	267	60	288	68	252	68	250	72	205	67	183	61	2781	62
WASH NATL AP	168	55	182	60	211	57	200	50	273	62	286	64	277	61	264	62	234	63	237	68	164	48	123	42	2621	59
WASHINGTON																										
SEATTLE TACOMA	-	-	-	-	250	68	161	39	197	42	272	57	306	64	241	55	202	54	130	39	50	18	49	18	-	-
SPOKANE	22	8	115	40	278	75	220	54	288	68	348	73	368	76	294	67	247	65	200	59	30	11	38	14	2446	55
TATOOSH ISLAND R	49	18	55	19	265	72	215	52	273	58	220	46	156	32	132	30	169	45	119	36	42	15	43	16	1736	39
WALLA WALLA U	26	9	100	34	275	74	261	64	319	69	380	81	403	85	340	78	302	80	224	66	41	14	35	13	2704	61
WEST INDIES																										
SAN JUAN P.R.	211	61	192	59	344	92	302	80	146	36	215	54	273	67	253	64	213	58	237	65	204	60	184	54	2772	63
WEST VIRGINIA																										
PARKERSBURG U	113	37	116	39	120	32	194	49	292	66	251	56	269	59	240	57	208	56	208	60	115	38	[illegible]	30	2214	50
WISCONSIN																										
GREEN BAY	135	47	168	57	186	50	141	35	219	48	348	75	287	61	245	56	150	40	180	53	87	30	62	22	2207	49
MADISON	153	52	181	61	163	44	150	37	268	59	349	76	353	76	271	63	139	37	206	60	117	40	105	37	2455	55
MILWAUKEE	142	49	292	59	169	46	214	53	289	64	379	83	358	77	283	66	169	45	216	63	136	46	85	30	2732	61
WYOMING																										
CHEYENNE	149	50	194	65	272	73	272	68	307	68	273	60	318	69	311	73	183	49	296	86	183	62	181	63	2938	66
LANDER	205	70	197	67	269	73	248	62	238	52	261	57	311	67	337	78	215	57	263	77	222	76	192	68	2958	66
SHERIDAN	176	61	132	45	230	62	179	44	211	46	274	59	344	73	283	65	149	40	267	78	186	65	172	62	2602	58

Data from airport unless otherwise specified.
"U" indicates Urban, "R" indicates Rural, sites.

ANNUAL CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Temperature – Averages – Daily maximum	Temperature – Averages – Daily minimum	Temperature – Averages – Annual	Temperature – Extremes – Highest	Temperature – Extremes – Date	Temperature – Extremes – Lowest	Temperature – Extremes – Date	Heating degree days	Precipitation – Total	Precipitation – Greatest in 24 hours	Precipitation – Date (s)	Precipitation – Snow, Sleet – Total	Precipitation – Snow, Sleet – Greatest in 24 hours	Precipitation – Snow, Sleet – Date (s)	Relative humidity – 1:00am EST	Relative humidity – 7:00am EST	Relative humidity – 1:00p.m. EST	Relative humidity – 7:00p.m. EST	Wind – Resultant speed	Wind – Resultant direction	Wind – Fastest mile – Speed	Wind – Fastest mile – Direction	Wind – Fastest mile – Date	Possible sunshine	Average sky cover sunrise to sunset	Number of days – Sunrise to sunset – Clear, 0–0.3	Number of days – Sunrise to sunset – Partly cloudy, 0.4–0.7	Number of days – Sunrise to sunset – Cloudy, 0.8–1.0	Number of days – Precipitation .01 inch or more	Number of days – Snow, Sleet 1.0 inch or more	Number of days – Thunderstorms	Number of days – Heavy fog	Number of days – Max temp – 90 °F and above	Number of days – Max temp – 32 °F and below	Number of days – Min temp – 32 °F and below	Number of days – Min temp – 0 °F and below
	°F	°F	°F	°F		°F		Base 65 °F	In.	In		In	In.		%	%	%	%	M.p.h.		M.p.h.			%	Tenths											
ALABAMA																																				
BIRMINGHAM	72.8	50.9	61.9	94	AUG 16	8	JAN 31	2799	44.16	3.45	JUN 6-7	T	T	MAR 20+	84	88	59	67	0.3	18	49	W	APR 12	55	6.2	93	109	163	110	0	61	10	20	2	69	0
HUNTSVILLE	72.6	51.5	62.1	97	AUG 16	5	JAN 17	2964	42.99	2.87	MAY 17-18	5.5	1.8	MAR 5	76	80	56	58	0.9	16	48	24	FEB 24		6.0	108	94	163	105	3	57	14	33	4	69	0
MOBILE	78.0	58.5	68.3	98	JUL 20	18	JAN 17	1461	57.48	8.34	JAN 22-23	.0	.0		84	87	59	70	1.7	11	32	14	SEP 9+		6.1	84	132	149	108	0	63	61	67	0	16	0
MONTGOMERY	75.4	54.2	64.8	94	AUG 26+	17	JAN 31+	2198	47.01	4.73	JAN 22-23	T	T	MAR 6+	84	90	59	64	0.3	10	44	SE	MAY 22	56	6.3	83	119	163	103	0	52	22	54	0	40	0
ALASKA																																				
ANCHORAGE PRK STRIP	40.8	27.7	34.3	76	JUL 30	-21	JAN 1	11097	15.72	.84	SEP 19	77.0	10.6	DEC 20															129	16			B 3	125	192	40
ANCHORAGE	42.8	28.5	35.7	77	JUL 30	-21	FEB 19	10577	16.50	.79	SEP 26-27	89.1	10.6	DEC 19-20	70	68	59	65	0.3	18	32	2	APR 20+	37	7.5	67	49	249	137	24	2	37	12	109	181	46
ANNETTE	51.1	38.2	44.7	82	JUL 31	3	JAN 4	7328	121.68	5.58	FEB 17-18	63.9	11.3	FEB 20-21	83	76	69	80	2.7	14	41	17	DEC 22		7.7	49	73	243	186	16	2	18	26	16	100	0
BARROW	14.8	3.4	9.1	65	AUG 20	-45	JAN 2+	20320	5.86	.32	NOV 14-15	49.8	3.5	NOV 14-15	80	79	78	79	4.4	10	37	27	APR 13+			V56	V68	V175	116	16	0	70	0	263	324	170
BARTER ISLAND	13.7	3.1	8.4	59	SEP 15	-51	FEB 9+	20551	6.51	.55	JUL 20	41.4	3.6	DEC 15-16	86	85	84	85	0.3	5	49	26	NOV 12			X53	X54	X203	112	10	0	52	0	265	324	162
BETHEL	33.9	20.7	27.3	76	JUL 30+	-33	FEB 15+	13640	14.15	1.00	SEP 21-22	48.6	3.2	DEC 30	86	84	75	80	0.9	3	55	18	NOV 14		7.9	53	41	271	158	14	0	50	6	149	231	72
COLD BAY	42.0	33.4	37.7	65	JUL 28	2	FEB 18	9853	32.70	3.43	SEP 20-21	77.1	6.2	FEB 21-22	86	85	80	84	2.7	21	61	12	DEC 2+		8.8	16	43	306	239	25	1	15	0	50	168	0
FAIRBANKS	33.4	13.6	23.5	80	JUL 30+	-56	JAN 5	15033	11.28	.87	SEP 5-6	86.5	12.9	DEC 27	78	74	62	70	0.8	30	32	24	DEC 28+		7.3	59	73	233	111	24	5	23	42	156	231	128
JUNEAU	46.8	31.7	39.3	82	JUL 7	-15	JAN 6	9266	47.88	2.18	JAN 14-15	163.3	14.8	FEB 6-7	91	85	76	85	5.6	11	49	12	OCT 28	40	7.9	53	59	253	195	35	0	25	22	39	171	15
KING SALMON	39.4	23.1	31.3	75	JUL 27	-30	DEC 22	12198	19.97	.90	AUG 13-14	52.1	5.3	DEC 18-19	87	83	72	80	2.0	11	69	9	MAR 18		7.6	59	56	250	172	17	0	27	7	109	223	50
KOTZEBUE	26.7	13.7	20.2	69	JUL 28	-41	JAN 17	16230	12.10	.97	AUG 1-2	88.0	5.9	DEC 27+	81	80	77	78	2.7	12	51	28	DEC 27+		7.2	82	44	239	132	33	0	20	0	206	242	120
MC GRATH	33.3	15.1	24.2	78	JUL 30	-52	DEC 24+	14794	14.45	.59	SEP 21-22	106.6	6.7	NOV 23-24	77	72	61	68	1.0	25	39	19	NOV 14		7.7	54	54	257	142	37	3	23	15	161	227	112
NOME	30.4	17.8	24.1	68	JUL 28+	-32	FEB 15+	14819	20.09	1.23	AUG 5-6	58.0	3.2	APR 12	82	81	77	79	2.9	7	55	24	NOV 11	34	7.0	82	51	232	170	20	0	26	0	190	247	88
ST. PAUL ISLAND	37.5	28.8	33.2	55	JUL 31	- 8	FEB 16	11501	28.42	1.38	JUL 24-25	78.3	8.5	JAN 16-17	92	91	88	91	1.6	1	69	24	NOV 14		9.1	10	36	319	255	25	0	104	0	83	209	5
SHEMYA	41.5	35.9	38.7	55	JUL 29	20	JAN 17	9487	35.07	1.15	DEC 16	58.5	5.5	DEC 16	88	87	85	86	3.6	21	68	22	FEB 4		8.9	6	56	303	232	19	0	73	0	25	123	0
YAKUTAT	42.7	28.9	35.8	72	JUL 29	-21	JAN 6+	10530	187.79	5.56	AUG 29-30	252.2	18.2	DEC 31	94	88	81	91	3.4	12	44	12	APR 3		8.3	35	54	276	222	51	1	41	3	62	193	20
ARIZONA																																				
FLAGSTAFF	59.2	29.9	44.6	87	JUL 5+	-16	FEB 12	7391	36.59	3.43	SEP 17-18	184.3	16.1	FEB 6-7	76	43	43	68	2.4	19	40	1	SEP 30		5.0	150	86	129	98	39	47	22	0	14	222	7
PHOENIX	83.3	53.9	68.6	113	JUL 4	28	FEB 12	1634	11.19	1.15	DEC 9-10	.0	.0		62	37	28	49	1.2	15	53Y	W	SEP 19	85	3.7	206	74	85	50	0	26	0	159	0	8	0
TUCSON	80.8	53.3	67.1	107	JUL 3	20	MAR 4	1718	11.53	1.18	DEC 9-10	4.2	3.9	FEB 9-10	52	30	24	43	2.8	18	54	SE	JUL 8	83	3.8	207	72	86	57	2	35	0	133	0	19	0
WINSLOW	70.0	39.2	54.6	101	JUL 4	7	FEB 12	4634	9.52	.61	MAR 25	13.3	4.1	MAR 25	67	41	32	57	3.8	21	46	19	MAY 7		4.6	159	107	99	74	4	40	4	56	1	130	0
YUMA	85.5	58.9	72.2	113	JUL 4	31	FEB 12	1025	4.85	1.08	APR 3-4	.0	.0		53	33	24	43	1.0	27	45	SE	JUL 28	87	3.2	232	66	67	27	0	7	2	168	0	1	0
ARKANSAS																																				
FORT SMITH	74.3	49.0	61.7	103	AUG 26	10	JAN 17	3180	30.88	3.57	MAY 26	.1	.1	JAN 9	81	86	54	56	1.0	7	44	NE	JUL 25	63	5.7	115	105	145	79	0	52	12	86	2	78	0
LITTLE ROCK	73.9	51.4	62.7	101	AUG 18+	15	FEB 2+	2916	38.92	3.64	MAY 9-10	7.2	3.3	MAR 3-4	80	86	58	62	0.9	21	49	SE	JUL 24	62	5.5	122	104	139	89	3	50	14	81	2	60	0
TEXARKANA	76.1	54.1	65.1	100	AUG 19+	16	JAN 17	2276	41.21	3.49	FEB 10-11	4.5	3.0	FEB 24	77	85	59	60	2.1	16					5.4	132	92	141	90	2	62	19	79	0	39	0
CALIFORNIA																																				
BAKERSFIELD	75.1	52.4	63.8	105	JUL 6	25	DEC 19	2361	6.80	.93	DEC 29	T	T	DEC 22	65	52	39	55	2.2	34	32	33	JAN 24		4.0	193	74	98	39	0	3	37	93	0	14	0
BISHOP	73.1	38.1	55.6	102	AUG 5	8	JAN 1	4129	6.56	2.16	DEC 28-29	1.6	1.1	APR 1		30	21								4.2	174	104	87	40	1			81	0	130	0
BLUE CANYON	58.1	41.9	50.0	85	OCT 7	11	JAN 1	5585	55.59	3.92	NOV 17-18	208.0	19.5	JAN 3-4		50					54	19	JAN 6		4.7	173	73	119	86	31			0	16	88	0
BURBANK	74.5	51.4	63.0	106	AUG 9	32	FEB 12	1745	26.29	5.39	DEC 28-29	.0	.0		76	54	46	70	3.0	16	29	12	MAR 31		4.4	174	94	97	53	0	8	16	47	0	1	0

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA
ENGLISH UNITS

YEAR 1965

State and Station	Temperature							Heating degree days	Precipitation						Relative humidity				Wind					Possible sunshine	Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes								Snow, Sleet									Fastest mile					Sunrise to sunset							Max temp		Min temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date		Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1:00a.m. E.S.T.	7:00a.m. E.S.T	1:00p.m. E.S.T	7:00p.m. E.S.T	Resultant speed	Resultant direction	Speed	Direction	Date			Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation .01 inch or more	Snow, Sleet 1.0 inch or more	Thunderstorms	Heavy fog	90 °F and above	32 °F and below	32 °F and below	0 °F and below
	°F	°F	°F	°F		°F		Base 65 °F	In	In.		In	In.		%	%	%	%	M.p.h.		M.p.h.			%	Tenths											
CALIFORNIA																																				
EUREKA U	56.6	46.5	51.6	80	OCT 23	29	DEC 16	4824	26.28	2.03	DEC 27-28	.0	.0								42	SW	NOV 17+	50	7.1	70	84	211	90	0			0	0	3	0
FRESNO	75.0	48.2	61.6	104	JUL 15	25	DEC 19	2601	10.34	1.55	MAR 12	T	T	DEC 22	80	59	42	67	2.0	32	30	NW	JUN 25+	80	4.2	186	73	106	46	0	5	39	98	0	22	0
LONG BEACH	71.6	52.5	62.1	101	OCT 22	32	JAN 2	1668	17.54	2.03	NOV 22	.0	.0		78	61	53	74	2.1	25	32	32	JAN 7		4.8	148	124	93	45	0	9	35	16	0	1	0
LOS ANGELES	69.1	54.3	61.7	101	OCT 22	37	FEB 12+	1629	16.81	2.12	NOV 22	.0	.0		77	60	63	76	3.3	26	45Y	N	FEB 22		5.1	127	121	117	47	0	7	35	7	0	0	0
LOS ANGELES U	73.7	54.9	64.3	100	OCT 22	37	JAN 1	1242	26.81	3.92	DEC 28-29	.0	.0								31	W	APR 10	60	4.3	174	107	84	47	0			25	0	0	0
MT SHASTA R	62.6	36.8	49.7	93	AUG 6+	9	JAN 1	5630	38.49	3.02	DEC 27-28	105.8	26.0	DEC 27-28		58													99	19			12	3	132	0
OAKLAND	63.5	51.2	57.4	87	OCT 23+	32	DEC 21	2815	16.32	1.28	DEC 28-29	.0	.0		80	74	67	78	4.6	28	38	15	DEC 28		5.3	140	95	130	58	0	5	13	0	0	1	0
RED BLUFF	74.0	49.7	61.9	108	JUL 5	22	DEC 21	2666	19.67	1.82	JAN 4-5	4.0	4.0	JAN 2	69	52	40	62	0.4	22	50	NE	SEP 16	75	4.6	174	72	119	65	1	9	29	75	0	16	0
SACRAMENTO	72.0	47.2	59.6	102	JUL 15	24	DEC 20	2844	13.81	1.08	JAN 5-6	.0	.0		81	63	47	73	3.1	22	42	NW	SEP 16	78	4.5	172	74	119	56	0	4	38	59	0	14	0
SANDBERG R	62.1	45.4	53.8	93	AUG 9+	17	JAN 1	4732	20.19	3.41	DEC 28-29	37.2	10.5	APR 3		43					52	34	FEB 22+		4.6	170	72	123	46	9			7	5	70	0
SAN DIEGO	69.9	55.2	62.6	104	OCT 22	38	FEB 12+	1400	19.03	2.21	DEC 9-10	.0	.0		78	61	62	75	2.6	27	33	S	APR 8	68	5.1	133	119	113	52	0	2	18	6	0	0	0
SAN FRANCISCO	63.3	47.8	55.6	88	OCT 24	30	DEC 21+	3413	21.22	2.07	DEC 24-25	.0	.0		83	71	63	79	6.0	28	51	S	JAN 5		5.0	151	92	122	60	0	5	14	0	0	7	0
SAN FRANCISCO U	61.8	51.1	56.5	90	OCT 24	35	DEC 21	3134	19.86	1.34	DEC 28-29	.0	.0								47	SE	JAN 5	65					62	0			1	0	0	0
SANTA CATALINA	66.9	54.5	60.7	98	OCT 22	39	JAN 1	2428	19.63	2.51	NOV 14-15	.0	.0												4.8	150	100	115	53	0	5	170	14	0	0	0
SANTA MARIA	68.4	45.4	56.9	100	OCT 22	27	DEC 23+	2999	13.43	1.93	NOV 22-23	.0	.0			62	61								4.7	159	106	100	51	0			9	0	16	0
STOCKTON	73.2	48.2	60.7	104	JUL 5	21	DEC 23	2734	14.56	1.42	MAR 12	.0	.0		80	63	47	71	3.5	29	44	15	DEC 28		4.6	163	77	125	56	0	3	47	69	1	16	0
COLORADO																																				
ALAMOSA	57.3	24.8	41.1	86	AUG 13+	-23	FEB 13	8651	9.84	1.00	OCT 16-17	36.8	5.0	DEC 23	80	47	43								4.7	138	141	86	93	11			0	40	228	40
COLORADO SPRINGS	60.6	35.4	48.0	91	JUL 21	- 7	MAR 25+	6342	25.43	2.58	JUN 17-18	35.0	5.2	MAR 24	65	41	42	62	1.8	4	49	17	MAY 23		5.8	105	110	150	93	11	63	20	2	29	139	10
DENVER	63.5	35.7	49.6	97	AUG 12	- 5	FEB 16+	5972	21.87	2.77	JUN 4-5	62.1	6.5	JAN 31	70	43	45	66	1.6	19	56	SW	JUL 25	70	5.9	107	112	146	103	21	45	11	22	22	149	11
GRAND JUNCTION	66.1	42.4	54.3	101	AUG 9	4	FEB 13	4958	14.16	1.35	SEP 17-18	26.8	3.8	FEB 9-10	64	44	39	57	1.8	12	49	NE	JUN 4	64	5.6	118	102	145	86	10	36	8	50	9	107	0
PUEBLO	69.0	36.1	52.6	102	JUL 21	-12	FEB 12	5300	12.55	1.67	JUN 4-5	30.8	5.9	FEB 10-11	68	38	35	59	0.9	1	59	W	JAN 31	76	5.3	128	112	125	75	9	48	4	49	17	151	8
CONNECTICUT																																				
BRIDGEPORT	59.4	43.4	51.4	90	JUL 25	1	JAN 15	5579	26.85	2.21	JUL 18	38.6	7.9	JAN 23-24	78	77	60	69	4.5	28	50	31	FEB 22		5.7	111	118	136	104	8	21	22	1	25	97	0
HARTFORD	60.5	39.3	49.9	100	JUL 14	- 8	FEB 4+	6215	29.45	2.16	FEB 25	48.7	12.0	JAN 23-24	75	75	50	59	2.6	28	38	NW	MAR 27	62	6.5	80	112	173	118	12	25	26	34	32	140	8
NEW HAVEN	58.4	41.7	50.1	91	JUN 29	1	JAN 15	5958	27.68	1.50	FEB 7-8	41.4	7.2	JAN 23-24		78	59				39	NW	MAR 27	66	5.7	106	116	143	112	12			1	23	122	0
DELAWARE																																				
WILMINGTON	63.0	43.6	53.3	95	JUN 23	2	JAN 17	5187	24.90	2.84	JUL 11	16.5	6.6	JAN 10	79	79	54	67	2.9	27	44	20	FEB 25		5.9	100	115	150	99	6	26	27	16	18	112	0
DIST.OF COLUMBIA																																				
WASH NATL AP	66.5	47.0	56.8	97	JUL 25	9	JAN 31	4365	26.94	1.94	MAR 4-5	16.6	3.8	JAN 10	73	75	52	61	1.4	26	49	SSW	FEB 25	59	5.9	101	116	148	100	6	26	9	48	7	89	0
FLORIDA																																				
APALACHICOLA U	75.2	61.8	68.5	93	JUL 18	23	JAN 17	1224	82.62	6.96	MAR 1-2	.0	.0											58	5.6	121	113	131	121	0	46	27	10	0	5	0
DAYTONA BEACH	79.0	60.5	69.8	95	AUG 28+	27	JAN 18	770	36.13	2.84	JUN 17-18	.0	.0		87	88	63	76	1.4	7	40	26	JUN 13		6.0	85	141	139	101	0	76	39	15	0	5	0
FORT MYERS	83.9	64.7	74.3	93	AUG 23+	33	JAN 18	229	50.83	4.06	JUL 29	.0	.0		88	90	57	75	2.3	8	46	6	SEP 8		5.4	98	175	92	115	0	103	24	82	0	0	0
JACKSONVILLE	79.2	59.9	69.6	96	AUG 25+	26	JAN 18+	1133	52.47	5.27	SEP 27-28	.0	.0		84	87	56	71	0.2	5	57	E	SEP 8	63	5.9	95	135	135	120	[illegible]	66	33	70	0	9	0
KEY WEST	83.7	74.8	79.3	92	AUG 14+	54	JAN 18	15	33.13	3.90	SEP 8	.0	.0		76	77	67	72	6.8	9	81	SW	SEP 8	76	5.2	117	157	91	86	0	57	0	41	0	0	0

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
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State and Station	Temperature							Heating degree days	Precipitation						Relative humidity				Wind					Possible sunshine	Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes								Snow, Sleet									Fastest mile					Sunrise to sunset							Max temp		Min temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date		Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1:00a.m. E.S.T.	7:00a.m. E.S.T.	1:00p.m. E.S.T.	7:00p.m. E.S.T.	Resultant speed	Resultant direction	Speed	Direction	Date			Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation .01 inch or more	Snow, Sleet 1.0 inch or more	Thunderstorms	Heavy fog	90 °F and above	32 °F and below	32 °F and below	0 °F and below
	°F	°F	°F	°F		°F		Base 65 °F	In.	In.		In	In		%	%	%	%	M.p.h.		M.p.h.			%	Tenths											
FLORIDA																																				
LAKELAND U	81.6	63.2	72.4	95	JUL 1	30	JAN 17	481	48.35	2.92	AUG 6-7	.0	.0											69	5.6	100	156	109	122	0			73	0	2	0
MIAMI	83.1	68.8	76.0	93	APR 16	35	JAN 18	122	58.40	5.68	OCT 14-15	.0	.0		81	84	60	71	4.1	10	69	6	SEP 8		6.1	62	186	117	117	0	59	7	20	0	0	0
ORLANDO	82.2	63.1	72.7	94	AUG 27+	30	JAN 17	481	47.40	2.66	JUL 12-13	.0	.0		85	89	55	69	1.3	8	32	28	FEB 25		5.7	95	140	130	110	0	70	37	90	0	2	0
PENSACOLA	76.1	59.0	67.6	97	JUL 20	21	JAN 17	1486	50.85	4.58	SEP 29-30	.0	.0		83	86	63	72	0.9	11	48	S	JAN 23	61					119	0			24	0	14	0
TALLAHASSEE	79.5	56.5	68.0	97	AUG 25+	15	JAN 18	1506	78.79	5.29	JUN 14-15	T	T	JAN 17	85	86	54	67	0.6	6	46	36	MAR 18		5.9	75	162	128	118	0	84	45	94	0	24	0
TAMPA	81.5	61.8	71.7	95	JUN 6+	29	JAN 18	588	42.78	2.60	JUN 10-11	T	T	JAN 17	84	88	57	71	1.4	8	41	27	FEB 25	63	5.7	98	143	124	98	0	91	20	69	0	3	0
WEST PALM BEACH	83.6	66.8	75.2	93	JUL 31+	32	JAN 18	186	58.26	9.58	OCT 14-15	.0	.0		79	81	58	71	3.8	10	55	3	SEP 7		5.6	100	155	110	111	0	61	12	59	0	1	0
GEORGIA																																				
ATHENS	72.9	50.7	61.8	97	AUG 17	15	JAN 31	2832	41.91	2.89	OCT 30-1	2.5	2.5	JAN 15-16	83	88	58	67	1.5	27	35	30	JUL 3		6.0	102	98	165	110	1	59	34	41	1	59	0
ATLANTA	70.5	50.8	60.7	92	AUG 17+	11	JAN 31	2998	42.26	2.98	SEP 30-1	3.0	2.4	JAN 16	80	86	59	65	1.2	26	34	W	NOV 27	55	6.2	96	104	165	108	1	56	44	9	2	58	0
AUGUSTA	76.5	51.0	63.8	96	AUG 26+	19	FEB 3+	2397	38.42	2.36	OCT 6-7	T	T	MAR 6+	86	88	53	69	1.0	25	62	8	JUN 10		6.1	94	111	160	107	0	57	28	88	0	61	0
COLUMBUS	76.5	53.0	64.8	97	AUG 26	18	JAN 31+	2207	46.87	3.16	SEP 2	T	T	MAR 7+	83	88	56	66	0.4	34	35	22	JUL 6		6.4	87	98	180	112	0			76	0	52	0
MACON	75.7	51.8	63.8	98	MAY 19	16	JAN 31	2397	49.57	4.97	JUN 15-16	T	T	MAR 8+	87	92	57	68	0.6	29	35	W	FEB 25	59	6.2	89	118	158	130	0	64	33	66	0	58	0
ROME	72.7	47.6	60.2	96	AUG 16	8	JAN 31	3236	43.19	2.65	MAR 23-24	1.2	.9	JAN 30															121	0			28	2	89	0
SAVANNAH	77.1	54.2	65.7	95	AUG 27+	19	JAN 19	1920	45.81	1.81	JUN 26-27	T	T	MAR 6+	85	88	56	72	0.7	24	42	N	MAY 12	61	5.9	97	123	145	127	0	79	36	52	0	39	0
HAWAII																																				
HILO	80.8	65.4	73.1	91	OCT 13	55	FEB 1	0	127.29	10.26	MAY 3-4	.0	.0		83	79	67	82	0.6	23	41	36	JAN 29	36	7.4	31	129	205	264	0	15	0	1	0	0	0
HONOLULU	82.6	69.5	76.1	93	SEP 12	57	FEB 28+	0	42.78	6.46	DEC 14-15	.0	.0		75	73	58	69	6.6	6	44	SE	NOV 13	74	6.0	78	166	121	116	0	17	0	4	0	0	0
KAHULUI	81.9	65.9	73.9	92	SEP 20	54	FEB 28	0	30.91	5.48	NOV 12	.0	.0			76	59	74	7.6	6	34	NE	JUL 14	67	5.9	75	181	109	107	0	6	0	10	0	0	0
LIHUE	79.0	68.1	73.6	86	SEP 19+	55	MAR 1+	0	57.97	4.06	MAY 4-5	.0	.0		84	81	70	80	6.5	6	29	NE	DEC 2	48	6.5	49	171	145	217	0	16	0	0	0	0	0
IDAHO																																				
BOISE	62.5	39.5	51.0	103	AUG 7	8	DEC 23+	5584	12.52	.85	JAN 27-28	25.7	7.1	JAN 3-4	70	52	43	63	0.6	18	36	NW	MAR 16	69	5.8	120	83	162	96	6	20	19	29	19	128	0
IDAHO FALLS 42NW R	56.6	26.0	41.3	98	AUG 8	-18	JAN 26	8658	8.00	.74	JAN 6-7										37	NNW	JAN 31						60	0			11	52	224	26
IDAHO FALLS 46W R	56.5	28.4	42.5	95	AUG 8	-10	DEC 27+	8252	8.95	.95	JUN 25-26	24.9	7.6	MAY 6-7							48	W	MAR 26						67	8			11	46	219	11
LEWISTON	63.6	41.5	52.6	104	AUG 1	12	MAR 24+	5076	11.38	.79	JAN 5-6	14.5	5.2	JAN 6-7	77	62	48								6.5	93	82	190	96	4			32	1	97	0
POCATELLO	59.6	32.6	46.1	98	AUG 8	- 3	FEB 11	7012	10.05	.98	JUL 19	27.0	4.6	DEC 30	75	52	43	62	5.0	22	46	SW	APR 22	66	6.0	107	99	159	93	10	32	14	17	24	176	6
ILLINOIS																																				
CAIRO U	68.7	51.0	59.9	101	JUL 24	3	JAN 31	3638	49.23	6.23	SEP 10-11	13.6	5.2	FEB 24							43	SW	JAN 25	65	5.7	119	101	145	106	5			30	11	63	0
CHICAGO MIDWAY	58.6	41.9	50.3	94	JUL 23+	- 9	FEB 2+	6056	42.05	2.79	DEC 24-25	51.2	7.5	MAR 22-23	70	75	61	63	2.6	24	47	NE	DEC 24	58	6.5	83	113	169	120	14	41	12	10	43	114	9
MOLINE	59.3	40.2	49.8	98	JUL 23	-12	FEB 2	6334	49.59	3.67	AUG 3-4	39.8	5.5	FEB 23-24	80	84	64	68	2.4	24	49	W	NOV 27	55	6.3	87	106	172	128	13	47	16	10	48	131	11
PEORIA	60.2	40.9	50.6	96	JUL 23	-10	FEB 2	6070	48.26	4.45	JAN 1-2	29.1	5.7	FEB 23-24	82	85	67	69	1.6	23	73	W	SEP 14	56	6.1	101	91	173	119	11	55	24	12	44	124	8
ROCKFORD	57.1	38.2	47.7	99	JUL 23	-16	FEB 2	6873	49.45	2.60	JUL 30-31	40.1	5.0	MAR 4	79	81	63	67	2.2	25	48	26	AUG 26		6.2	96	104	165	124	16	50	23	9	55	136	14
SPRINGFIELD	63.5	43.2	53.4	96	JUL 23	-12	JAN 31	5313	39.08	3.95	JUN 1-2	36.1	10.3	FEB 23-24	79	83	63	65	3.0	21	45	W	MAR 17	59	5.9	113	95	157	112	11	56	10	17	35	114	8
INDIANA																																				
EVANSVILLE	67.2	44.4	55.8	97	JUL 24	-14	JAN 31	4568	35.03	3.16	SEP 11-12	16.8	6.3	FEB 24-25	79	82	59	63	1.9	25	42	NW	MAY 18	61	6.0	98	111	156	108	6	40	8	28	19	108	6

See reference notes at end of table.

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State and Station	Temperature							Heating degree days	Precipitation						Relative humidity				Wind					Possible sunshine	Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes								Snow, Sleet									Fastest mile					Sunrise to sunset							Max temp		Min temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date		Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1:00a.m. E.S.T.	7:00a.m. E.S.T.	1:00p.m. E.S.T.	7:00p.m. E.S.T.	Resultant speed	Resultant direction	Speed	Direction	Date			Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation .01 inch or more	Snow, Sleet 1.0 inch or more	Thunderstorms	Heavy fog	90 °F and above	32 °F and below	32 °F and below	0 °F and below
	°F	°F	°F	°F		°F		Base 65 °F	In	In.		In	In.		%	%	%	%	M.p.h.		M.p.h			%	Tenths											
INDIANA																																				
FORT WAYNE	59.5	40.6	50.1	95	AUG 16+	-10	JAN 17	6057	37.25	2.92	OCT 21-22	30.2	7.3	FEB 24-25	79	82	63	67	3.5	25	55	N	AUG 27	55	6.7	70	115	180	135	9	45	20	12	41	127	9
INDIANAPOLIS	62.6	43.0	52.8	95	JUL 24	-10	FEB 2+	5323	38.11	2.07	FEB 9-10	35.7	12.5	FEB 24-25	78	81	62	65	2.4	24	50	SW	NOV 26	62	6.4	81	113	171	115	9	48	12	11	28	117	8
SOUTH BEND	58.0	40.2	49.1	94	JUL 22	- 9	FEB 2	6289	42.45	3.33	DEC 24-25	74.0	9.0	FEB 24-25	79	81	63	67	3.4	24	40	32	AUG 27		6.9	67	107	191	146	24	40	20	10	42	127	7
IOWA																																				
BURLINGTON	60.6	40.9	50.8	95	AUG 15	-12	JAN 31	6007	41.79			29.6			82	85	67	69	2.3	27	45	29	AUG 25		5.9	105	99	161	121	12	55	21	10	44	125	11
DES MOINES	58.5	39.0	48.8	99	AUG 13+	-17	JAN 30	6721	33.96	2.05	SEP 20-21	34.7	7.5	MAR 2	81	85	67	66	1.1	27	76	W	APR 23	57	6.3	92	98	175	119	10	63	24	16	60	138	15
DUBUQUE	55.3	36.7	46.0	97	JUL 23	-21	FEB 2	7345	61.42	4.01	SEP 19-20	40.7	6.0	MAR 17+		86	67	72							6.7	75	103	187	122	14			5	64	143	15
SIOUX CITY	58.5	37.3	47.9	98	AUG 13	-20	JAN 16	6921	28.35	2.94	SEP 29	38.8	7.2	MAR 1	79	84	64	63	0.8	29	60	NW	MAR 17	58	6.2	91	108	166	107	11	58	28	17	55	146	24
WATERLOO	55.5	34.9	45.2	95	AUG 13+	-20	FEB 2	7563	50.79	2.89	AUG 29-30	30.3	5.9	MAR 17	84	87	68	71	1.3	26	45	30	MAR 18+		6.6	81	103	181	116	11	56	26	6	65	156	23
KANSAS																																				
CONCORDIA	64.7	41.8	53.3	101	JUL 23	- 9	FEB 24	5336	33.24	3.01	AUG 20-21	27.3	13.2	FEB 11	76	83	58	59	1.9	18	54	NW	MAR 17	63	5.8	110	95	160	93	4	75	26	35	31	127	3
DODGE CITY	67.7	42.9	55.3	101	JUL 23	- 1	FEB 24	4743	24.95	2.85	OCT 17-18	19.8	2.9	FEB 9	74	82	54	52	2.1	19	59	SW	JUN 3	71	5.8	118	92	155	76	10	63	17	58	21	111	1
GOODLAND	65.0	35.9	50.5	103	JUL 22	-17	MAR 20	5924	20.87	2.40	OCT 16-17	26.5	4.7	FEB 10-11	74	70	48	55	2.0	22	53	30	MAY 22		5.4	133	95	137	82	11	58	25	40	25	150	7
TOPEKA	65.4	43.8	54.6	100	AUG 26	- 1	FEB 25+	4945	37.97	2.13	SEP 19-20	18.8	6.0	FEB 23	79	83	61	61	1.4	21	45	SW	APR 11	63	6.1	100	98	167	102	7	79	14	20	26	125	3
WICHITA	68.8	46.5	57.7	103	JUL 13	1	FEB 24	4250	38.97	4.98	JUN 4-5	6.9	3.0	JAN 25	76	83	59	58	2.6	17	60	N	MAR 1	62	6.0	107	93	165	85	2	70	14	52	15	102	0
KENTUCKY																																				
COVINGTON	63.7	43.2	53.5	99	JUL 24	-10	FEB 4	5077	38.33	2.70	SEP 11-12	23.9	4.2	JAN 15-16	77	80	59	62	2.9	24	35	27	NOV 26+		6.5	82	109	174	118	7	45	17	14	22	109	9
LEXINGTON	64.8	44.7	54.8	97	JUL 24	-10	JAN 31	4748	32.10	1.92	JUN 6-7	15.8	4.3	JAN 16	75	79	59	62	3.5	20	35	22	MAY 27		6.1	92	115	158	125	7	46	21	12	17	105	4
LOUISVILLE	66.8	46.2	56.5	97	JUL 24	- 5	JAN 31	4370	39.80	3.39	SEP 31-1	20.3	5.5	JAN 15-16	75	80	58	59	2.2	25	46	W	MAR 21	61	6.3	88	114	163	114	9	53	6	20	16	93	1
LOUISIANA																																				
ALEXANDRIA	77.2	54.0	65.6	98	JUL 11	18	JAN 17	2002	41.10	4.10	DEC 18	T	T	MAR 3+	90	92	59	68	0.5	10	46	35	SEP 10		6.0	101	115	149	91	0	62	37	87	0	40	0
BATON ROUGE	78.3	57.2	67.8	94	SEP 12+	20	JAN 17	1509	45.00	3.99	SEP 9-10	T	T	MAR 19+	85	89	60	67	1.2	10	58	6	SEP 10		6.2	80	136	149	94	0	61	48	74	0	25	0
LAKE CHARLES	79.0	58.5	68.8	98	JUL 28	22	JAN 17	1280	34.80	3.38	MAR 28-1	T	T	MAR 19+	89	90	61	71	2.2	13	35	12	JUN 7+		6.2	81	137	147	79	0	67	51	82	0	9	0
NEW ORLEANS	77.2	58.3	67.8	94	JUL 21	26	JAN 17	1351	49.34	4.12	JAN 22-23	.0	.0		84	87	65	71	1.5	9	69	9	SEP 10+		5.9	84	145	136	109	0	63	37	28	0	15	0
SHREVEPORT	76.4	56.1	66.3	101	AUG 20	18	JAN 17	1963	41.12	3.53	FEB 10-11	6.0	4.0	MAR 3	81	91	61	63	2.5	17	44	19	SEP 17	60	5.7	119	101	145	86	2	53	21	79	0	30	0
MAINE																																				
CARIBOU	47.2	28.0	37.6	90	AUG 15+	-21	JAN 16	9998	29.73	1.53	SEP 1-2	89.6	8.0	NOV 27-28		78	59	68							6.9	62	96	207	152	28			2	112	195	41
PORTLAND	55.4	34.0	44.7	94	JUL 14	-13	JAN 15	7604	28.15	3.21	FEB 25	44.7	6.3	DEC 12-13	78	75	54	67	2.6	28	42	NW	NOV 4+	61	6.1	100	109	156	121	14	18	47	3	46	165	15
MARYLAND																																				
BALTIMORE	65.1	43.7	54.4	98	JUL 25	1	JAN 17	4984	28.22	1.80	MAR 4-5	17.8	5.0	JAN 10	77	78	52	63	2.6	28	57	SW	FEB 25	57	5.8	101	122	142	101	5	25	22	40	12	109	0
MASSACHUSETTS																																				
BLUE HILL OBS R	57.1	38.9	48.0	94	AUG 7+	- 9	JAN 15	6661	26.96	1.67	FEB 25	56.1	15.0	JAN 15-16	76	75	56	65			59	WNW	NOV 4	60					121	13			9	40	142	4
BOSTON	57.5	41.7	49.6	93	AUG 7+	- 4	JAN 15	6158	23.71	1.87	FEB 25	40.5	7.5	JAN 15-16	76	75	59	67	4.4	28	43	NW	NOV 4	63	5.8	115	102	148	118	10	19	11	9	31	109	1
NANTUCKET	54.8	40.6	47.7	85	AUG 13	10	JAN 30+	6450	25.31	1.97	SEP 13-14	50.4	12.4	JAN 16	84	80	66	80	3.4	27	47	E	FEB 25	58	6.3	89	109	167	110	9	22	86	0	20	127	0
PITTSFIELD	54.6	33.8	44.2	94	JUL 14	-13	JAN 15	7793	33.13	2.05	JUL 17-18	63.9	5.0	JAN 2-3															150	24			3	54	171	12
WORCESTER	55.2	37.2	46.2	92	JUL 14	-11	JAN 15	7163	31.98	2.04	FEB 25	51.9	7.0	JAN 23-24	71	70	52	62	5.7	28	47	29	NOV 4		5.9	106	105	154	128	14	24	76	3	46	154	7

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Temperature							Heating degree days	Precipitation						Relative humidity				Wind					Possible sunshine	Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes								Snow, Sleet									Fastest mile					Sunrise to sunset							Max temp		Min temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date		Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1:00am E.S.T.	7:00am E.S.T	1:00p.m. E.S.T	7:00p.m. E.S.T	Resultant speed	Resultant direction	Speed	Direction	Date			Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation .01 inch or more	Snow, Sleet 1.0 inch or more	Thunderstorms	Heavy fog	90 °F and above	32 °F and below	32 °F and below	0 °F and below
	°F	°F	°F	°F		°F		Base 65 °F	In.	In.		In.	In.		%	%	%	%	M.p.h.		M.p.h.			%	Tenths											
MICHIGAN																																				
ALPENA	52.1	30.4	41.3	95	AUG 14	-19	JAN 17+	8711	31.85	2.21	MAY 6-7 +	84.3	8.7	JAN 26		81	61	68			42	SE	MAR 17	55	7.1	64	99	202	165	22			2	69	188	21
DETROIT	57.8	41.3	49.6	97	AUG 15	1	JAN 17	6220	34.95	2.45	DEC 24-25	40.0	10.0	FEB 24-25	75	78	60	63	3.2	27	55	W	APR 12	51	6.9	66	108	191	133	12	33	8	7	39	118	0
DETROIT M WAYNE CO	58.0	38.5	48.3	96	AUG 15+	- 5	JAN 17	6528	39.10	3.71	DEC 24-25	49.6	10.3	FEB 24-25	77	79	60	66	3.1	24					6.9	68	106	191	131	13	33	35	12	39	141	5
DETROIT WILLOW RUN	56.5	37.0	46.8	94	AUG 15	- 5	FEB 3	6969	32.47	2.85	DEC 24-25	39.0	8.7	FEB 24-25	75	78	59	62	3.5	25	40	24	NOV 27+		6.8	72	105	188	122	11	32	35	8	46	146	8
FLINT	56.9	37.7	47.3	97	AUG 14	- 7	MAR 24+	6847	25.79	2.23	AUG 18	67.3	11.3	FEB 24-25	76	77	61	65	3.4	24	40	22	APR 11		7.1	51	109	205	143	17	40	17	9	44	137	7
GRAND RAPIDS	56.5	38.0	47.3	96	JUL 23	- 4	JAN 29	6881	38.21	1.52	AUG 16-17	100.9	8.3	NOV 28-29	81	83	63	69	2.6	24	52	W	JUN 20	47	7.2	57	106	202	154	26	41	26	7	51	147	7
HOUGHTON LAKE	52.0	32.2	42.1	90	AUG 14	-18	JAN 28+	8426	32.97	1.43	AUG 8-9	86.7	9.2	JAN 25-26	82	84	63	69	2.6	25	37	26	NOV 27		7.1	66	97	202	153	24	43	39	1	71	175	21
LANSING	56.8	36.7	46.8	98	AUG 14	-10	MAR 24	7052	32.04	2.30	SEP 20-21	56.7	9.0	FEB 24-25	87	89	68	73	3.5	25	47	W	APR 12+	50	7.0	55	120	190	141	13	32	20	13	47	149	14
MARQUETTE U	49.1	33.6	41.4	99	AUG 14	-13	JAN 29	8683	28.17	1.07	FEB 11-12	82.7	14.8	FEB 11-12							36	NW	OCT 23	55	7.4	53	101	211	164	24			5	79	167	16
MUSKEGON	56.4	39.9	48.2	94	JUL 23	- 3	JAN 17+	6511	38.04	3.61	SEP 9-10	139.7	17.5	FEB 31-1	79	82	66	70	2.1	25	40	23	MAY 26+		7.2	65	86	214	151	43	40	12	2	47	130	2
SAULT STE MARIE	47.5	30.3	38.9	87	AUG 14	-27	JAN 14	9424	42.96	2.79	JUL 21-22	146.4	7.8	FEB 12+	85	86	68	73	1.3	29	48	29	JAN 8	48	7.6	49	86	230	182	44	34	50	0	88	183	28
MINNESOTA																																				
DULUTH	46.7	26.5	36.6	89	AUG 12	-38	JAN 14	10303	38.04	1.94	MAR 17-18	112.5	19.4	MAR 17-18	77	80	63	64	1.4	30	50-	E	FEB 28	52	7.1	57	113	195	161	25	34	68	0	111	191	57
INTERNATIONAL FALLS	46.1	23.9	35.0	92	AUG 11	-42	JAN 14	10898	29.55	2.16	OCT 18	72.3	11.0	NOV 26	83	85	64	65	1.9	26	40	32	AUG 12+		7.0	63	105	197	142	22	36	15	3	120	197	69
MINNEAPOLIS	51.8	33.5	42.7	95	AUG 13+	-28	FEB 2	8465	39.94	3.03	MAY 31-1	64.1	11.2	MAR 17	78	83	65	66	0.9	33	45	NW	FEB 21	51	6.6	85	92	188	127	16	49	16	6	82	164	38
ROCHESTER	51.0	33.6	42.3	92	JUL 23+	-26	JAN 14	8495	31.55	2.04	JUL 8	39.3	7.5	FEB 11-12	80	82	68	70	2.8	25	41	31	NOV 16		6.5	94	76	195	137	12	57	54	2	84	155	36
ST CLOUD	49.9	30.0	40.0	95	AUG 12	-31	JAN 29	9293	39.32	2.59	JUN 4-5	81.7	14.5	MAR 1		82	62	64							6.7	78	96	191	126	16			5	91	180	49
MISSISSIPPI																																				
JACKSON	76.6	52.5	64.6	99	JUL 18	17	JAN 17	2313	43.99	5.86	SEP 10-11	T	T	MAR 19+	87	92	58	68	1.5	14	43	SE	SEP 10		5.8	97	122	146	99	0	63	24	90	0	51	0
MERIDIAN	76.5	51.3	63.9	95	JUN 3	14	JAN 17	2367	37.41	2.70	JUL 7	T	T	MAR 7+	89	92	58	67	0.5	20	29	35	AUG 8+		6.2	85	109	171	97	0	62	39	71	0	65	0
VICKSBURG U	75.0	57.0	66.0	94	JUL 22+	19	JAN 17	1952	40.48	3.14	MAR 29-30	T	T	MAR 19+							35	SE	SEP 10	66	5.4	127	107	131	96	0			60	0	25	0
MISSOURI																																				
COLUMBIA	65.8	45.9	55.9	95	AUG 26+	- 6	JAN 31	4656	42.25	3.05	SEP 15-16	32.1	7.9	FEB 23-24	74	81	58	60	2.2	22	50	SW	APR 11	64	6.1	100	99	166	116	9	59	10	25	28	106	3
KANSAS CITY	66.8	46.6	56.7	97	JUL 23	- 3	JAN 30	4513	47.74	3.19	JUL 19-20	24.0	7.4	FEB 23-24	71	77	56	56	1.7	20	57	N	JUN 29	67	6.3	88	97	180	115	8	61	4	31	21	104	1
SAINT JOSEPH	66.9	43.1	55.0	95	AUG 15+	- 9	JAN 31	4939	47.38	2.73	JUL 20	14.8	2.3	FEB 23	76	80	59	59	1.2	22	40	31	MAR 17		5.7	113	109	143	101	6	70	8	30	18	121	4
ST LOUIS	66.5	45.6	56.1	100	JUL 24	- 7	JAN 31	4640	28.26	1.32	JUL 7	21.8	6.4	MAR 3-4	73	79	56	58	2.6	24	38	NW	AUG 27+	59	6.0	107	99	159	102	6	48	2	27	24	105	3
SPRINGFIELD	68.6	45.0	56.8	96	AUG 15+	0	FEB 25	4175	41.44	2.94	SEP 21-22	12.6	4.8	MAR 4-5	81	86	61	64	3.3	19	65	SW	APR 5	58	5.8	113	100	152	112	5	68	14	25	15	97	1
MONTANA																																				
BILLINGS	56.6	34.0	45.3	101	AUG 12	-20	FEB 23	7490	16.55	2.47	AUG 20-21	62.1	5.3	FEB 20-21	75	58	51	67	3.8	27	54	NW	JAN 31	61	6.4	87	107	171	104	22	27	22	18	49	158	19
GLASGOW	50.7	28.4	39.6	100	AUG 12	-24	JAN 8	9564	14.31	2.45	AUG 5-6	28.6	4.3	JAN 27	73	58	53	67							6.7	73	112	180	89	7			12	97	180	61
GREAT FALLS	54.9	33.1	44.0	100	AUG 9	-20	JAN 8	7884	18.39	1.89	JUN 24-25	59.7	4.9	NOV 15	71	56	50	66	5.4	24	56	W	OCT 6	67	6.8	67	104	194	115	22	29	15	11	53	148	29
HAVRE	50.9	27.6	39.3	96	AUG 10	-20	FEB 23	9562	18.11	1.96	JUN 25-26	42.3	5.5	NOV 23-24	81	61					59	W	JUN 12	66	6.6	81	99	185	100	17			9	87	193	60
HELENA	56.0	31.5	43.8	95	AUG 9	-16	MAR 24	7840	15.52	1.28	JUN 25-26	53.1	12.3	SEP 27-28	75	57	49	68	3.9	28	42	W	OCT 5	59	6.7	77	98	190	112	15	33	15	9	43	194	11
KALISPELL	53.1	30.3	41.7	93	AUG 9+	-12	JAN 1	8499	14.64	.99	AUG 23-24	52.8	6.1	JAN 23-24	82	67	59	78	0.6	18	40	23	MAY 16+		7.2	66	73	226	124	18	19	36	11	56	208	14
MILES CITY	55.0	31.2	43.1	103	AUG 12	-17	DEC 27+	8472	15.60			35.0			78	58	53	69	1.9	31									107	20	32	9	24	71	176	46
MISSOULA	54.1	31.3	42.7	93	AUG 9+	-10	JAN 1	8121	14.20	1.06	AUG 22-23	54.9	6.8	JAN 23-24	86	69	57	76	1.3	31	43	NE	JUN 6	53	7.2	71	76	218	121	18	24	55	7	63	197	6

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Temperature							Heating degree days	Precipitation						Relative humidity				Wind					Possible sunshine	Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes								Snow, Sleet									Fastest mile					Sunrise to sunset							Max temp		Min temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date		Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	100a.m. E.S.T.	700a.m. E.S.T.	100p.m. E.S.T.	700p.m. E.S.T.	Resultant speed	Resultant direction	Speed	Direction	Date			Clear, 0–0.3	Partly cloudy, 0.4–0.7	Cloudy, 0.8–1.0	Precipitation .01 inch or more	Snow, Sleet 1.0 inch or more	Thunderstorms	Heavy fog	90 °F and above	32 °F and below	32 °F and below	0 °F and below
	°F	°F	°F	°F		°F		Base 65 °F	In	In		In	In.		%	%	%	%	M.p.h.		M.p.h.			%	Tenths											
NEBRASKA																																				
GRAND ISLAND	61.4	37.2	49.3	103	AUG 12	-17	FEB 24	6474	32.63	2.89	SEP 29	31.8	9.1	FEB 9	78	83	58	58	1.1	26	44	35	MAR 1		6.1	11[illegible]	84	171	111	10	71	27	30	45	147	17
LINCOLN U	61.0	40.9	51.0	99	AUG 12	- 9	FEB 24	6034	41.33	3.74	JUN 28-29	42.1	19.0	FEB 11							51	NE	JUN 2		6.2	91	101	173	118	10			20	43	127	9
NORFOLK	58.8	36.0	47.4	98	AUG 13+	-17	FEB 24	7046	27.58	2.60	JUL 18-19	25.2	6.6	FEB 9		78	56	57							6.2	93	106	166	96	8			20	50	155	26
NORTH PLATTE	61.7	34.1	47.9	100	AUG 12	- 9	FEB 24+	6690	29.61	3.80	JUN 4-5	28.2	9.0	JAN 22-23	79	85	58	55	1.0	1	50	NW	MAR 17	63	6.1	101	101	163	88	9	55	13	14	36	163	23
OMAHA	61.9	40.2	51.1	99	AUG 12	-16	JAN 30	6038	44.85	6.47	SEP 6-7	50.1	18.3	FEB 11	80	84	64	64	0.6	28	45	N	MAR 2+	59	6.2	98	95	172	122	11	56	16	24	39	130	15
SCOTTSBLUFF	62.1	34.5	48.3	98	AUG 13+	- 9	FEB 13	6454	19.09	1.32	JUN 9-10	23.5	4.8	FEB 10-11	81	51	49	73	1.8	34	46	27	APR 17		5.7	117	1[illegible]4	144	93	7	60	8	15	30	156	12
VALENTINE	59.7	33.4	46.6	108	AUG 13	-16	FEB 24+	7236	18.21	1.44	MAY 14-15	12.2	2.2	NOV 25-26										64	5.9	107	105	153	74	4			21	53	165	24
NEVADA																																				
ELKO	61.3	28.6	45.0	96	AUG 7+	-14	DEC 18	7383	11.17	1.13	NOV 23-24	51.7	9.0	NOV 23-24	77	50	39	65	1.7	24	36	24	MAY 1		5.8	117	94	154	93	20	28	6	19	24	208	15
ELY	59.4	27.8	43.6	90	AUG 8+	-16	DEC 18	7774	10.77	1.24	SEP 5-6	48.2	6.5	FEB 6	66	43	38	57	4.1	20	48	S	MAY 21	76	5.9	110	94	161	83	13	33	3	3	19	222	18
LAS VEGAS	77.7	52.4	65.1	109	AUG 7	22	FEB 12	2518	7.96	1.09	NOV 22	T	T	JAN 7	42	30	22	35	3.7	23	54	NW	FEB 22	82	4.1	187	86	92	37	0	19	2	126	0	32	0
RENO	66.8	31.6	49.2	97	AUG 6	- 4	JAN 1	5813	9.72	.97	AUG 14-15	21.8	3.3	DEC 28-29	74	48	35	59	1.1	25	56	SW	JAN 23	86	5.2	136	95	134	68	8	25	6	22	11	190	2
WINNEMUCCA	64.2	31.7	48.0	97	AUG 7+	- 9	JAN 1	6392	7.75	.54	JAN 10-11	21.4	4.1	MAY 6-7	67	43	33	55	0.8	26	47	SW	DEC 28	62	5.5	128	92	145	76	9	22	8	22	12	200	5
NEW HAMPSHIRE																																				
CONCORD	56.9	32.1	44.5	96	AUG 7+	-14	FEB 5+	7691	24.17	1.29	FEB 25	31.8	4.1	JAN 2-3	81	79	51	62	2.5	29	38	W	NOV 4	59	5.9	107	117	141	115	15	25	36	7	46	195	15
MT WASHINGTON OBS	31.7	17.8	24.8	68	AUG 16	-38	JAN 14	14555	71.35	3.59	SEP 24-25	214.2	12.6	OCT 28	86	86	84	86			132Y	SE	FEB 25	32	7.8	43	81	241	201	71	21	318	0	189	255	88
NEW JERSEY																																				
ATLANTIC CITY	62.8	41.5	52.2	97	JUL 25	- 8	JAN 17	5491	25.27	1.47	JUL 11	17.5	5.3	JAN 15-16	81	81	54	70	3.2	27	40	23	FEB 25	60	5.8	105	117	143	100	7	20	44	19	16	125	3
NEWARK	62.1	45.3	53.7	97	JUN 23+	5	JAN 15	5168	26.09	1.52	FEB 7-8	23.2	7.7	JAN 10	69	71	51	59	3.6	28	46	23	FEB 25		5.8	103	126	136	105	5	24	11	26	21	91	0
TRENTON U	61.9	44.9	53.4	94	JUN 29+	3	JAN 15	5155	32.73	2.55	JUL 11	28.6	9.0	JAN 9-10							41	SW	FEB 25	60	5.7	103	124	138	113	7			16	21	91	0
NEW MEXICO																																				
ALBUQUERQUE	69.4	42.3	55.9	97	JUL 21+	10	DEC 16+	4250	9.31	.89	OCT 16-17	8.0	2.5	DEC 14-15	62	39	31	49	0.7	20	56	SW	APR 10	76	4.3	168	112	85	65	4	42	6	48	4	104	0
CLAYTON	66.7	39.3	53.0	95	JUL 23	4	MAR 20	4932	21.36	3.90	OCT 16-17	17.5	3.3	FEB 10	70	39	39								5.2	142	90	133	83	8			17	12	123	0
RATON	64.4	32.0	48.2	91	JUL 20	- 9	FEB 12	6208	22.94	5.60	JUN 17	18.4	3.2	APR 26		19									5.2	123	124	118	85	8			3	17	185	9
ROSWELL	76.7	43.2	60.0	102	JUL 19+	- 4	FEB 24	3398	6.68	1.07	JUN 9-10	13.4	5.8	FEB 7-8	69	40					42	SW	JAN 25	73	4.4	158	120	87	47	5	33	11	103	3	108	1
SILVER CITY	71.1	42.4	56.8	98	JUN 29	10	MAR 4+	3847	11.42	1.08	DEC 9-10	9.1	4.0	DEC 14-15											3.9	187	108	70	69	4			39	0	99	0
NEW YORK																																				
ALBANY	57.4	36.1	46.8	96	JUN 28	-14	JAN 31	7096	27.94	1.80	SEP 24-25	37.8	8.0	JAN 23-24	75	74	53	64	3.5	26	40	NW	NOV 18+	50	6.9	66	107	192	133	10	24	13	18	45	154	12
BINGHAMTON	53.3	37.0	45.2	92	AUG 15	-12	JAN 17	7530	31.65	1.83	SEP 23-24	69.9	8.7	JAN 23-24	80	83	64	70	3.8	26	42	SW	MAY 16+	53	7.5	3[illegible]	105	222	165	19	30	46	4	58	152	11
BUFFALO	55.2	39.0	47.1	90	AUG 7	- 4	JAN 15+	6841	35.47	2.27	OCT 8-9	70.7	8.4	NOV 27-28	79	80	65	71	4.9	24	51	SW	JAN 26	46	7.7	47	89	229	175	27	33	23	1	45	132	3
NEW YORK U	62.0	46.3	54.2	95	JUN 29	9	JAN 17	4839	26.09	1.79	FEB 7-8	21.3	6.3	JAN 10	69	72	50	59	2.6	27	37	NW	JAN 3	61	5.1	134	118	113	103	8	17	0	15	19	71	0
J.F. KENNEDY	60.3	44.3	52.3	95	JUN 29	5	JAN 15	5267	25.38	1.48	DEC 12-13	26.5	6.6	JAN 10	75	74	56	68	3.0	27	46	30	AUG 28		5.8	100	140	125	111	8	20	18	6	19	93	0
NEW YORK LA GUARDIA	61.3	48.4	54.9	95	JUL 14+	9	JAN 15	4836	22.17	1.38	FEB 25	18.0	4.6	JAN 16	66	68	53	58	3.0	28	37	W	OCT 31+		5.8	98	130	137	107	7	20	7	16	21	65	0
ROCHESTER	56.5	37.7	47.1	96	AUG 6	- 6	JAN 15+	6920	25.16	1.42	AUG 19	69.3	8.2	JAN 2	76	78	59	66	4.8	25	49	W	OCT 31	50	7.2	55	95	215	144	21	30	13	9	44	136	5
SYRACUSE	56.1	37.0	46.6	97	AUG 15	-16	JAN 17	7122	28.39	1.36	APR 11-12	86.3	11.9	FEB 26-27	79	79	60	69	3.7	27	49	W	OCT 31	45	7.0	59	106	200	174	24	23	8	8	49	147	6

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Temperature							Heating degree days	Precipitation						Relative humidity				Wind					Possible sunshine	Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes								Snow, Sleet									Fastest mile					Sunrise to sunset							Max temp		Min temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date		Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1:00a.m. E.S.T.	7:00a.m. E.S.T.	1:00p.m. E.S.T.	7:00p.m. E.S.T.	Resultant speed	Resultant direction	Speed	Direction	Date			Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation .01 inch or more	Snow, Sleet 1.0 inch or more	Thunderstorms	Heavy fog	90 °F and above	32 °F and below	32 °F and below	0 °F and below
	°F	°F	°F	°F		°F		Base 65 °F	In.	In		In	In.		%	%	%	%	M.p.h.		M.p.h.			%	Tenths											
NORTH CAROLINA																																				
ASHEVILLE	66.6	43.0	54.8	89	AUG 15	7	JAN 31	4286	39.50	2.35	OCT 30-1	14.8	5.5	JAN 15-16	89	93	59	72	1.9	35	44	34	DEC 25	60	5.9	111	96	158	129	5	63	79	0	7	105	0
CAPE HATTERAS R	68.6	53.6	61.1	91	AUG 27	17	FEB 1	2890	41.52	4.80	JUL 28-29	.3	.3	JAN 31	82	81	64	79	1.1	30	42	ESE	OCT 7+	67	5.9	99	112	154	111	0	50	21	2	0	27	0
CHARLOTTE	71.1	49.8	60.5	96	AUG 18	13	JAN 19	3222	39.35	2.46	JUL 27-28	12.2	10.2	JAN 16-17	80	87	56	63	1.0	26	38	SW	FEB 25	66	5.7	117	98	150	102	3	45	25	35	2	73	0
GREENSBORO	69.6	47.6	58.6	95	AUG 18+	8	FEB 1+	3701	45.12	3.16	JUN 11-12	12.6	5.5	JAN 16-17	82	85	55	67	1.5	26	48	NW	MAY 12	58	5.9	108	104	153	109	4	46	33	29	4	85	0
RALEIGH	70.7	47.5	59.1	94	AUG 27	8	JAN 19	3531	34.42	3.02	JUN 11-12	13.1	4.3	JAN 16-17	80	84	52	67	1.5	25	32	24	FEB 25	62	5.7	105	119	141	92	4	58	40	26	3	84	0
WILMINGTON	73.9	53.6	63.8	96	AUG 27	19	FEB 1	2393	57.32	3.93	AUG 17-18	3.3	2.8	JAN 30-31	80	81	56	71	0.9	27	43	NE	JUN 14	65	5.7	105	124	136	128	1	53	36	35	1	43	0
NORTH DAKOTA																																				
BISMARCK	51.2	27.8	39.5	97	JUL 22	-35	JAN 13	9487	21.53	2.68	AUG 5-6	42.4	7.0	MAY 9	73	77	57	56	2.1	33	52	NW	MAY 1	61	6.4	78	119	168	104	15	32	12	7	93	194	60
FARGO	48.8	27.1	38.0	100	AUG 13	-35	JAN 29	10011	24.01	1.35	APR 10	30.7	5.6	NOV 25-26	79	82	66	66	0.9	32	6[illegible]	S	JUL 29	56	6.8	72	100	193	101	11	28	23	4	114	187	67
WILLISTON	50.3	26.6	38.5	100	AUG 12+	-38	JAN 13	9914	17.46	2.05	MAY 5-6	27.9	5.1	DEC 30		81	59	57			66	NW	FEB 20	59	6.4	89	100	176	88	6			12	101	206	68
OHIO																																				
AKRON	59.8	39.6	49.7	94	JUL 24	- 9	JAN 17	6111	33.55	1.72	OCT 21-22	38.5	5.3	JAN 15-16	79	82	61	68	3.5	24	40	30	APR 7		7.0	59	110	196	149	13	41	26	9	34	137	7
CINCINNATI OBS	65.0	45.5	55.3	99	JUL 24	- 3	JAN 31	4709	41.91	3.74	SEP 11-12	21.9	5.0	JAN 15-16							34	W	APR 8	55					112	7			23	21	97	3
CLEVELAND	58.9	40.9	49.9	98	JUL 24	- 2	FEB 3+	6073	31.91	1.36	JUN 1-2	44.9	5.1	JAN 15-16	77	80	65	68	4.2	23	43	W	JUL 9	49	7.1	54	114	197	161	15	33	15	6	35	126	4
COLUMBUS	62.2	42.2	52.2	97	JUL 24	-11	JAN 17	5464	42.65	2.04	JUL 9-10	27.7	7.2	JAN 15-16	75	77	59	63	2.3	24	56	W	NOV 27	52	6.7	75	105	185	140	9	46	15	15	27	119	5
DAYTON	62.8	42.8	52.8	100	JUL 24	- 7	FEB 2+	5446	30.46	2.10	SEP 14-15	25.8	6.2	JAN 15-16	74	77	58	63	3.4	22	41	S	MAY 22	62	6.6	78	108	179	127	9	42	20	18	27	116	6
MANSFIELD	57.9	38.6	48.3	96	JUL 24	- 9	JAN 17	6473	30.64	2.33	MAY 26	33.1	3.6	FEB 1		80	61								7.0	62	106	197	140	11	43	21	4	43	137	5
TOLEDO	58.2	38.4	48.3	94	JUL 24	- 9	JAN 17	6537	40.85	2.07	AUG 1-2	34.2	6.5	FEB 24-25	79	83	62	66	3.2	25	47	W	AUG 27	55	6.8	58	124	183	140	9	46	18	9	42	144	6
YOUNGSTOWN	57.8	38.8	48.3	95	JUL 24	- 9	JAN 17	6482	40.47	1.67	JUN 1-2	60.0	7.1	MAR 5-6	79	81	62	68	3.3	24	44	30	APR 12		7.2	56	101	208	160	23	37	26	4	45	138	9
OKLAHOMA																																				
OKLAHOMA CITY	72.9	50.6	61.8	104	JUL 24	7	FEB 24	3247	24.17	2.24	DEC 23-24	3.0	2.0	JAN 9	73	80	54	53	4.2	16	54	NW	JUN 1	68	5.4	132	92	141	78	1	53	15	77	5	77	0
TULSA	74.0	49.7	61.9	104	AUG 27	8	FEB 24	3288	30.69	3.19	DEC 23-24	2.4	1.5	FEB 23-24	73	82	53	52	3.9	18	42	SW	APR 8	72	5.5	122	111	132	78	1	49	5	88	7	84	0
OREGON																																				
ASTORIA	58.5	43.7	51.1	82	SEP 24+	24	DEC 16+	4979	63.74	2.83	JAN 27-28	14.1	6.6	JAN 2-3	87	77	70	84	2.1	22	44	18	JAN 1		7.8	42	78	245	178	4	2	35	0	0	36	0
BURNS U	60.0	32.5	46.3	94	JUL 30	- 9	DEC 23	6929	11.10	.88	AUG 11	44.8	4.4	JAN 23	73	54	40	61	3.0	32					5.7	117	105	143	92	16			11	20	190	3
EUGENE	63.5	43.0	53.3	99	JUL 31	21	DEC 20	4435	35.26	2.27	DEC 27-28	9.7	4.9	JAN 3	91	76	59	82	1.1	25	36	18	DEC 29		6.8	86	69	210	107	3	4	65	17	3	27	0
MEACHAM	52.6	35.8	44.2	92	AUG 1	1	MAR 18	7629	30.93	1.94	JAN 27-28	109.8	9.0	JAN 25+		61									6.5	102	65	198	133	30			4	47	150	0
MEDFORD	67.9	40.3	54.1	102	JUL 24	12	DEC 20	4427	18.12	1.45	DEC 27-28	22.2	5.0	JAN 2-3	84	65	45	70	1.3	30	44	14	DEC 27		5.7	123	77	165	92	8	[illegible]	55	5[illegible]	2	80	0
PENDLETON	63.7	42.7	53.2	103	AUG 1	15	MAR 18	4830	10.42	.75	JUN 16-17	10.1	3.1	JAN 25	68	54	46	61	3.4	25	44	26	FEB 5		5.9	123	69	173	94	3	8	35	30	14	81	0
PORTLAND	63.4	44.0	53.7	107	JUL 30	19	DEC 17	4360	31.29	1.88	DEC 27-28	.3	.3	MAR 25	86	73	59	77	0.9	24	58	SE	FEB 5	55	6.9	78	74	213	120	0	4	46	14	0	48	0
SALEM	63.3	41.0	52.2	104	JUL 31	18	DEC 15	4806	33.73	1.94	DEC 27-28	7.4	3.3	DEC 30-31	91	74	59	82	1.6	23	43	21	FEB 5		6.7	89	73	203	126	4	6	49	15	4	60	0
SEXTON SUMMIT R	57.2	39.4	48.3	91	JUL 30	19	DEC 31+	6191	27.09	3.18	DEC 27-28	127.2	33.5	DEC 27-28		67	56				51	9	DEC 29		5.3	154	64	147	102	22			2	22	104	0
PACIFIC AREA																																				
CANTON ISLAND	88.1	77.5	82.8	92	DEC 18+	72	NOV 15+	0	56.41	4.93	NOV 28-29	.0	.0		80	80	68	77							7.0	44	146	175	157	0			82	0	0	0
ENIWETOK	86.5	77.0	81.8	92	OCT 25	70	AUG 7	0	59.84	3.86	OCT 13-14	.0	.0		80	80	71	74	13.0	7									187	0			17	0	0	0
TAGUAC GUAM R	85.0	71.6	78.3	89	SEP 27+	54	MAR 14	0	78.24	7.48	SEP 13-14	.0	.0								29	SW	SEP 29+	60					243	0			0	0	0	0

See reference notes at end of table.

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State and Station	Temperature							Heating degree days	Precipitation						Relative humidity				Wind					Possible sunshine	Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes								Snow, Sleet									Fastest mile					Sunrise to sunset							Max temp		Min temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date		Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1:00am EST	7:00am EST	1:00p.m. EST	7:00p.m. EST	Resultant speed	Resultant direction	Speed	Direction	Date			Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation .01 inch or more	Snow, Sleet 1.0 inch or more	Thunderstorms	Heavy fog	90 °F and above	32 °F and below	32 °F and below	0 °F and below
	°F	°F	°F	°F		°F		Base 65 °F	In	In		In	In.		%	%	%	%	M.p.h.		M.p.h			%	Tenths											
PACIFIC AREA																																				
JOHNSTON	82.2	74.1	78.2	87	OCT 17+	65	FEB 16	0	20.72	2.31	OCT 24-25	.0	.0		76	75	67	73	12.2	9	47	E	DEC 1	72	5.5	92	178	95	151	0	3	0	0	0	0	0
KOROR R	86.3	75.4	80.9	90	OCT 13+	71	JUN 16	0	159.59	5.46	FEB 17-18	.0	.0		91	81	78	89	1.5	8	30	NW	JUL 20	52	9.8	2	6	357	253	0	37	0	3	0	0	0
KWAJALEIN	86.6	76.6	81.6	90	AUG 14+	71	NOV 9+	0	70.04	2.75	JUL 15-16	.0	.0		82	83	74	78	12.3	7	44	3	NOV 9		8.7	8	70	287	216	0	5	0	2	0	0	0
MAJURO	85.2	76.9	81.1	90	AUG 13	72	JAN 3+	0	114.83	3.67	SEP 26-27	.0	.0		81	82	75	78	9.1	7	33	NE	APR 11	54	8.8	8	68	289	242	0	21	0	1	0	0	0
MARCUS ISLAND	82.4	72.1	77.3	93	AUG 15+	60	MAR 17	0	33.52	3.36	JAN 25	.0	.0			68	69	77			86	SE	AUG 18	70	6.0	73	171	120	141	0			38	0	0	0
PONAPE R	86.1	74.4	80.3	90	OCT 30+	70	AUG 4+	0	193.31	7.07	JUL 16	.0	.0		90	79	81	89	5.1	6	28	SE	JAN 21	35	9.2	0	45	320	293	0	29	0	5	0	0	0
TRUK MOEN ISLAND	85.3	75.5	80.4	89	OCT 30+	70	JUN 1	0	137.61	6.22	JAN 16-17	.0	.0		85	77	77	84	6.1	5	38	NE	APR 12	56	8.9	4	58	303	246	0	18	0	0	0	0	0
WAKE	83.2	74.0	78.6	89	SEP 25	67	NOV 27	0	26.45	3.39	OCT 12-13	.0	.0		78	79	68	72	10.9	6	37	4	NOV 30+		5.7	92	163	110	154	0	4	0	0	0	0	0
YAP R	85.9	75.7	80.8	90	JUL 1+	72	JUL 10+	0	120.92	6.47	JUL 2-3	.0	.0		90	80	78	88	4.2	6	34	SW	SEP 29+	40	9.5	0	36	329	268	0	19	0	2	0	0	0
PENNSYLVANIA																																				
ALLENTOWN	60.8	40.1	50.5	95	JUN 23	- 3	JAN 15	5974	30.55	1.81	FEB 7-8	20.4	6.3	JAN 10	76	79	54	62	3.7	28	45	32	FEB 19		5.9	101	115	149	111	6	28	23	20	25	132	1
ERIE	56.2	40.5	48.4	92	AUG 17	- 2	FEB 23+	6501	38.41	1.87	MAR 4-5	83.2	13.5	NOV 28-29	78	77	66	70	4.6	23	46	21	APR 12		7.0	69	96	200	165	26	39	24	5	39	124	3
HARRISBURG	62.9	43.1	53.0	97	AUG 18+	0	JAN 15	5460	31.19	1.93	FEB 7-8	30.4	7.6	JAN 10	70	73	52	58	2.8	28	42	W	APR 12	58	6.4	81	115	169	118	9	31	18	37	23	115	1
PHILADELPHIA	62.2	43.8	53.0	94	JUN 23	5	JAN 17	5273	29.34	2.05	AUG 8-9	23.6	6.6	JAN 10	74	75	55	62	2.8	28	41	SW	FEB 25	57	6.0	100	111	154	106	6	22	14	14	19	112	0
PITTSBURGH	60.2	40.5	50.4	94	AUG 17+	- 8	JAN 17	5880	30.24	2.20	AUG 31-1	36.7	5.7	MAR 5-6	77	80	57	63	3.8	26	46	24	APR 12	49	7.2	5[illegible]	105	210	145	12	36	18	7	30	118	2
PITTSBURGH U	61.9	43.9	52.9	95	AUG 17+	1	JAN 17	5239	27.73	2.19	AUG 31-1	23.5	3.6	MAR 5										48					138	8			7	27	100	1
READING U	62.7	44.9	53.8	96	AUG 16	4	JAN 15	5113	27.74	1.86	FEB 7-8	19.0	7.3	JAN 10							55	E	FEB 25	55	5.8	108	122	135	112	6			28	19	96	0
SCRANTON	58.3	40.1	49.2	94	JUL 14+	- 5	JAN 17	6322	26.35	2.09	AUG 1-2	29.9	3.5	JAN 10	76	79	57	63	2.5	26	40	SW	APR 12	55	6.8	71	1[illegible]9	185	135	8	36	21	13	36	124	4
WILLIAMSPORT	58.3	38.3	48.3	93	JUL 14	- 7	JAN 17	6464	32.43	2.23	AUG 1-2	23.8	3.1	MAR 5-6	84	85	60	66	2.3	28	38	26	FEB 25		6.7	66	116	183	133	10	37	34	5	30	137	6
RHODE ISLAND																																				
BLOCK ISLAND	54.6	42.5	48.6	82	AUG 20+	4	JAN 15	6218	24.08	3.20	AUG 2	27.6	9.0	JAN 23-24											5.9	90	139	136	90	7			0	24	96	0
PROVIDENCE	59.3	40.3	49.8	92	JUL 25+	- 3	JAN 18	6114	25.44	2.11	FEB 25	39.9	10.4	JAN 23-24	72	71	50	61	3.6	27	36	29	FEB 22	61	5.7	120	100	145	109	9	22	19	9	27	132	5
SOUTH CAROLINA																																				
CHARLESTON	75.1	54.3	64.7	94	AUG 27+	21	DEC 8+	2135	54.03	3.81	OCT 18-19	T	T	MAR 31+	84	85	56	72	0.9	25	54Y	S	FEB 25	55	6.4	82	116	167	130	0	68	31	31	0	38	0
COLUMBIA	75.3	51.9	63.6	98	AUG 27	19	FEB 3+	2535	52.55	5.06	SEP 2	1.1	1.1	JAN 30-31	83	87	52	65	1.4	26	40	35	JUL 15	65	5.5	114	121	130	121	1	56	24	77	0	63	0
GNVLE-SPARTANBURG	71.3	49.9	60.6	95	AUG 27+	15	JAN 19	3115	45.66	3.09	JUN 14-15	10.0	5.7	JAN 16	79	82	53	63	1.0	27	36	W	FEB 25	59	5.7	117	100	148	114	4	54	32	24	1	66	0
SOUTH DAKOTA																																				
ABERDEEN	53.5	28.7	41.1	112	AUG 13	-32	JAN 13	9067	17.13	1.23	MAY 22-23	33.9	5.8	NOV 25-26	75	79	58	59	1.7	34	46	16	MAY 5		6.4	84	110	171	101	12	34	10	13	87	184	50
HURON	55.3	30.6	43.0	110	AUG 13	-33	FEB 24	8455	19.52	2.46	MAY 20-21	35.2	10.3	MAR 28	79	83	60	60	0.8	30	47	NW	MAR 17	59	6.4	88	110	167	108	9	37	14	23	71	171	45
RAPID CITY	58.8	34.0	46.4	105	AUG 12	-14	FEB 23	7161	17.68	3.40	MAY 14-15	28.1	8.8	MAY 8-9	74	52	53	70	3.8	34	57	NW	JAN 31	58	5.9	100	119	146	104	8	49	18	18	40	162	21
SIOUX FALLS	54.5	32.4	43.5	101	AUG 13	-30	FEB 24	8180	27.94	2.26	MAY 8	39.8	10.1	FEB 9-10	82	86	65	65	1.0	28	40	28	DEC 30+		6.3	93	105	167	113	11	48	18	10	69	171	41
TENNESSEE																																				
BRISTOL	67.7	45.0	56.4	95	AUG 17+	- 4	FEB 3	4184	37.26	2.19	JUL 10	22.1	6.1	FEB 1	81	86	58	64	1.5	28	40	25	JAN 26		6.2	86	115	164	110	6	50	40	13	11	99	1
CHATTANOOGA	70.4	48.0	59.2	96	AUG 17	8	JAN 31	3484	44.36	3.48	MAR 25-26	3.4	1.8	JAN 15-16	88	91	60	66	0.7	24	43	NW	MAY 18	58	6.3	100	87	178	117	1	62	39	11	4	82	0
KNOXVILLE	70.0	49.7	59.9	96	AUG 16	3	FEB 3	3430	40.81	3.69	MAR 25-26	17.6	6.3	JAN 16-17	80	85	59	62	2.0	27	42	NW	MAR 25+	50	6.2	96	102	167	118	5	49	35	25	4	76	0

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Temperature							Heating degree days	Precipitation						Relative humidity				Wind					Possible sunshine	Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes								Snow, Sleet									Fastest mile					Sunrise to sunset							Max temp		Min temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date		Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1:00a.m. E.S.T.	7:00a.m. E.S.T.	1:00p.m. E.S.T.	7:00p.m. E.S.T.	Resultant speed	Resultant direction	Speed	Direction	Date			Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation .01 inch or more	Snow, Sleet 1.0 inch or more	Thunderstorms	Heavy fog	90 °F and above	32 °F and below	32 °F and below	0 °F and below
	°F	°F	°F	°F		°F		Base 65 °F	In.	In.		In	In.		%	%	%	%	M.p.h.		M.p.h.			%	Tenths											
TENNESSEF																																				
MEMPHIS	72.3	52.3	62.3	100	JUL 24	10	JAN 31	3046	42.79	4.90	MAY 26-27	7.9	3.3	FEB 24-25	75	80	57	58	1.6	20	43	W	FEB 11	64	5.6	124	95	146	103	5	49	7	60	5	61	0
NASHVILLE	70.3	49.1	59.7	98	JUL 24	2	JAN 31	3576	39.67	2.07	MAR 25-26	7.5	2.0	MAR 5-6	76	81	55	58	2.0	22	48	NW	JUL 2	62	5.9	106	108	151	114	4	54	15	38	8	80	0
OAK RIDGE	68.6	46.8	57.7	95	AUG 17+	1	FEB 3	3813	47.84	4.00	MAR 25-26	11.3	4.5	FEB 1							45Y		AUG 19		5.8	123	79	163	121	3			8	5	77	0
TEXAS																																				
ABILENE	77.1	54.8	66.0	104	SEP 15	15	MAR 20	2250	24.35	2.31	APR 25-26	T	T	MAR 25+	63	72	50	44	4.7	17	54	W	DEC 23	66	5.3	138	97	130	62	0	45	16	105	0	44	0
AMARILLO	71.4	44.2	57.8	98	SEP 14+	3	FEB 24	3895	20.09	3.09	JUN 10-11	13.1	3.4	JAN 22-23	62	73	45	40	4.8	21	52	SE	SEP 9	77	4.8	151	121	93	61	7	47	27	65	8	103	0
AUSTIN	78.0	58.4	68.2	101	JUL 28	23	FEB 24	1604	40.57	4.00	SEP 22	2.5	2.0	MAR 3	78	86	60	58	1.9	16	40	SE	MAY 17	54	5.8	103	120	142	86	1	46	26	105	0	17	0
BROWNSVILLE	82.0	65.0	73.5	97	SEP 10	36	JAN 17	493	21.21	3.15	SEP 23-24	.0	.0		87	91	61	70	6.3	13	55	NW	FEB 24	65	5.6	104	132	129	70	0	20	30	98	0	0	0
CORPJS CHRISTI	81.4	62.5	72.0	100	SEP 10+	29	MAR 4	854	25.29	2.30	FEB 16-17	.0	.0		86	91	64	69	6.2	13	42	N	FEB 24	53	6.1	92	125	148	81	0	31	24	107	0	6	0
DALLAS	76.0	56.9	66.5	102	SEP 14	18	FEB 24	2202	35.50	4.81	SEP 21-22	T	T	MAR 19+	73	82	60	55	4.3	16	39	SE	OCT 15	59	5.6	123	98	144	84	0	43	10	99	0	37	0
DEL RIO	81.0	58.3	69.7	103	SEP 10	25	FEB 14	1318	17.12	1.88	APR 26-27	3.0	3.0	MAR 3	66	79	56	45	5.5	12	35	12	JUN 4+		5.5	125	95	145	51	1	40	19	133	0	14	0
EL PASO	77.0	50.7	63.9	102	AUG 7	15	MAR 4	2428	5.41	1.54	SEP 6-7	.3	.3	FEB 23	52	35	26	41	1.7	25	56	W	MAR 16	83	3.8	196	90	79	45	0	26	0	99	0	44	0
FORT WORTH	76.5	55.6	66.1	103	AUG 19	18	FEB 24	2208	36.56	4.86	MAY 9-10	T	T	MAR 19+	73	82	57	55	3.2	17	43	35	JUN 15		5.4	135	95	135	78	0	49	13	101	0	39	0
GALVESTON U	75.3	65.8	70.6	97	JUL 22	28	FEB 24	950	34.66	3.81	DEC 18	.0	.0								45	NW	APR 19	60					72	0			11	0	3	0
HOUSTON U	79.3	63.7	71.5	99	JUL 28	27	FEB 24	954	36.16	3.34	MAY 18-19	T	T	FEB 24															92	0			87	0	3	0
HOUSTON	80.5	61.2	70.9	100	JUL 28	23	JAN 17	1091	37.97	2.89	MAY 21-22	T	T	FEB 24	83	86	59	64	3.0	14	44	17	JUN 5	63	6.3	73	136	156	105	0	50	47	105	0	8	0
LUBBOCK	75.4	47.9	61.7	101	JUL 8	8	MAR 20	3021	14.15	2.80	SEP 18-19	4.1	2.0	FEB 8-9	62	73	46	39	4.1	18	59	28	JAN 25		4.8	149	112	104	55	2	40	10	95	4	84	0
MIDLAND	76.9	50.5	63.7	101	JUL 9	14	MAR 20+	2532	12.16	2.41	AUG 15	4.5	2.5	FEB 17	64	77	44	36	4.2	17	41	27	JAN 25		4.7	159	94	112	45	3	30	25	105	1	63	0
PORT ARTHUR	79.8	59.9	69.9	98	JUL 28	20	JAN 17	1220	34.46	5.05	FEB 28-1	T	T	MAR 3+	88	90	61	71	2.6	14	60	W	APR 19	61	6.3	73	134	158	86	0	55	45	90	0	14	0
SAN ANGELO	78.8	54.1	66.5	103	SEP 15+	17	MAR 20	2121	16.25	1.65	MAY 13-14	1.1	.8	MAR 2	67	78	50	44	3.6	18	44	30	OCT 18		5.1	142	101	122	67	0	33	15	124	0	47	0
SAN ANTONIO	79.2	58.0	68.6	99	SEP 11+	23	MAR 4	1534	36.65	3.05	MAY 18	T	T	MAR 3+	78	86	59	55	3.1	12	45	SE	MAY 17	59	5.7	111	116	138	87	0	39	25	106	0	27	0
VICTORIA	80.5	61.3	70.9	100	JUL 28	25	JAN 17	1081	30.85	2.79	SEP 22-23	T	T	FEB 24	85	88	61	65	3.4	12	51Y	N	FEB 24		6.5	67	130	168	87	0	46	46	104	0	6	0
WACO	78.1	57.8	68.0	102	AUG 20	20	FEB 24	1898	42.10	3.45	MAY 9-10	2.2	2.0	FEB 24	72	79	55	54	3.7	17	40	17	MAY 9		5.3	136	95	134	76	1	40	20	109	0	32	0
WICHITA FALLS	76.6	50.9	63.8	107	SEP 14	9	MAR 20	2806	24.43	2.10	OCT 18	1.4	1.4	MAR 19	74	82	52	51	3.9	18	44	1	AUG 23		5.3	131	106	128	71	1	54	18	96	1	68	0
UTAH																																				
MILFORD	64.5	32.7	48.6	98	JUL 28	-12	DEC 24	6282	10.80	.50	SEP 16-17	54.8	6.7	SEP 16-17		43	34								5.3	132	98	135	94	17			41	18	183	8
SALT LAKE CITY	62.9	38.0	50.5	98	JUL 28+	3	JAN 22	5804	18.43	1.38	APR 23	51.6	5.3	MAY 5	68	47	43	64	2.2	17	37	SW	AUG 3	69	6.0	104	100	161	97	16	34	16	31	24	133	0
WENDOVER	61.1	41.5	51.3	96	AUG 8+	5	DEC 20	5703	5.33	.43	DEC 12-13	3.5	2.4	DEC 13	55	43	36								5.2	130	102	133	66	1			22	24	118	0
VERMONT																																				
BURLINGTON	52.9	33.5	43.2	92	JUN 7	-19	JAN 15	8157	29.01	1.81	JUN 7-8	49.8	7.8	NOV 17-18	79	77	57	65	1.8	24	50	SE	FEB 25	55	7.1	56	105	204	146	16	36	16	5	69	172	16
VIRGINIA																																				
LYNCHBURG	66.4	44.5	55.5	95	AUG 16	0	FEB 1	4415	28.28	2.62	OCT 7	14.9	4.0	JAN 16-17		81	53	65			34	W	FEB 25	62	5.6	111	118	136	100	5	41	36	13	10	94	1
NORFOLK	67.8	49.4	58.6	95	AUG 19+	8	FEB 1	3703	26.67	2.09	JUN 15-16	14.5	5.2	JAN 30-31	77	79	57	67	1.1	21	66	SW	FEB 25	60	5.8	104	120	141	98	3	31	27	33	4	68	0
RICHMOND	67.5	45.6	56.6	94	AUG 19+	2	JAN 19	4229	29.76	2.65	JUL 25	20.0	8.5	JAN 15-16	78	82	51	64	1.0	23	35	N	JUN 30	62	5.8	108	115	142	97	5	27	26	33	6	93	0
ROANOKE	66.7	45.1	55.9	95	AUG 18+	5	FEB 1	4317	31.72	2.38	OCT 7	20.5	5.0	JAN 30	75	77	51	59	2.6	28	37	32	FEB 19		5.7	113	125	127	106	5	41	27	17	11	88	0

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Temperature							Heating degree days	Precipitation						Relative humidity				Wind					Possible sunshine	Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes								Snow, Sleet									Fastest mile					Sunrise to sunset							Max. temp		Min temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date		Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1:00a.m. E.S.T.	7:00a.m. E.S.T	1:00p.m. E.S.T	7:00p.m. E.S.T	Resultant speed	Resultant direction	Speed	Direction	Date			Clear, 0-0 3	Partly cloudy, 0 4-0 7	Cloudy, 0 8-1 0	Precipitation .01 inch or more	Snow, Sleet 1.0 inch or more	Thunderstorms	Heavy fog	90 °F and above	32 °F and below	32 °F and below	0 °F and below
	°F	°F	°F	°F		°F		Base 65 °F	In	In.		In	In.		%	%	%	%	M.p.h.		M.p.h.			%	Tenths											
WASHINGTON																																				
OLYMPIA	61.2	40.1	50.7	99	JUL 31	18	MAR 24+	5282	40.69	2.31	APR 19	29.0	6.3	JAN 23	91	77	63	85	3.2	21	35	22	APR 30+		7.5	55	78	232	146	10	2	98	9	1	78	0
SEATTLE-TACOMA	60.3	44.8	52.6	94	JUL 30	25	DEC 15	4659	33.56	1.85	APR 19	22.6	9.6	DEC 23-24	84	75	62	75	1.9	21	43	21	FEB 27		7.4	54	82	229	142	7	8	55	6	0	27	0
SPOKANE	57.6	37.1	47.4	98	AUG 1	10	DEC 25+	6704	14.46	.99	JAN 23-24	46.2	9.2	JAN 23-24	76	61	50	66	2.8	19	45	SW	FEB 27	55	6.6	90	91	184	100	16	8	57	21	43	138	0
STAMPEDE PASS R	46.2	34.6	40.4	87	AUG 1+	10	MAR 18	8924	66.60	3.00	JAN 26-27	297.1	16.3	JAN 27-28	88	80	74								7.6	59	66	240	188	67			0	82	160	0
TATOOSH ISLAND R	52.8	45.1	49.0	73	JUL 29	30	JAN 23	5754	76.87	2.99	FEB 3-4	13.7	6.0	DEC 27	89	84	82	87	4.4	14	72	SW	JAN 1	39	7.8	50	68	247	187	4	9	86	0	0	3	0
WALLA WALLA U	64.3	45.4	54.9	104	JUL 31	18	MAR 18	4405	13.96	1.36	AUG 25	11.2	3.3	JAN 10-11							34	W	FEB 8+	61	6.1	123	58	184	92	4			31	9	60	0
YAKIMA	63.3	36.9	50.1	102	AUG 1	5	JAN 9	5722	5.95	.95	DEC 26-27	28.6	9.5	DEC 26-27	75	55	44	65	3.3	28	39	24	OCT 4		6.0	109	97	159	49	10	5	19	29	14	133	0
WEST INDIES																																				
SAN JUAN P.R.	85.2	73.0	79.1	93	JUL 27	62	JAN 28+	0	65.81	3.55	JUN 15	.0	.0		83	81	67	77	6.8	9	40	E	FEB 7	63	6.0	50	207	108	211	0	46	0	14	0	0	0
SWAN ISLAND	84.5	76.6	80.6	90	SEP 13	70	FEB 26+	0	49.26	5.97	SEP 23-24	.0	.0												6.0	83	161	121	129	0			1	0	0	0
WEST VIRGINIA																																				
BECKLEY	61.5	41.0	51.3	90	AUG 17+	- 5	FEB 3+	5400	32.62	1.79	JAN 9-10	50.5	5.1	MAR 20+	81	84	57	67	3.7	24	46	15	MAR 17+		7.1	57	109	199	145	16	58	41	2	28	113	3
CHARLESTON	65.7	43.7	54.7	95	AUG 16	1	FEB 5+	4704	34.96	1.83	APR 11	31.6	4.6	MAR 20+	79	83	54	60	2.9	23	37	26	JUL 9		6.7	62	128	175	131	11	51	117	12	18	109	0
ELKINS	62.2	37.3	49.8	92	AUG 17	-12	FEB 1	5861	34.06	1.49	JAN 1-2	53.6	6.6	JAN 28-29	88	90	57	69	3.5	27	46	27	JAN 26		7.2	45	132	188	164	19	50	80	3	26	137	9
HUNTINGTON	66.4	45.0	55.7	94	AUG 17+	- 1	JAN 31	4426	37.27	1.78	SEP 23-24	21.0	5.9	JAN 10	79	84	59	63	2.3	23	36	32	APR 8		6.5	71	119	175	124	6	50	51	20	15	95	1
PARKERSBURG U	64.7	44.3	54.5	95	AUG 16	1	FEB 5+	4778	30.98	2.60	SEP 11-12	17.3	3.8	MAR 20							40	W	JAN 26	50					129	6			15	19	101	0
WISCONSIN																																				
GREEN BAY	52.9	34.5	43.7	96	AUG 14	-21	JAN 29	8027	32.58	2.50	SEP 19-20	44.4	8.1	MAR 17-18	81	83	65	68	2.2	28	45Y	W	JUN 20	49	6.6	83	102	180	137	17	43	31	6	75	160	20
LA CROSSE	53.9	34.2	44.1	99	JUL 23	-31	FEB 2	7971	41.58	2.15	SEP 27-28	37.4	8.4	MAR 17	83	86	66	69	1.5	24	35	23	JUN 20		6.6	93	77	195	128	9	46	23	8	68	159	36
MADISON	55.2	34.0	44.6	98	JUL 22	-25	JAN 29	7740	37.60	2.90	AUG 8-9	48.9	6.9	MAR 17	84	86	65	69	2.0	26	54	SW	JUN 27	55	6.6	84	92	189	133	12	50	21	8	64	165	17
MILWAUKEE	54.0	37.6	45.8	95	JUN 27	-16	JAN 29	7314	38.49	1.90	SEP 9	79.0	10.5	DEC 24-25	81	83	69	73	2.2	26	43	SW	MAR 18	61	6.3	100	91	174	133	21	41	33	6	54	137	11
WYOMING																																				
CASPER	57.4	31.3	44.4	96	AUG 12	-21	MAR 25	7642	12.12	1.10	JUN 9-10	70.2	5.8	DEC 22-23+	66	45	41	61	6.2	25	53	32	SEP 6		5.8	108	117	140	94	24	31	7	10	43	180	21
CHEYENNE	57.7	33.0	45.4	90	AUG 13+	-10	MAR 18	7220	14.02	1.45	JUN 9-10	32.3	4.2	JAN 28	65	42	44	62	6.8	30	60	W	JAN 27	66	5.9	109	101	155	99	12	49	27	5	34	167	18
LANDER	57.3	31.7	44.5	93	AUG 12+	-14	MAR 18	7635	13.96	1.36	MAY 7-8	100.6	14.4	SEP 16	64	49	44	57	2.6	25	59	W	JAN 27	66	6.0	95	111	159	80	28	28	1	10	40	179	18
SHERIDAN	58.3	30.3	44.3	100	AUG 12	-23	MAR 25	7721	11.36	.89	JUN 23-24	61.3	7.2	MAR 21-22	69	49	48	68	3.3	30	61	SW	JAN 4	58	6.5	81	112	172	113	22	42	3	17	40	189	23

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

+	And also on an earlier date or dates.
B	Number of days maximum 70°F. or above for Alaskan Stations.
Y	Peak gust.
V	Sun below horizon November 19 - January 23, inclusive.
X	Sun below horizon November 24 - January 17, inclusive.

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Temperature, Averages, Daily maximum	Temperature, Averages, Daily minimum	Temperature, Averages, Annual	Temperature, Extremes, Highest	Temperature, Extremes, Date	Temperature, Extremes, Lowest	Temperature, Extremes, Date	Heating degree days	Precipitation, Total	Precipitation, Greatest in 24 hours	Precipitation, Date (s)	Snow, Sleet, Total	Snow, Sleet, Greatest in 24 hours	Snow, Sleet, Date (s)	Relative humidity, 1:00 am EST	Relative humidity, 7:00 am EST	Relative humidity, 1:00 pm EST	Relative humidity, 7:00 pm EST	Wind, Resultant speed	Wind, Resultant direction	Wind, Fastest mile (1.6 kilometers), Speed	Wind, Fastest mile, Direction	Wind, Fastest mile, Date	Possible sunshine	Average sky cover sunrise to sunset	Number of days, Sunrise to sunset, Clear, 0–0.3	Number of days, Sunrise to sunset, Partly cloudy, 0.4–0.7	Number of days, Sunrise to sunset, Cloudy, 0.8–1.0	Number of days, Precipitation 25mm or more	Number of days, Snow, Sleet 25.4mm or more	Number of days, Thunderstorms	Number of days, Heavy fog	Number of days, Max temp, 32.2°C and above	Number of days, Max temp, 0°C and below	Number of days, Min. temp, 0°C and below	Number of days, Min. temp, -17.8°C and below
	°C	°C	°C.	°C		°C		Base 18.3°C	Mm.	Mm.		Mm.	Mm.		%	%	%	%	M.p.s.		M.p.s.			%	Tenths											
ALABAMA																																				
BIRMINGHAM	22.7	10.5	16.6	34.4	AUG 16	-13.3	JAN 31	1555	1122	88	JUN 6-7	T	T	MAR 20+	84	88	59	67	.1	18	21.9	W	APR 12	55	6.2	93	109	163	110	0	61	10	20	2	69	0
HUNTSVILLE	22.6	10.8	16.7	36.1	AUG 16	-15.0	JAN 17	1647	1092	73	MAY 17-18	140	46	MAR 5	76	80	56	58	.4	16	21.5	24	FEB 24		6.0	108	94	163	105	3	57	14	33	4	69	0
MOBILE	25.6	14.7	20.2	36.7	JUL 20	-7.8	JAN 17	812	1460	212	JAN 22-23	0	0		84	87	59	70	.8	11	14.3	14	SEP 9+		6.1	84	132	149	108	0	63	61	67	0	16	0
MONTGOMERY	24.1	12.3	18.2	34.4	AUG 26+	-8.3	JAN 31+	1221	1194	120	JAN 22-23	T	T	MAR 6+	84	90	59	64	.1	10	19.7	SE	MAY 22	56	6.3	83	119	163	103	0	52	22	54	0	40	0
ALASKA																																	B			
ANCHORAGE PRK STRIP	4.9	-2.4	1.3	24.4	JUL 30	-29.4	JAN 1	6165	399	21	SEP 19	1956	269	DEC 20															129	16			3	125	192	40
ANCHORAGE	6.0	-1.9	2.1	25.0	JUL 30	-29.4	FEB 19	5876	419	20	SEP 26-27	2263	269	DEC 19-20	70	68	59	65	.1	18	14.3	2	APR 20+	37	7.5	67	49	249	137	24	2	37	12	109	181	46
ANNETTE	10.6	3.4	7.1	27.8	JUL 31	-16.1	JAN 4	4071	3091	142	FEB 17-18	1623	287	FEB 20-21	83	76	69	80	1.2	14	18.3	17	DEC 22		7.7	49	73	243	186	16	2	18	26	16	100	0
BARROW	-9.6	-15.9	-12.7	18.3	AUG 20	-42.8	JAN 2+	11289	149	8	NOV 14-15	1265	89	NOV 14-15	80	79	78	79	2.0	10	16.5	27	APR 13+			V56	V68	V175	116	16	0	70	0	263	324	170
BARTER ISLAND	-10.2	-16.1	-13.1	15.0	SEP 15	-46.1	FEB 9+	11417	165	14	JUL 20	1052	91	DEC 15-16	86	85	84	85	.1	5	21.9	26	NOV 12			X53	X54	X203	112	10	0	52	0	265	324	162
BETHEL	1.1	-6.3	-2.6	24.4	JUL 30+	-36.1	FEB 15+	7578	359	25	SEP 21-22	1234	81	DEC 30	86	84	75	80	.4	3	24.6	18	NOV 14		7.9	53	41	271	158	14	0	50	6	149	231	72
COLD BAY	5.6	.8	3.2	18.3	JUL 28	-16.7	FEB 18	5474	831	87	SEP 20-21	1958	157	FEB 21-22	86	85	80	84	1.2	21	27.3	12	DEC 2+		8.8	16	43	306	239	25	1	15	0	50	168	0
FAIRBANKS	.8	-10.2	-4.7	26.7	JUL 30+	-48.9	JAN 5	8352	287	22	SEP 5-6	2197	328	DEC 27	78	74	62	70	.4	30	14.3	24	DEC 28+		7.3	59	73	233	111	24	5	23	42	156	231	128
JUNEAU	8.2	-.2	4.1	27.8	JUL 7	-26.1	JAN 6	5148	1216	55	JAN 14-15	4148	376	FEB 6-7	91	85	76	85	2.5	11	21.9	12	OCT 28	40	7.9	53	59	253	195	35	0	25	22	39	171	15
KING SALMON	4.1	-4.9	-.4	23.9	JUL 27	-34.4	DEC 22	6777	507	23	AUG 13-14	1323	135	DEC 18-19	87	83	72	80	.9	11	30.8	9	MAR 18		7.6	59	56	250	172	17	0	27	7	109	223	50
KOTZEBUE	-2.9	-10.2	-6.6	20.6	JUL 28	-40.6	JAN 17	9017	307	25	AUG 1-2	2235	150	DEC 27+	81	80	77	78	1.2	12	22.8	28	DEC 27+		7.2	82	44	239	132	33	0	20	0	206	242	120
MC GRATH	.7	-9.4	-4.3	25.6	JUL 30	-46.7	DEC 24+	8219	367	15	SEP 21-22	2708	170	NOV 23-24	77	72	61	68	.4	25	17.4	19	NOV 14		7.7	54	54	257	142	37	3	23	15	161	227	112
NOME	-.9	-7.9	-4.4	20.0	JUL 28+	-35.6	FEB 15+	8233	510	31	AUG 5-6	1473	81	APR 12	82	81	77	79	1.3	7	24.6	24	NOV 11	34	7.0	82	51	232	170	20	0	26	0	190	247	88
ST. PAUL ISLAND	3.1	-1.8	.7	12.8	JUL 31	-22.2	FEB 16	6389	722	35	JUL 24-25	1989	216	JAN 16-17	92	91	88	91	.7	1	30.8	24	NOV 14		9.1	10	36	319	255	25	0	104	0	83	209	5
SHEMYA	5.3	2.2	3.7	12.8	JUL 29	-6.7	JAN 17	5271	891	29	DEC 16	1486	140	DEC 16	88	87	85	86	1.6	21	30.4	22	FEB 4		8.9	6	56	303	232	19	0	73	0	25	123	0
YAKUTAT	5.9	-1.7	2.1	22.2	JUL 29	-29.4	JAN 6+	5850	4770	141	AUG 29-30	6406	462	DEC 31	94	88	81	91	1.5	12	19.7	12	APR 3		8.3	35	54	276	222	51	1	41	3	62	193	20
ARIZONA																																				
FLAGSTAFF	15.1	-1.2	7.0	30.6	JUL 5+	-26.7	FEB 12	4106	929	87	SEP 17-18	4681	409	FEB 6-7	76	43	43	68	1.1	19	17.9	1	SEP 30		5.0	150	86	129	98	39	47	22	0	14	222	7
PHOENIX	28.5	12.2	20.3	45.0	JUL 4	-2.2	FEB 12	908	284	29	DEC 9-10	0	0		62	37	28	49	.5	15	23.7Y	W	SEP 19	85	3.7	206	74	85	50	0	26	0	159	0	8	0
TUCSON	27.1	11.8	19.5	41.7	JUL 3	-6.7	MAR 4	954	293	30	DEC 9-10	107	99	FEB 9-10	52	30	24	43	1.3	18	24.1	SE	JUL 8	83	3.8	207	72	86	57	2	35	0	133	0	19	0
WINSLOW	21.1	4.0	12.6	38.3	JUL 4	-13.9	FEB 12	2574	242	15	MAR 25	338	104	MAR 25	67	41	32	57	1.7	21	20.6	19	MAY 7		4.6	159	107	99	74	4	40	4	56	1	130	0
YUMA	29.7	14.9	22.3	45.0	JUL 4	-.6	FEB 12	569	123	27	APR 3-4	0	0		53	33	24	43	.4	27	20.1	SE	JUL 28	87	3.2	232	66	67	27	0	7	2	168	0	1	0
ARKANSAS																																				
FORT SMITH	23.5	9.4	16.5	39.4	AUG 26	-12.2	JAN 17	1767	784	91	MAY 26	3	3	JAN 9	81	86	54	56	.4	7	19.7	NE	JUL 25	63	5.7	115	105	145	79	0	52	12	86	2	78	0
LITTLE ROCK	23.3	10.8	17.1	38.3	AUG 18+	-9.4	FEB 2+	1620	989	92	MAY 9-10	183	84	MAR 3-4	80	86	58	62	.4	21	21.9	SE	JUL 24	62	5.5	122	104	139	89	3	50	14	81	2	60	0
TEXARKANA	24.5	12.3	18.4	37.8	AUG 19+	-8.9	JAN 17	1264	1047	89	FEB 10-11	114	76	FEB 24	77	85	59	60	.9	16					5.4	132	92	141	90	2	62	19	79	0	39	0
CALIFORNIA																																				
BAKERSFIELD	23.9	11.3	17.7	40.6	JUL 6	-3.9	DEC 19	1312	173	24	DEC 29	T	T	DEC 22	65	52	39	55	1.0	34	14.3	33	JAN 24		4.0	193	74	98	39	0	3	37	93	0	14	0
BISHOP	22.8	3.4	13.1	38.9	AUG 5	-13.3	JAN 1	2294	167	55	DEC 28-29	41	28	APR 1		30	21								4.2	174	104	87	40	1			81	0	130	0
BLUE CANYON	14.5	5.5	10.0	29.4	OCT 7	-11.7	JAN 1	3103	1412	100	NOV 17-18	5283	495	JAN 3-4		50					24.1	19	JAN 6		4.7	173	73	119	86	31			0	16	88	0
BURBANK	23.6	10.8	17.2	41.1	AUG 9	.0	FEB 12	969	668	137	DEC 28-29	0	0		76	54	46	70	1.3	16	13.0	12	MAR 31		4.4	174	94	97	53	0	8	16	47	0	1	0

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

YEAR 1965

State and Station	Temperature							Heating degree days	Precipitation						Relative humidity				Wind					Possible sunshine	Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes								Snow, Sleet									Fastest mile (1.6 kilometers)					Sunrise to sunset							Max. temp.		Min. temp.	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date		Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1:00 a.m. EST	7:00 a.m. EST	1:00 p.m. EST	7:00 p.m. EST	Resultant speed	Resultant direction	Speed	Direction	Date			Clear, 0-03	Partly cloudy, 04-07	Cloudy, 0.8-1.0	Precipitation 25mm. or more	Snow, Sleet 25.4mm. or more	Thunderstorms	Heavy fog	32.2 °C and above	0 °C and below	0 °C and below	-17.8 °C. and below
	°C.	°C.	°C.	°C		°C		Base 18.3 °C.	Mm.	Mm.		Mm.	Mm.		%	%	%	%	M.p.s.		M.p.s.			%	Tenths											
CALIFORNIA																																				
EUREKA U	13.7	8.1	10.9	26.7	OCT 23	- 1.7	DEC 16	2680	668	52	DEC 27-28	0	0								18.8	SW	NOV 17+	50	7.1	70	84	211	90	0			0	0	3	0
FRESNO	23.9	9.0	16.4	40.0	JUL 15	- 3.9	DEC 19	1445	263	39	MAR 12	T	T	DEC 22	80	59	42	67	.9	32	13.4	NW	JUN 25+	80	4.2	186	73	106	46	0	5	39	98	0	22	0
LONG BEACH	22.0	11.4	16.7	38.3	OCT 22	.0	JAN 2	927	446	52	NOV 22	0	0		78	61	53	74	.9	25	14.3	32	JAN 7		4.8	148	124	93	45	0	9	35	16	0	1	0
LOS ANGELES	20.6	12.4	16.5	38.3	OCT 22	2.8	FEB 12+	905	427	54	NOV 22	0	0		77	60	63	76	1.5	26	20.1Y	N	FEB 22		5.1	127	121	117	47	0	7	35	7	0	0	0
LOS ANGELES U	23.2	12.7	17.9	37.8	OCT 22	2.8	JAN 1	690	681	100	DEC 28-29	0	0								13.9	W	APR 10	60	4.3	174	107	84	47	0			25	0	0	0
MT SHASTA R	17.0	2.7	9.8	33.9	AUG 6+	- 12.8	JAN 1	3128	978	77	DEC 27-28	2687	660	DEC 27-28		58													99	19			12	3	132	0
OAKLAND	17.5	10.7	14.1	30.6	OCT 23+	.0	DEC 21	1564	415	33	DEC 28-29	0	0		80	74	67	78	2.1	28	17.0	15	DEC 28		5.3	140	95	130	58	0	5	13	0	0	1	0
RED BLUFF	23.3	9.8	16.6	42.2	JUL 5	- 5.6	DEC 21	1481	500	46	JAN 4-5	102	102	JAN 2	69	52	40	62	.2	22	22.4	NE	SEP 16	75	4.6	174	72	119	65	1	9	29	75	0	16	0
SACRAMENTO	22.2	8.4	15.3	38.9	JUL 15	- 4.4	DEC 20	1580	351	27	JAN 5-6	0	0		81	63	47	73	1.4	22	18.8	NW	SEP 16	78	4.5	172	74	119	56	0	4	38	59	0	14	0
SANDBERG R	16.7	7.4	12.1	33.9	AUG 9+	- 8.3	JAN 1	2629	513	87	DEC 28-29	945	267	APR 3		43					23.2	34	FEB 22+		4.6	170	72	123	46	9			7	5	70	0
SAN DIEGO	21.1	12.9	17.0	40.0	OCT 22	3.3	FEB 12+	778	483	56	DEC 9-10	0	0		78	61	62	75	1.2	27	14.8	S	APR 8	68	5.1	133	119	113	52	0	2	18	6	0	0	0
SAN FRANCISCO	17.4	8.8	13.1	31.1	OCT 24	- 1.1	DEC 21+	1896	539	53	DEC 24-25	0	0		83	71	63	79	2.7	28	22.8	S	JAN 5		5.0	151	92	122	60	0	5	14	0	0	7	0
SAN FRANCISCO U	16.6	10.6	13.6	32.2	OCT 24	1.7	DEC 21	1741	504	34	DEC 28-29	0	0								21.0	SE	JAN 5	65					62	0			1	0	0	0
SANTA CATALINA	19.4	12.5	15.9	36.7	OCT 22	3.9	JAN 1	1349	499	64	NOV 14-15	0	0												4.8	150	100	115	53	0	5	170	14	0	0	0
SANTA MARIA	20.2	7.4	13.8	37.8	OCT 22	- 2.8	DEC 23+	1666	341	49	NOV 22-23	0	0			62	61								4.7	159	106	100	51	0			9	0	16	0
STOCKTON	22.9	9.0	15.9	40.0	JUL 5	- 6.1	DEC 23	1519	370	36	MAR 12	0	0		80	63	47	71	1.6	29	19.7	15	DEC 28		4.6	163	77	125	56	0	3	47	69	1	16	0
COLORADO																																				
ALAMOSA	14.1	- 4.0	5.1	30.0	AUG 13+	- 30.6	FEB 13	4806	250	25	OCT 16-17	935	127	DEC 23	80	47	43								4.7	138	141	86	93	11			0	40	228	40
COLORADO SPRINGS	15.9	1.9	8.9	32.8	JUL 21	- 21.7	MAR 25+	3523	646	66	JUN 17-18	889	132	MAR 24	65	41	42	62	.8	4	21.9	17	MAY 23		5.8	105	110	150	93	11	63	20	2	29	139	10
DENVER	17.5	2.1	9.8	36.1	AUG 12	- 20.6	FEB 16+	3318	555	70	JUN 4-5	1577	165	JAN 31	70	43	45	66	.7	19	25.0	SW	JUL 25	70	5.9	107	112	146	103	21	45	11	22	22	149	11
GRAND JUNCTION	18.9	5.8	12.4	38.3	AUG 9	- 15.6	FEB 13	2754	360	34	SEP 17-18	681	97	FEB 9-10	64	44	39	57	.8	12	21.9	NE	JUN 4	64	5.6	118	102	145	86	10	36	8	50	9	107	0
PUEBLO	20.6	2.3	11.4	38.9	JUL 21	- 24.4	FEB 12	2944	319	42	JUN 4-5	782	150	FEB 10-11	68	38	35	59	.4	1	26.4	W	JAN 31	76	5.3	128	112	125	75	9	48	4	49	17	151	8
CONNECTICUT																																				
BRIDGEPORT	15.2	6.3	10.[illegible]	32.2	JUL 25	- 17.2	JAN 15	3099	682	56	JUL 18	980	201	JAN 23-24	78	77	60	69	2.0	28	22.4	31	FEB 22		5.7	111	118	136	104	8	21	22	1	25	97	0
HARTFORD	15.8	4.1	9.9	37.8	JUL 14	- 22.2	FEB 4+	3453	748	55	FEB 25	1237	305	JAN 23-24	75	75	50	59	1.2	28	17.0	NW	MAR 27	62	6.5	80	112	173	118	12	25	26	34	32	140	8
NEW HAVEN	14.7	5.4	10.1	32.8	JUN 29	- 17.2	JAN 15	3310	703	38	FEB 7-8	1052	183	JAN 23-24		78	59				17.4	NW	MAR 27	66	5.7	106	116	143	112	12			1	23	122	0
DELAWARE																																				
WILMINGTON	17.2	6.4	11.8	35.0	JUN 23	- 16.7	JAN 17	2882	632	72	JUL 11	419	168	JAN 10	79	79	54	67	1.3	27	19.7	20	FEB 25		5.9	100	115	150	99	6	26	27	16	18	112	0
DIST.OF COLUMBIA																																				
WASH NATL AP	19.2	8.3	13.8	36.1	JUL 25	- 12.8	JAN 31	2425	684	49	MAR 4-5	422	97	JAN 10	73	75	52	61	.6	26	21.9	SSW	FEB 25	59	5.9	101	116	148	100	6	26	9	48	7	89	0
FLORIDA																																				
APALACHICOLA U	24.0	16.6	20.3	33.9	JUL 18	- 5.0	[illegible]	680	2099	177	MAR 1-2	0	0											58	5.6	121	113	131	121	0	46	27	10	0	5	0
DAYTONA BEACH	26.1	15.8	21.0	35.0	AUG 28+	- 2.8	JAN 18	428	918	72	JUN 17-18	0	0		87	88	63	76	.6	7	17.9	26	JUN 13		6.0	85	141	139	101	0	76	39	15	0	5	0
FORT MYERS	28.8	18.2	23.5	33.9	AUG 23+	.6	JAN 18	127	1291	103	JUL 29	0	0		88	90	57	75	1.0	8	20.6	6	SEP 8		5.4	98	175	92	115	0	103	24	82	0	0	0
JACKSONVILLE	[illegible]	15.5	20.9	35.6	AUG 25+	- 3.3	JAN 18+	629	1333	134	SEP 27-28	0	0		84	87	56	71	.1	5	25.5	E	SEP 8	63	5.9	95	135	135	120	0	66	33	70	0	9	0
KEY WEST	28.7	23.8	26.3	33.3	AUG 14+	[illegible]	[illegible]	8	842	99	SEP 8	0	0		76	77	67	72	3.0	9	36.2	SW	SEP 8	76	5.2	117	157	91	86	0	57	0	41	0	0	0

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Temperature							Heating degree days	Precipitation						Relative humidity				Wind					Possible sunshine	Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes								Snow, Sleet									Fastest mile (1.6 kilometers)					Sunrise to sunset							Max temp.		Min. temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date		Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1:00 am EST	7:00 am EST	1:00 pm EST	7:00 pm EST	Resultant speed	Resultant direction	Speed	Direction	Date			Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm or more	Snow, Sleet 25.4mm or more	Thunderstorms	Heavy fog	32.2°C and above	0°C and below	0°C and below	-17.8°C and below
	°C.	°C.	°C.	°C		°C		Base 18.3°C.	Mm.	Mm.		Mm.	Mm.		%	%	%	%	M.p.s.		M.p.s.			%	Tenths											
FLORIDA																																				
LAKELAND U	27.6	17.3	22.4	35.0	JUL 1	-1.1	JAN 17	267	1228	74	AUG 6-7	0	0											69	5.6	100	156	109	122	0			73	0	2	0
MIAMI	28.4	20.4	24.4	33.9	APR 16	1.7	JAN 18	68	1483	144	OCT 14-15	0	0		81	84	60	71	1.8	10	30.8	6	SEP 8		6.1	62	186	117	117	0	59	7	20	0	0	0
ORLANDO	27.9	17.3	22.6	34.4	AUG 27+	-1.1	JAN 17	267	1204	68	JUL 12-13	0	0		85	89	55	69	.6	8	14.3	28	FEB 25		5.7	95	140	130	110	0	70	37	90	0	2	0
PENSACOLA	24.5	15.0	19.8	36.1	JUL 20	-6.1	JAN 17	826	1292	116	SEP 29-30	0	0		83	86	63	72	.4	11	21.5	S	JAN 23	61					119	0			24	0	14	0
TALLAHASSEE	26.4	13.6	20.0	36.1	AUG 25+	-9.4	JAN 18	837	2001	134	JUN 14-15	T	T	JAN 17	85	86	54	67	.3	6	20.6	36	MAR 18		5.9	75	162	128	118	0	84	45	94	0	24	0
TAMPA	27.5	16.6	22.1	35.0	JUN 6+	-1.7	JAN 18	327	1087	66	JUN 10-11	T	T	JAN 17	84	88	57	71	.6	8	18.3	27	FEB 25	63	5.7	98	143	124	98	0	91	20	69	0	3	0
WEST PALM BEACH	28.7	19.3	24.0	33.9	JUL 31+	.0	JAN 18	103	1480	243	OCT 14-15	0	0		79	81	58	71	1.7	10	24.6	3	SEP 7		5.6	100	155	110	111	0	61	12	59	0	1	0
GEORGIA																																				
ATHENS	22.7	10.4	16.6	36.1	AUG 17	-9.4	JAN 31	1573	1065	73	OCT 30-1	64	64	JAN 15-16	83	88	58	67	.7	27	15.6	30	JUL 3		6.0	102	98	165	110	1	59	34	41	1	59	0
ATLANTA	21.4	10.4	15.9	33.3	AUG 17+	-11.7	JAN 31	1666	1073	76	SEP 30-1	76	61	JAN 16	80	86	59	65	.5	26	15.2	W	NOV 27	55	6.2	96	104	165	108	1	56	44	9	2	58	0
AUGUSTA	24.7	10.6	17.7	35.6	AUG 26+	-7.2	FEB 3+	1332	976	60	OCT 6-7	T	T	MAR 6+	86	88	53	69	.4	25	27.7	8	JUN 10		6.1	94	111	160	107	0	57	28	88	0	61	0
COLUMBUS	24.7	11.7	18.2	36.1	AUG 26	-7.8	JAN 31+	1226	1190	80	SEP 2	T	T	MAR 7+	83	88	56	66	.2	34	15.6	22	JUL 6		6.4	87	98	180	112	0			76	0	52	0
MACON	24.3	11.0	17.7	36.7	MAY 19	-8.9	JAN 31	1332	1259	126	JUN 15-16	T	T	MAR 8+	87	92	57	68	.3	29	15.6	W	FEB 25	59	6.2	89	118	158	130	0	64	33	66	0	58	0
ROME	22.6	8.7	15.7	35.6	AUG 16	-13.3	JAN 31	1798	1097	67	MAR 23-24	30	23	JAN 30															121	0			28	2	89	0
SAVANNAH	25.1	12.3	18.7	35.0	AUG 27+	-7.2	JAN 19	1067	1164	46	JUN 26-27	T	T	MAR 6+	85	88	56	72	.3	24	18.8	N	MAY 12	61	5.9	97	123	145	127	0	79	36	52	0	39	0
HAWAII																																				
HILO	27.1	18.6	22.8	32.8	OCT 13	12.8	FEB 1	0	3233	261	MAY 3-4	0	0		83	79	67	82	.3	23	18.3	36	JAN 29	36	7.4	31	129	205	264	0	15	0	1	0	0	0
HONOLULU	28.1	20.8	24.5	33.9	SEP 12	13.9	FEB 28+	0	1087	164	DEC 14-15	0	0		75	73	58	69	3.0	6	19.7	SE	NOV 13	74	6.0	78	166	121	116	0	17	0	4	0	0	0
KAHULUI	27.7	18.8	23.3	33.3	SEP 20	12.2	FEB 28	0	785	139	NOV 12	0	0			76	59	74	3.4	6	15.2	NE	JUL 14	67	5.9	75	181	109	107	0	6	0	10	0	0	0
LIHUE	26.1	20.1	23.1	30.0	SEP 19+	12.8	MAR 1+	0	1472	103	MAY 4-5	0	0		84	81	70	80	2.9	6	13.0	NE	DEC 2	48	6.5	49	171	145	217	0	16	0	0	0	0	0
IDAHO																																				
BOISE	16.9	4.2	10.6	39.4	AUG 7	-13.3	DEC 23+	3102	318	22	JAN 27-28	653	180	JAN 3-4	70	52	43	63	.3	18	16.1	NW	MAR 16	69	5.8	120	83	162	96	6	20	19	29	19	128	0
IDAHO FALLS 42NW R	13.7	-3.3	5.2	36.7	AUG 8	-27.8	JAN 26	4810	203	19	JAN 6-7										16.5	NNW	JAN 31						60	0			11	52	224	26
IDAHO FALLS 46W R	13.6	-2.0	5.8	35.0	AUG 8	-23.3	DEC 27+	4584	227	24	JUN 25-26	632	193	MAY 6-7							21.5	W	MAR 26						67	8			11	46	219	11
LEWISTON	17.6	5.3	11.4	40.0	AUG 1	-11.1	MAR 24+	2820	289	20	JAN 5-6	368	132	JAN 6-7	77	62	48								6.5	93	82	190	96	4			32	1	97	0
POCATELLO	15.3	.3	7.8	36.7	AUG 8	-19.4	FEB 11	3896	255	25	JUL 19	686	117	DEC 30	75	52	43	62	2.2	22	20.6	SW	APR 22	66	6.0	107	99	159	93	10	32	14	17	24	176	6
ILLINOIS																																				
CAIRO U	20.4	10.6	15.5	38.3	JUL 24	-16.1	JAN 31	2021	1250	158	SEP 10-11	345	132	FEB 24							19.2	SW	JAN 25	65	5.7	119	101	145	106	5			30	11	63	0
CHICAGO MIDWAY	14.8	5.5	10.2	34.4	JUL 23+	-22.8	FEB 2+	3364	1068	71	DEC 24-25	1300	191	MAR 22-23	70	75	61	63	1.2	24	21.0	NE	DEC 24	58	6.5	83	113	169	120	14	41	12	10	43	114	9
MOLINE	15.2	4.6	9.9	36.7	JUL 23	-24.4	FEB 2	3519	1260	93	AUG 3-4	1011	140	FEB 23-24	80	84	64	68	1.1	24	21.9	W	NOV 27	55	6.3	87	106	172	128	13	47	16	10	48	131	11
PEORIA	15.7	4.9	10.3	35.6	JUL 23	-23.3	FEB 2	3372	1226	113	JAN 1-2	739	145	FEB 23-24	82	85	67	69	.7	23	32.6	W	SEP 14	56	6.1	101	91	173	119	11	55	24	12	44	124	8
ROCKFORD	13.9	3.4	8.7	37.2	JUL 23	-26.7	FEB 2	3818	1256	66	JUL 30-31	1019	127	MAR 4	79	81	63	67	1.0	25	21.5	26	AUG 26		6.2	96	104	165	124	16	50	23	9	55	136	14
SPRINGFIELD	17.5	6.2	11.9	35.6	JUL 23	-24.4	JAN 31	2952	993	100	JUN 1-2	917	262	FEB 23-24	79	83	63	65	1.3	21	20.1	W	MAR 17	59	5.9	113	95	157	112	11	56	10	17	35	114	8
INDIANA																																				
EVANSVILLE	19.6	6.9	13.2	36.1	JUL 24	-25.6	JAN 31	2538	890	80	SEP 11-12	427	160	FEB 24-25	79	82	59	63	.8	25	18.8	NW	MAY 18	61	6.0	98	111	156	108	6	40	8	28	19	108	6

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA
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State and Station	Temperature, Averages, Daily maximum	Temperature, Averages, Daily minimum	Temperature, Averages, Annual	Temperature, Extremes, Highest	Temperature, Extremes, Date	Temperature, Extremes, Lowest	Temperature, Extremes, Date	Heating degree days	Precipitation, Total	Precipitation, Greatest in 24 hours	Precipitation, Date (s)	Snow, Sleet, Total	Snow, Sleet, Greatest in 24 hours	Snow, Sleet, Date (s)	Relative humidity, 1:00 a.m. E.S.T.	Relative humidity, 7:00 a.m. E.S.T.	Relative humidity, 1:00 p.m. E.S.T.	Relative humidity, 7:00 p.m. E.S.T.	Wind, Resultant speed	Wind, Resultant direction	Wind, Fastest mile (1.6 kilometers), Speed	Wind, Fastest mile (1.6 kilometers), Direction	Wind, Fastest mile (1.6 kilometers), Date	Possible sunshine	Average sky cover sunrise to sunset	Number of days, Sunrise to sunset, Clear, 0-0.3	Number of days, Sunrise to sunset, Partly cloudy, 0.4-0.7	Number of days, Sunrise to sunset, Cloudy, 0.8-1.0	Number of days, Precipitation 25mm. or more	Number of days, Snow, Sleet 25.4mm. or more	Number of days, Thunderstorms	Number of days, Heavy fog	Number of days, Max. temp., 32.2 °C and above	Number of days, Max. temp., 0 °C and below	Number of days, Min. temp., 0 °C and below	Number of days, Min. temp., -17.8 °C. and below
	°C.	°C.	°C.	°C.		°C		Base 18.3 °C.	Mm.	Mm.		Mm.	Mm.		%	%	%	%	M.p.s.		M.p.s.			%	Tenths											
INDIANA																																				
FORT WAYNE	15.3	4.8	10.1	35.0	AUG 16+	-23.3	JAN 17	3365	946	74	OCT 21-22	767	185	FEB 24-25	79	82	63	67	1.6	25	24.6	N	AUG 27	55	6.7	70	115	180	135	9	45	20	12	41	127	9
INDIANAPOLIS	17.0	6.1	11.6	35.0	JUL 24	-23.3	FEB 2+	2957	968	53	FEB 9-10	907	318	FEB 24-25	78	81	62	65	1.1	24	22.4	SW	NOV 26	62	6.4	81	113	171	115	9	48	12	11	28	117	8
SOUTH BEND	14.4	4.6	9.5	34.4	JUL 22	-22.8	FEB 2	3494	1078	85	DEC 24-25	1880	229	FEB 24-25	79	81	63	67	1.5	24	17.9	32	AUG 27		6.9	67	107	191	146	24	40	20	10	42	127	7
IOWA																																				
BURLINGTON	15.9	4.9	10.4	35.0	AUG 15	-24.4	JAN 31	3337	1061			752			82	85	67	69	1.0	27	20.1	29	AUG 25		5.9	105	99	161	121	12	55	21	10	44	125	11
DES MOINES	14.7	3.9	9.3	37.2	AUG 13+	-27.2	JAN 30	3734	863	52	SEP 20-21	881	191	MAR 2	81	85	67	66	.5	27	34.0	W	APR 23	57	6.3	92	98	175	119	10	63	24	16	60	138	15
DUBUQUE	12.9	2.6	7.8	36.1	JUL 23	-29.4	FEB 2	4081	1560	102	SEP 19-20	1034	152	MAR 17+		86	67	72							6.7	75	103	187	122	14			5	64	143	15
SIOUX CITY	14.7	2.9	8.8	36.7	AUG 13	-28.9	JAN 16	3845	720	75	SEP 29	986	183	MAR 1	79	84	64	63	.4	29	26.8	NW	MAR 17	58	6.2	91	108	166	107	11	58	28	17	55	146	24
WATERLOO	13.1	1.6	7.3	35.0	AUG 13+	-28.9	FEB 2	4202	1290	73	AUG 29-30	770	150	MAR 17	84	87	68	71	.6	26	20.1	30	MAR 18+		6.6	81	103	181	116	11	56	26	6	65	156	23
KANSAS																																				
CONCORDIA	18.2	5.4	11.8	38.3	JUL 23	-22.8	FEB 24	2964	844	76	AUG 20-21	693	335	FEB 11	76	83	58	59	.8	18	24.1	NW	MAR 17	63	5.8	110	95	160	93	4	75	26	35	31	127	3
DODGE CITY	19.8	6.1	12.9	38.3	JUL 23	-18.3	FEB 24	2635	634	72	OCT 17-18	503	74	FEB 9	74	82	54	52	.9	19	26.4	SW	JUN 3	71	5.8	118	92	155	76	10	63	17	58	21	111	1
GOODLAND	18.3	2.2	10.3	39.4	JUL 22	-27.2	MAR 20	3291	530	61	OCT 16-17	673	119	FEB 10-11	74	70	48	55	.9	22	23.7	30	MAY 22		5.4	133	95	137	82	11	58	25	40	25	150	7
TOPEKA	18.6	6.6	12.6	37.8	AUG 26	-18.3	FEB 25+	2747	964	54	SEP 19-20	478	152	FEB 23	79	83	61	61	.6	21	20.1	SW	APR 11	63	6.1	100	98	167	102	7	79	14	20	26	125	3
WICHITA	20.4	8.1	14.3	39.4	JUL 13	-17.2	FEB 24	2361	990	126	JUN 4-5	175	76	JAN 25	76	83	59	58	1.2	17	26.8	N	MAR 1	62	6.0	107	93	165	85	2	70	14	52	15	102	0
KENTUCKY																																				
COVINGTON	17.6	6.2	11.9	37.2	JUL 24	-23.3	FEB 4	2821	974	69	SEP 11-12	607	107	JAN 15-16	77	80	59	62	1.3	24	15.6	27	NOV 26+		6.5	82	109	174	118	7	45	17	14	22	109	9
LEXINGTON	18.2	7.1	12.7	36.1	JUL 24	-23.3	JAN 31	2638	815	49	JUN 6-7	401	109	JAN 16	75	79	59	62	1.6	20	15.6	22	MAY 27		6.1	92	115	158	125	7	46	21	12	17	105	4
LOUISVILLE	19.3	7.9	13.6	36.1	JUL 24	-20.6	JAN 31	2428	1011	86	SEP 31-1	516	140	JAN 15-16	75	80	58	59	1.0	25	20.6	[illegible]	MAR 21	61	6.3	88	114	163	114	9	53	6	20	16	93	1
LOUISIANA																																				
ALEXANDRIA	25.1	12.2	18.7	36.7	JUL 11	-7.8	JAN 17	1112	1044	104	DEC 18	T	T	MAR 3+	90	92	59	68	.2	10	20.6	35	SEP 10		6.0	101	115	149	91	0	62	37	87	0	40	0
BATON ROUGE	25.7	14.0	19.9	34.4	SEP 12+	-6.7	JAN 17	838	1143	101	SEP 9-10	T	T	MAR 19+	85	89	60	67	.5	10	25.9	6	SEP 10		6.2	80	136	149	94	0	61	48	74	0	25	0
LAKE CHARLES	26.1	14.7	20.4	36.7	JUL 28	-5.6	JAN 17	711	884	86	MAR 28-1	T	T	MAR 19+	89	90	61	71	1.0	13	15.6	12	JUN 7+		6.2	81	137	147	79	0	67	51	82	0	9	0
NEW ORLEANS	25.1	14.6	19.9	34.4	JUL 21	-3.3	JAN 17	751	1253	105	JAN 22-23	0	0		84	87	65	71	.7	9	30.8	9	SEP 10+		5.9	84	145	136	109	0	63	37	28	0	15	0
SHREVEPORT	24.7	13.4	19.1	38.3	AUG 20	-7.8	JAN 17	1091	1044	90	FEB 10-11	152	102	MAR 3	81	91	61	63	1.1	17	19.7	19	SEP 17	60	5.7	119	101	145	86	2	53	21	79	0	30	0
MAINE																																				
CARIBOU	8.4	-2.2	3.1	32.2	AUG 15+	-29.4	JAN 16	5554	755	39	SEP 1-2	2276	203	NOV 27-28		78	59	68							6.9	62	96	207	152	28			2	112	195	41
PORTLAND	13.0	1.1	7.1	34.4	JUL 14	-25.0	JAN 15	4224	715	82	FEB 25	1135	160	DEC 12-13	78	75	54	67	1.2	28	18.8	NW	NOV 4+	61	6.1	100	109	156	121	14	18	47	3	46	165	15
MARYLAND																																				
BALTIMORE	18.4	6.5	12.4	36.7	JUL 25	-17.2	JAN 17	2769	717	46	MAR 4-5	452	127	JAN 10	77	78	52	63	1.2	28	25.5	SW	FEB 25	57	5.8	101	122	142	101	5	25	22	40	12	109	[illegible]
MASSACHUSETTS																																				
BLUE HILL OBS R	13.9	3.8	8.9	34.4	AUG 7+	-22.8	JAN 15	3701	685	42	FEB 25	1425	381	JAN 15-16	76	75	56	65			26.4	WNW	NOV 4	60					121	13			9	40	142	4
BOSTON	14.2	5.4	9.8	33.9	AUG 7+	-20.0	JAN 15	3421	602	47	FEB 25	1029	191	JAN 15-16	76	75	59	67	2.0	28	19.2	NW	NOV 4	63	5.8	115	102	148	118	10	19	11	9	31	109	1
NANTUCKET	12.7	4.8	8.7	29.4	AUG 13	-12.2	JAN 30+	3583	643	50	SEP 13-14	1280	315	JAN 16	84	80	66	80	1.5	27	21.0	E	FEB 25	58	6.3	89	109	167	110	9	22	86	0	20	127	0
PITTSFIELD	12.6	1.0	6.8	34.4	JUL 14	-25.0	JAN 15	4329	842	52	JUL 17-18	1623	127	JAN 2-3															150	24			3	54	171	12
WORCESTER	12.9	2.9	7.9	33.3	JUL 14	-23.9	JAN 15	3979	812	52	FEB 25	1318	178	JAN 23-24	71	70	52	62	2.5	28	21.0	29	NOV 4		5.9	106	105	154	128	14	24	76	3	46	154	7

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
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State and Station	Temperature							Heating degree days	Precipitation						Relative humidity				Wind					Possible sunshine	Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes								Snow, Sleet									Fastest mile (1.6 kilometers)					Sunrise to sunset							Max. temp		Min. temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date		Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1:00 a.m. E.S.T	7:00 a.m. E.S.T	1:00 p.m. E.S.T	7:00 p.m. E.S.T	Resultant speed	Resultant direction	Speed	Direction	Date			Clear, 0–0.3	Partly cloudy, 0.4–0.7	Cloudy, 0.8–1.0	Precipitation .25mm. or more	Snow, Sleet 25.4mm or more	Thunderstorms	Heavy fog	32.2 °C and above	0 °C and below	0 °C and below	–17.8 °C. and below
	°C.	°C.	°C.	°C.		°C		Base 18.3 °C.	Mm.	Mm.		Mm.	Mm.		%	%	%	%	M.p.s.		M.p.s.			%	Tenths											
MICHIGAN																																				
ALPENA	11.2	- .9	5.2	35.0	AUG 14	- 28.3	JAN 17+	4839	809	56	MAY 6-7 +	2141	221	JAN 26		81	61	68			18.8	SE	MAR 17	55	7.1	64	99	202	165	22			2	69	188	21
DETROIT	14.3	5.2	9.8	36.1	AUG 15	- 17.2	JAN 17	3456	888	62	DEC 24-25	1016	254	FEB 24-25	75	78	60	63	1.4	27	24.6	W	APR 12	51	6.9	66	108	191	133	12	33	8	7	39	118	0
DETROIT M WAYNE CO	14.4	3.6	9.1	35.6	AUG 15+	- 20.6	JAN 17	3627	993	94	DEC 24-25	1260	262	FEB 24-25	77	79	60	66	1.4	24					6.9	68	106	191	131	13	33	35	12	39	141	5
DETROIT WILLOW RUN	13.6	2.8	8.2	34.4	AUG 15	- 20.6	FEB 3	3872	825	72	DEC 24-25	991	221	FEB 24-25	75	78	59	62	1.6	25	17.9	24	NOV 27+		6.8	72	105	188	122	11	32	35	8	46	146	8
FLINT	13.8	3.2	8.5	36.1	AUG 14	- 21.7	MAR 24+	3804	655	57	AUG 18	1709	287	FEB 24-25	76	77	61	65	1.5	24	17.9	22	APR 11		7.1	51	109	205	143	17	40	17	9	44	137	7
GRAND RAPIDS	13.6	3.3	8.5	35.6	JUL 23	- 20.0	JAN 29	3823	971	39	AUG 16-17	2563	211	NOV 28-29	81	83	63	69	1.2	24	23.2	W	JUN 20	47	7.2	57	106	202	154	26	41	26	7	51	147	7
HOUGHTON LAKE	11.1	.1	5.6	32.2	AUG 14	- 27.8	JAN 28+	4681	837	36	AUG 8-9	2202	234	JAN 25-26	82	84	63	69	1.2	25	16.5	26	NOV 27		7.1	66	97	202	153	24	43	39	1	71	175	21
LANSING	13.8	2.6	8.2	36.7	AUG 14	- 23.3	MAR 24	3918	814	58	SEP 20-21	1440	229	FEB 24-25	87	89	68	73	1.6	25	21.0	W	APR 12+	50	7.0	55	120	190	141	13	32	20	13	47	149	14
MARQUETTE U	9.5	.9	5.2	37.2	AUG 14	- 25.0	JAN 29	4824	716	27	FEB 11-12	2101	376	FEB 11-12							16.1	NW	OCT 23	55	7.4	53	101	211	164	24			5	79	167	16
MUSKEGON	13.6	4.4	9.0	34.4	JUL 23	- 19.4	JAN 17+	3617	966	92	SEP 9-10	3548	445	FEB 31-1	79	82	66	70	.9	25	17.9	23	MAY 26+		7.2	65	86	214	151	43	40	12	2	47	130	2
SAULT STE MARIE	8.6	- .9	3.8	30.6	AUG 14	- 32.8	JAN 14	5236	1091	71	JUL 21-22	3719	198	FEB 12+	85	86	68	73	.6	29	21.5	29	JAN 8	48	7.6	49	86	230	182	44	34	50	0	88	183	28
MINNESOTA																																				
DULUTH	8.2	- 3.1	2.6	31.7	AUG 12	- 38.9	JAN 14	5724	966	49	MAR 17-18	2858	493	MAR 17-18	77	80	63	64	.6	30	22.4	E	FEB 28	52	7.1	57	113	195	161	25	34	68	0	111	191	57
INTERNATIONAL FALLS	7.8	- 4.5	1.7	33.3	AUG 11	- 41.1	JAN 14	6054	751	55	OCT 18	1836	279	NOV 26	83	85	64	65	.8	26	17.9	32	AUG 12+		7.0	63	105	197	142	22	36	15	3	120	197	69
MINNEAPOLIS	11.0	.8	5.9	35.0	AUG 13+	- 33.3	FEB 2	4703	1014	77	MAY 31-1	1628	284	MAR 17	78	83	65	66	.4	33	20.1	NW	FEB 21	51	6.6	85	92	188	127	16	49	16	6	82	164	38
ROCHESTER	10.6	.9	5.7	33.3	JUL 23+	- 32.2	JAN 14	4719	801	52	JUL 8	998	191	FEB 11-12	80	82	68	70	1.3	25	18.3	31	NOV 16		6.5	94	76	195	137	12	57	54	2	84	155	36
ST CLOUD	9.9	- 1.1	4.4	35.0	AUG 12	- 35.0	JAN 29	5163	999	66	JUN 4-5	2075	368	MAR 1		82	62	64							6.7	78	96	191	126	16			5	91	180	49
MISSISSIPPI																																				
JACKSON	24.8	11.4	18.1	37.2	JUL 18	- 8.3	JAN 17	1285	1117	149	SEP 10-11	T	T	MAR 19+	87	92	58	68	.7	14	19.2	SE	SEP 10		5.8	97	122	146	99	0	63	24	90	0	51	0
MERIDIAN	24.7	10.7	17.7	35.0	JUN 3	- 10.0	JAN 17	1315	950	69	JUL 7	T	T	MAR 7+	89	92	58	67	.2	20	13.0	35	AUG 8+		6.2	85	109	171	97	0	62	39	71	0	65	0
VICKSBURG U	23.9	13.9	18.9	34.4	JUL 22+	- 7.2	JAN 17	1084	1028	80	MAR 29-30	T	T	MAR 19+							15.6	SE	SEP 10	66	5.4	127	107	131	96	0			60	0	25	0
MISSOURI																																				
COLUMBIA	18.8	7.7	13.3	35.0	AUG 26+	- 21.1	JAN 31	2587	1073	77	SEP 15-16	815	201	FEB 23-24	74	81	58	60	1.0	22	22.4	SW	APR 11	64	6.1	100	99	166	116	9	59	10	25	28	106	3
KANSAS CITY	19.3	8.1	13.7	36.1	JUL 23	- 19.4	JAN 30	2507	1213	81	JUL 19-20	610	188	FEB 23-24	71	77	56	56	.8	20	25.5	N	JUN 29	67	6.3	88	97	180	115	8	61	4	31	21	104	1
SAINT JOSEPH	19.4	6.2	12.8	35.0	AUG 15+	- 22.8	JAN 31	2744	1203	69	JUL 20	376	58	FEB 23	76	80	59	59	.5	22	17.9	31	MAR 17		5.7	113	109	143	101	6	70	8	30	18	121	4
ST LOUIS	19.2	7.6	13.4	37.8	JUL 24	- 21.7	JAN 31	2578	718	34	JUL 7	554	163	MAR 3-4	73	79	56	58	1.2	24	17.0	NW	AUG 27+	59	6.0	107	99	159	102	6	48	2	27	24	105	3
SPRINGFIELD	20.3	7.2	13.8	35.6	AUG 15+	- 17.8	FEB 25	2319	1053	75	SEP 21-22	320	122	MAR 4-5	81	86	61	64	1.5	19	29.1	SW	APR 5	58	5.8	113	100	152	112	5	68	14	25	15	97	1
MONTANA																																				
BILLINGS	13.7	1.1	7.4	38.3	AUG 12	- 28.9	FEB 23	4161	420	63	AUG 20-21	1577	135	FEB 20-21	75	58	51	67	1.7	27	24.1	NW	JAN 31	61	6.4	87	107	171	104	22	27	22	18	49	158	19
GLASGOW	10.4	- 2.0	4.2	37.8	AUG 12	- 31.1	JAN 8	5313	363	62	AUG 5-6	726	109	JAN 27	73	58	53	67							6.7	73	112	180	89	7			12	97	180	61
GREAT FALLS	12.7	.6	6.7	37.8	AUG 9	- 28.9	JAN 8	4380	467	48	JUN 24-25	1516	124	NOV 15	71	56	50	66	2.4	24	25.0	W	OCT 6	67	6.8	67	104	194	115	22	29	15	11	53	148	29
HAVRE	10.5	- 2.4	4.1	35.6	AUG 10	- 28.9	FEB 23	5312	460	50	JUN 25-26	1074	140	NOV 23-24	81	61					26.4	W	JUN 12	66	6.6	81	99	185	100	17			9	87	193	60
HELENA	13.3	- .3	6.6	35.0	AUG 9	- 26.7	MAR 24	4356	394	33	JUN 25-26	1349	312	SEP 27-28	75	57	49	68	1.7	28	18.8	W	OCT 5	59	6.7	77	98	190	112	15	33	15	9	43	194	11
KALISPELL	11.7	- .9	5.4	33.9	AUG 9+	- 24.4	JAN 1	4722	372	25	AUG 23-24	1341	155	JAN 23-24	82	67	59	78	.3	18	17.9	23	MAY 16+		7.2	66	73	226	124	18	19	36	11	56	208	14
MILES CITY	12.8	- .4	6.2	39.4	AUG 12	- 27.2	DEC 27+	4707	396			889			78	58	53	69	.8	31									107	20	32	9	24	71	176	46
MISSOULA	12.3	- .4	5.9	33.9	AUG 9+	- 23.3	JAN 1	4512	361	27	AUG 22-23	1394	173	JAN 23-24	86	69	57	76	.6	31	19.2	NE	JUN 6	53	7.2	71	76	218	121	18	24	55	7	63	197	6

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

YEAR 1965

State and Station	Temperature							Heating degree days	Precipitation						Relative humidity				Wind					Possible sunshine	Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes								Snow, Sleet									Fastest mile (1.6 kilometers)					Sunrise to sunset							Max. temp.		Min. temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date		Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1:00 a.m. E.S.T	7:00 a.m. E.S.T	1:00 p.m. E.S.T	7:00 p.m. E.S.T	Resultant speed	Resultant direction	Speed	Direction	Date			Clear, 0–0.3	Partly cloudy, 0.4–0.7	Cloudy, 0.8–1.0	Precipitation .25mm. or more	Snow, Sleet 25.4mm or more	Thunderstorms	Heavy fog	32.2 °C and above	0 °C. and below	0 °C. and below	–17.8 °C. and below
	°C.	°C	°C.	°C		°C		Base 18.3 °C.	Mm.	Mm.		Mm.	Mm.		%	%	%	%	M.p.s.		M.p.s.			%	Tenths											
NEBRASKA																																				
GRAND ISLAND	16.3	2.9	9.6	39.4	AUG 12	-27.2	FEB 24	3597	829	73	SEP 29	808	231	FEB 9	78	83	58	58	.5	26	19.7	35	MAR 1		6.1	110	84	171	111	10	71	27	30	45	147	17
LINCOLN U	16.1	4.9	10.6	37.2	AUG 12	-22.8	FEB 24	3352	1050	95	JUN 28-29	1069	483	FEB 11							22.8	NE	JUN 2		6.2	91	101	173	118	10			20	43	127	9
NORFOLK	14.9	2.2	8.6	36.7	AUG 13+	-27.2	FEB 24	3914	701	66	JUL 18-19	640	168	FEB 9		78	56	57							6.2	93	106	166	96	8			20	50	155	26
NORTH PLATTE	16.5	1.2	8.8	37.8	AUG 12	-22.8	FEB 24+	3717	752	97	JUN 4-5	716	229	JAN 22-23	79	85	58	55	.4	1	22.4	NW	MAR 17	63	6.1	101	101	163	88	9	55	13	14	36	163	23
OMAHA	16.6	4.6	10.6	37.2	AUG 12	-26.7	JAN 30	3354	1139	164	SEP 6-7	1273	465	FEB 11	80	84	64	64	.3	28	20.1	N	MAR 2+	59	6.2	98	95	172	122	11	56	16	24	39	130	15
SCOTTSBLUFF	16.7	1.4	9.1	36.7	AUG 13+	-22.8	FEB 13	3586	485	34	JUN 9-10	597	122	FEB 10-11	81	51	49	73	.8	34	20.6	27	APR 17		5.7	117	104	144	93	7	60	8	15	30	156	12
VALENTINE	15.4	.8	8.1	42.2	AUG 13	-26.7	FEB 24+	4020	463	37	MAY 14-15	310	56	NOV 25-26										64	5.9	107	105	153	74	4			21	53	165	24
NEVADA																																				
ELKO	16.3	-1.9	7.2	35.6	AUG 7+	-25.6	DEC 18	4102	284	29	NOV 23-24	1313	229	NOV 23-24	77	50	39	65	.8	24	16.1	24	MAY 1		5.8	117	94	154	93	20	28	6	19	24	208	15
ELY	15.2	-2.3	6.4	32.2	AUG 8+	-26.7	DEC 18	4319	274	31	SEP 5-6	1224	165	FEB 6	66	43	38	57	1.8	20	21.5	S	MAY 21	76	5.9	110	94	161	83	13	33	3	3	19	222	18
LAS VEGAS	25.4	11.3	18.4	42.8	AUG 7	-5.6	FEB 12	1399	202	28	NOV 22	T	T	JAN 7	42	30	22	35	1.7	23	24.1	NW	FEB 22	82	4.1	187	86	92	37	0	19	2	126	0	32	0
RENO	19.3	-.2	9.6	36.1	AUG 6	-20.0	JAN 1	3229	247	25	AUG 14-15	554	84	DEC 28-29	74	48	35	59	.5	25	25.0	SW	JAN 23	86	5.2	136	95	134	68	8	25	6	22	11	190	2
WINNEMUCCA	17.9	-.2	8.9	36.1	AUG 7+	-22.8	JAN 1	3551	197	14	JAN 10-11	544	104	MAY 6-7	67	43	33	55	.4	26	21.0	SW	DEC 28	62	5.5	128	92	145	76	9	22	[illegible]	22	12	200	5
NEW HAMPSHIRE																																				
CONCORD	13.8	.1	6.9	35.6	AUG 7+	-25.6	FEB 5+	4273	614	33	FEB 25	808	104	JAN 2-3	81	79	51	62	1.1	29	17.0	W	NOV 4	59	5.9	107	117	141	115	15	25	36	7	46	195	15
MT WASHINGTON OBS	-.2	-7.9	-4.0	20.0	AUG 16	-38.9	JAN 14	8086	1812	91	SEP 24-25	5441	320	OCT 28	86	86	84	86			59.0Y	SE	FEB 25	32	7.8	43	81	[illegible]	201	71	21	318	0	189	255	88
NEW JERSEY																																				
ATLANTIC CITY	17.1	5.3	11.2	36.1	JUL 25	-22.2	JAN 17	3051	642	37	JUL 11	445	135	JAN 15-16	81	81	54	70	1.4	27	17.9	23	FEB 25	60	5.8	105	117	143	100	7	20	44	19	16	125	3
NEWARK	16.7	7.4	12.1	36.1	JUN 23+	-15.0	JAN 15	2871	663	39	FEB 7-8	589	196	JAN 10	69	71	51	59	1.6	28	20.6	23	FEB 25		5.8	103	126	136	105	5	24	11	26	21	91	0
TRENTON U	16.6	7.2	11.9	34.4	JUN 29+	-16.1	JAN 15	2864	831	65	JUL 11	726	229	JAN 9-10							18.3	SW	FEB 25	60	5.7	103	124	138	113	7			16	21	91	0
NEW MEXICO																																				
ALBUQUERQUE	20.8	5.7	13.3	36.1	JUL 21+	-12.2	DEC 16+	2361	236	23	OCT 16-17	203	64	DEC 14-15	62	39	31	49	.3	20	25.0	SW	APR 10	76	4.3	168	112	85	65	4	42	6	[illegible]	4	104	0
CLAYTON	19.3	4.1	11.7	35.0	JUL 23	-15.6	MAR 20	2740	543	99	OCT 16-17	445	84	FEB 10	70	39	39								5.2	142	90	133	83	8			17	12	123	0
RATON	18.0	.0	9.0	32.8	JUL 20	-22.8	FEB 12	3449	583	142	JUN 17	467	81	APR 26		19									5.2	123	124	118	85	8			3	17	185	9
ROSWELL	24.8	6.2	15.6	38.9	JUL 19+	-20.0	FEB 24	1888	170	27	JUN 9-10	340	147	FEB 7-8	69	40					18.8	SW	JAN 25	73	4.4	158	120	87	47	5	33	11	103	3	108	1
SILVER CITY	21.7	5.8	13.8	36.7	JUN 29	-12.2	MAR 4+	2137	290	27	DEC 9-10	231	102	DEC 14-15											3.9	187	108	70	69	4			39	0	99	0
NEW YORK																																				
ALBANY	14.1	2.3	8.2	35.6	JUN 28	-25.6	JAN 31	3942	710	46	SEP 24-25	960	203	JAN 23-24	75	74	53	64	1.6	26	17.9	NW	NOV 18+	50	6.9	66	107	192	133	10	24	13	18	45	154	12
BINGHAMTON	11.8	2.8	7.3	33.3	AUG 15	-24.4	JAN 17	4183	804	46	SEP 23-24	1775	221	JAN 23-24	80	83	64	70	1.7	26	18.8	SW	MAY 16+	53	7.5	38	105	222	165	19	30	46	4	58	152	11
BUFFALO	12.9	3.9	8.4	32.2	AUG 7	-20.0	JAN 15+	3801	901	58	OCT 8-9	1796	213	NOV 27-28	79	80	65	71	2.2	24	22.8	SW	JAN 26	46	7.7	47	89	229	175	27	33	23	1	45	132	3
NEW YORK U	16.7	7.9	12.3	35.0	JUN 29	-12.8	JAN 17	2688	663	45	FEB 7-8	541	160	JAN 10	69	72	50	59	1.2	27	16.5	NW	JAN 3	61	5.1	134	118	113	103	8	17	0	15	19	71	0
J.F. KENNEDY	15.7	6.8	11.3	35.0	JUN 29	-15.0	JAN 15	2926	645	38	DEC 12-13	673	168	JAN 10	75	74	56	68	1.3	27	20.6	30	AUG 28		5.8	100	140	125	111	8	20	18	6	19	93	[illegible]
NEW YORK LA GUARDIA	16.3	9.1	12.7	35.0	JUL 14+	-12.8	JAN 15	2687	563	35	FEB 25	457	117	JAN 16	66	68	53	58	1.3	28	16.5	W	OCT 31+		5.8	98	130	137	107	7	20	7	16	21	65	0
ROCHESTER	13.6	3.2	8.4	35.6	AUG 6	-21.1	JAN 15+	3844	639	36	AUG 19	1760	208	JAN 2	76	78	59	66	2.1	25	21.9	W	OCT 31	50	7.2	55	95	215	144	21	30	13	9	44	136	5
SYRACUSE	13.4	2.8	8.1	36.1	AUG 15	-26.7	JAN 17	3957	721	35	APR 11-12	2192	302	FEB 26-27	79	79	60	69	1.7	27	21.9	W	OCT 31	45	7.0	59	106	200	174	24	23	8	8	49	147	6

See reference notes at end of table

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State and Station	Temperature							Heating degree days	Precipitation						Relative humidity				Wind					Possible sunshine	Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes								Snow, Sleet									Fastest mile (1.6 kilometers)					Sunrise to sunset							Max temp.		Min. temp.	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date		Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1:00 am EST	7:00 am EST	1:00 pm EST	7:00 pm EST	Resultant speed	Resultant direction	Speed	Direction	Date			Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm or more	Snow, Sleet 25.4mm or more	Thunderstorms	Heavy fog	32.2°C and above	0°C and below	0°C and below	-17.8°C and below
	°C.	°C.	°C.	°C		°C.		Base 18.3°C.	Mm.	Mm.		Mm.	Mm.		%	%	%	%	M.p.s.		M.p.s.			%	Tenths											
NORTH CAROLINA																																				
ASHEVILLE	19.2	6.1	12.7	31.7	AUG 15	-13.9	JAN 31	2381	1003	60	OCT 30-1	376	140	JAN 15-16	89	93	59	72	.8	35	19.7	34	DEC 25	60	5.9	111	96	158	129	5	63	79	0	7	105	0
CAPE HATTERAS R	20.3	12.0	16.2	32.8	AUG 27	-8.3	FEB 1	1606	1055	122	JUL 28-29	8	8	JAN 31	82	81	64	79	.5	30	18.8	ESE	OCT 7+	67	5.9	99	112	154	111	0	50	21	2	0	27	0
CHARLOTTE	21.7	9.9	15.8	35.6	AUG 18	-10.6	JAN 19	1790	999	62	JUL 27-28	310	259	JAN 16-17	80	87	56	63	.4	26	17.0	SW	FEB 25	66	5.7	117	98	150	102	3	45	25	35	2	73	0
GREENSBORO	20.9	8.7	14.8	35.0	AUG 18+	-13.3	FEB 1+	2056	1146	80	JUN 11-12	320	140	JAN 16-17	82	85	55	67	.7	26	21.5	NW	MAY 12	58	5.9	108	104	153	109	4	46	33	29	4	85	0
RALEIGH	21.5	8.6	15.1	34.4	AUG 27	-13.3	JAN 19	1962	874	77	JUN 11-12	333	109	JAN 16-17	80	84	52	67	.7	25	14.3	24	FEB 25	62	5.7	105	119	141	92	4	58	40	26	3	84	0
WILMINGTON	23.3	12.0	17.7	35.6	AUG 27	-7.2	FEB 1	1329	1456	100	AUG 17-18	84	71	JAN 30-31	80	81	56	71	.4	27	19.2	NE	JUN 14	65	5.7	105	124	136	128	1	53	36	35	1	43	0
NORTH DAKOTA																																				
BISMARCK	10.7	-2.3	4.2	36.1	JUL 22	-37.2	JAN 13	5271	547	68	AUG 5-6	1077	178	MAY 9	73	77	57	56	.9	33	23.2	NW	MAY 1	61	6.4	78	119	168	104	15	32	12	7	93	194	60
FARGO	9.3	-2.7	3.3	37.8	AUG 13	-37.2	JAN 29	5562	610	34	APR 10	780	142	NOV 25-26	79	82	66	66	.4	32	26.8	S	JUL 29	56	6.8	72	100	193	101	11	28	23	4	114	187	67
WILLISTON	10.2	-3.0	3.6	37.8	AUG 12+	-38.9	JAN 13	5508	443	52	MAY 5-6	709	130	DEC 30		81	59	57			29.5	NW	FEB 20	59	6.4	89	100	176	88	6			12	101	206	68
OHIO																																				
AKRON	15.4	4.2	9.8	34.4	JUL 24	-22.8	JAN 17	3395	852	44	OCT 21-22	978	135	JAN 15-16	79	82	61	68	1.6	24	17.9	30	APR 7		7.0	59	110	196	149	13	41	26	9	34	137	7
CINCINNATI OBS	18.3	7.5	12.9	37.2	JUL 24	-19.4	JAN 31	2616	1065	95	SEP 11-12	556	127	JAN 15-16							15.2	W	APR 8	55					112	7			23	21	97	3
CLEVELAND	14.9	4.9	9.9	36.7	JUL 24	-18.9	FEB 3+	3374	811	35	JUN 1-2	1140	130	JAN 15-16	77	80	65	68	1.9	23	19.2	W	JUL 9	49	7.1	54	114	197	161	15	33	15	6	35	126	4
COLUMBUS	16.8	5.7	11.2	36.1	JUL 24	-23.9	JAN 17	3036	1083	52	JUL 9-10	704	183	JAN 15-16	75	77	59	63	1.0	24	25.0	W	NOV 27	52	6.7	75	105	185	140	9	46	15	15	27	119	5
DAYTON	17.1	6.0	11.6	37.8	JUL 24	-21.7	FEB 2+	3026	774	53	SEP 14-15	655	157	JAN 15-16	74	77	58	63	1.5	22	18.3	S	MAY 22	62	6.6	78	108	179	127	9	42	20	18	27	116	6
MANSFIELD	14.4	3.7	9.1	35.6	JUL 24	-22.8	JAN 17	3596	778	59	MAY 26	841	91	FEB 1		80	61								7.0	62	106	197	140	11	43	21	4	43	137	5
TOLEDO	14.6	3.6	9.1	34.4	JUL 24	-22.8	JAN 17	3632	1038	53	AUG 1-2	869	165	FEB 24-25	79	83	62	66	1.4	25	21.0	W	AUG 27	55	6.8	58	124	183	140	9	46	18	9	42	144	6
YOUNGSTOWN	14.3	3.8	9.1	35.0	JUL 24	-22.8	JAN 17	3601	1028	42	JUN 1-2	1524	180	MAR 5-6	79	81	62	68	1.5	24	19.7	30	APR 12		7.2	56	101	208	160	23	37	26	4	45	138	9
OKLAHOMA																																				
OKLAHOMA CITY	22.7	10.3	16.6	40.0	JUL 24	-13.9	FEB 24	1804	614	57	DEC 23-24	76	51	JAN 9	73	80	54	53	1.9	16	24.1	NW	JUN 1	68	5.4	132	92	141	78	1	53	15	77	5	77	0
TULSA	23.3	9.8	16.6	40.0	AUG 27	-13.3	FEB 24	1827	780	81	DEC 23-24	61	38	FEB 23-24	73	82	53	52	1.7	18	18.8	SW	APR 8	72	5.5	122	111	132	78	1	49	5	88	7	84	0
OREGON																																				
ASTORIA	14.7	6.5	10.6	27.8	SEP 24+	-4.4	DEC 16+	2766	1619	72	JAN 27-28	358	168	JAN 2-3	87	77	70	84	.9	22	19.7	18	JAN 1		7.8	42	78	245	178	4	2	35	0	0	36	0
BURNS U	15.6	.3	7.9	34.4	JUL 30	-22.8	DEC 23	3849	282	22	AUG 11	1138	112	JAN 23	73	54	40	61	1.3	32					5.7	117	105	143	92	16			11	20	190	3
EUGENE	17.5	6.1	11.8	37.2	JUL 31	-6.1	DEC 20	2464	896	58	DEC 27-28	246	124	JAN 3	91	76	59	82	.5	25	16.1	18	DEC 29		6.8	86	69	210	107	3	4	65	17	3	27	0
MEACHAM	11.4	2.1	6.8	33.3	AUG 1	-17.2	MAR 18	4238	786	49	JAN 27-28	2789	229	JAN 25+		61									6.5	102	65	198	133	30			4	47	150	0
MEDFORD	19.9	4.6	12.3	38.9	JUL 24	-11.1	DEC 20	2459	460	37	DEC 27-28	564	127	JAN 2-3	84	65	45	70	.6	30	19.7	14	DEC 27		5.7	123	77	165	92	8	8	55	50	2	80	0
PENDLETON	17.6	5.9	11.8	39.4	AUG 1	-9.4	MAR 18	2683	265	19	JUN 16-17	257	79	JAN 25	68	54	46	61	1.5	25	19.7	26	FEB 5		5.9	123	69	173	94	3	8	35	30	14	81	0
PORTLAND	17.4	6.7	12.1	41.7	JUL 30	-7.2	DEC 17	2422	795	48	DEC 27-28	8	8	MAR 25	86	73	59	77	.4	24	25.9	SE	FEB 5	55	6.9	78	74	213	120	0	4	46	14	0	48	0
SALEM	17.4	5.0	11.2	40.0	JUL 31	-7.8	DEC 15	2670	857	49	DEC 27-28	188	84	DEC 30-31	91	74	59	82	.7	23	19.2	21	FEB 5		6.7	89	73	203	126	4	6	49	15	4	60	0
SEXTON SUMMIT R	14.0	4.1	9.1	32.8	JUL 30	-7.2	DEC 31+	3439	688	81	DEC 27-28	3231	851	DEC 27-28		67	56				22.8	9	DEC 29		5.3	154	64	147	102	22			2	22	104	0
PACIFIC AREA																																				
CANTON ISLAND	31.2	25.3	28.2	33.3	DEC 18+	22.2	NOV 15+	0	1433	125	NOV 28-29	0	0		80	80	68	77							7.0	44	146	175	157	0			82	0	0	0
ENIWETOK	30.3	25.0	27.7	33.3	OCT 25	21.1	AUG 7	0	1520	98	OCT 13-14	0	0		80	80	71	74	5.8	7									187	0			17	0	0	0
TAGUAC GUAM R	29.4	22.0	25.7	31.7	SEP 27+	12.2	MAR 14	0	1987	190	SEP 13-14	0	0								13.0	SW	SEP 29+	60					243	0			0	0	0	0

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	Averages			Extremes								Snow, Sleet									Fastest mile (1.6 kilometers)					Sunrise to sunset							Max temp.		Min. temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date		Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1:00 am EST	7:00 am EST	1:00 pm EST	7:00 pm EST	Resultant speed	Resultant direction	Speed	Direction	Date			Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm or more	Snow, Sleet 25.4mm or more	Thunderstorms	Heavy fog	32.2 °C and above	0 °C and below	0 °C and below	-17.8 °C and below
	°C	°C	°C.	°C		°C		Base 18 3 °C	Mm	Mm.		Mm.	Mm.		%	%	%	%	M.p s		M.p s.			%	Tenths											
PACIFIC AREA																																				
JOHNSTON	27.9	23.4	25.7	30.6	OCT 17+	18.3	FEB 16	0	526	59	OCT 24-25	0	0		76	75	67	73	5.5	9	21.0	E	DEC 1	72	5.5	92	178	95	151	0	3	0	0	0	0	0
KOROR R	30.2	24.1	27.2	32.2	OCT 13+	21.7	JUN 16	0	4054	139	FEB 17-18	0	0		91	81	78	89	.7	8	13.4	NW	JUL 20	52	9.8	2	6	357	253	0	37	0	3	0	0	0
KWAJALEIN	30.3	24.8	27.6	32.2	AUG 14+	21.7	NOV 9+	0	1779	70	JUL 15-16	0	0		82	83	74	78	5.5	7	19.7	3	NOV 9		8.7	8	70	287	216	0	5	0	2	0	0	0
MAJURO	29.6	24.9	27.3	32.2	AUG 13	22.2	JAN 3+	0	2917	93	SEP 26-27	0	0		81	82	75	78	4.1	7	14.8	NE	APR 11	54	8.8	8	68	289	242	0	21	0	1	0	0	0
MARCUS ISLAND	28.0	22.3	25.2	33.9	AUG 15+	15.6	MAR 17	0	851	85	JAN 25	0	0			68	69	77			38.4	SE	AUG 18	70	6.0	73	171	120	141	0			38	0	0	0
PONAPE R	30.1	23.6	26.8	32.2	OCT 30+	21.1	AUG 4+	0	4910	180	JUL 16	0	0		90	79	81	89	2.3	6	12.5	SE	JAN 21	35	9.2	0	45	320	293	0	29	0	5	0	0	0
TRUK MOEN ISLAND	29.6	24.2	26.9	31.7	OCT 30+	21.1	JUN 1	0	3495	158	JAN 16-17	0	0		85	77	77	84	2.7	5	17.0	NE	APR 12	56	8.9	4	5[illegible]	303	246	0	18	0	0	0	0	0
WAKE	28.4	23.3	25.9	31.7	SEP 25	19.4	NOV 27	0	672	86	OCT 12-13	0	0		78	79	68	72	4.9	6	16.5	4	NOV 30+		5.7	92	163	110	154	0	4	0	0	0	0	0
YAP R	29.9	24.3	27.1	32.2	JUL 1+	22.2	JUL 10+	0	3071	164	JUL 2-3	0	0		90	80	78	88	1.9	6	15.2	SW	SEP 29+	40	9.5	0	36	329	268	0	19	0	2	0	0	0
PENNSYLVANIA																																				
ALLENTOWN	16.0	4.5	10.3	35.0	JUN 23	- 19.4	JAN 15	3319	776	46	FEB 7-8	518	160	JAN 10	76	79	54	62	1.7	28	20.1	32	FEB 19		5.9	101	115	149	111	6	28	23	20	25	132	1
ERIE	13.4	4.7	9.1	33.3	AUG 17	- 18.9	FEB 23+	3612	976	47	MAR 4-5	2113	343	NOV 28-29	78	77	66	70	2.1	23	20.6	21	APR 12		7.0	69	96	200	165	26	39	24	5	39	124	3
HARRISBURG	17.2	6.2	11.7	36.1	AUG 18+	- 17.8	JAN 15	3033	792	49	FEB 7-8	772	193	JAN 10	70	73	52	58	1.3	28	18.8	W	APR 12	58	6.4	81	115	169	118	9	31	18	37	23	115	1
PHILADELPHIA	16.8	6.6	11.7	34.4	JUN 23	- 15.0	JAN 17	2929	745	52	AUG 8-9	599	168	JAN 10	74	75	55	62	1.3	28	18.3	SW	FEB 25	57	6.0	100	111	154	106	6	22	14	14	19	112	0
PITTSBURGH	15.7	4.7	10.2	34.4	AUG 17+	- 22.2	JAN 17	3267	768	56	AUG 31-1	932	145	MAR 5-6	77	80	57	63	1.7	26	20.6	24	APR 12	49	7.2	50	105	210	145	12	36	18	7	30	118	2
PITTSBURG U	16.6	6.6	11.6	35.0	AUG 17+	- 17.2	JAN 17	2911	704	56	AUG 31-1	597	91	MAR 5										48					13[illegible]	8			7	27	100	1
READING U	17.1	7.2	12.1	35.6	AUG 16	- 15.6	JAN 15	2841	705	47	FEB 7-8	483	185	JAN 10							24.6	E	FEB 25	55	5.8	10[illegible]	122	135	112	6			28	19	96	0
SCRANTON	14.6	4.5	9.6	34.4	JUL 14+	- 20.6	JAN 17	3512	669	53	AUG 1-2	759	89	JAN 10	76	79	57	63	1.1	26	17.9	SW	APR 12	55	6.8	71	109	185	135	8	36	21	13	36	124	4
WILLIAMSPORT	14.6	3.5	9.1	33.9	JUL 14	- 21.7	JAN 17	3591	824	57	AUG 1-2	605	79	MAR 5-6	84	85	60	66	1.0	28	17.0	26	FEB 25		6.7	66	116	183	133	10	37	34	5	30	137	6
RHODE ISLAND																																				
BLOCK ISLAND	12.6	5.8	9.2	27.8	AUG 20+	- 15.6	JAN 15	3454	612	81	AUG 2	701	229	JAN 23-24											5.9	90	139	136	90	7			0	24	96	0
PROVIDENCE	15.2	4.6	9.9	33.3	JUL 25+	- 19.4	JAN 18	3397	646	54	FEB 25	1013	264	JAN 23-24	72	71	50	61	1.6	27	16.1	29	FEB 22	61	5.7	120	100	145	109	9	22	19	9	27	132	5
SOUTH CAROLINA																																				
CHARLESTON	23.9	12.4	18.2	34.4	AUG 27+	- 6.1	DEC 8+	1186	1372	97	OCT 18-19	T	T	MAR 31+	84	85	56	72	.4	25	24.1Y	S	FEB 25	55	6.4	82	116	167	130	0	68	31	31	0	38	0
COLUMBIA	24.1	11.1	17.6	36.7	AUG 27	- 7.2	FEB 3+	1408	1335	129	SEP 2	28	28	JAN 30-31	83	87	52	65	.6	26	17.9	35	JUL 15	65	5.5	114	121	130	121	1	56	24	77	0	63	0
GNVLE-SPARTANBURG	21.8	9.9	15.9	35.0	AUG 27+	- 9.4	JAN 19	1731	1160	78	JUN 14-15	254	145	JAN 16	79	82	53	63	.4	27	16.1	W	FEB 25	59	5.7	117	100	148	114	4	54	32	24	1	66	0
SOUTH DAKOTA																																				
ABERDEEN	11.9	- 1.8	5.1	44.4	AUG 13	- 35.6	JAN 13	5037	435	31	MAY 22-23	861	147	NOV 25-26	75	79	58	59	.8	34	20.6	16	MAY 5		6.4	84	110	171	101	12	34	10	13	87	1[illegible]4	50
HURON	12.9	- .8	6.1	43.3	AUG 13	- 36.1	FEB 24	4697	496	62	MAY 20-21	894	262	MAR 28	79	83	60	60	.4	30	21.0	NW	MAR 17	59	6.4	88	110	167	108	9	37	14	23	71	171	45
RAPID CITY	14.9	1.1	8.0	40.6	AUG 12	- 25.6	FEB 23	3978	449	86	MAY 14-15	714	224	MAY 8-9	74	52	53	70	1.7	34	25.5	NW	JAN 31	58	5.9	100	119	146	104	8	49	18	18	40	162	21
SIOUX FALLS	12.5	.2	6.4	38.3	AUG 13	- 34.4	FEB 24	4544	710	57	MAY 8	1011	257	FEB 9-10	82	86	65	65	.4	28	17.9	28	DEC 30+		6.3	93	105	167	113	11	48	18	10	69	171	41
TENNESSEE																																				
BRISTOL	19.8	7.2	13.6	35.0	AUG 17+	- 20.0	FEB 3	2324	946	56	JUL 10	561	155	FEB 1	81	86	58	64	.7	28	17.9	25	JAN 26		6.2	86	115	164	110	6	50	40	13	11	99	1
CHATTANOOGA	21.3	8.9	15.1	35.6	AUG 17	- 13.3	JAN 31	1936	1127	88	MAR 25-26	86	46	JAN 15-16	88	91	60	66	.3	24	19.2	NW	MAY 18	58	6.3	100	87	178	117	1	62	39	11	4	82	0
KNOXVILLE	21.1	9.8	15.5	35.6	AUG 16	- 16.1	FEB 3	1906	1037	94	MAR 25-26	447	160	JAN 16-17	80	85	59	62	.9	27	18.8	NW	MAR 25+	50	6.2	96	102	167	118	5	49	35	25	4	76	0

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
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State and Station	Temperature: Averages: Daily maximum	Temperature: Averages: Daily minimum	Temperature: Averages: Annual	Temperature: Extremes: Highest	Temperature: Extremes: Date	Temperature: Extremes: Lowest	Temperature: Extremes: Date	Heating degree days	Precipitation: Total	Precipitation: Greatest in 24 hours	Precipitation: Date (s)	Precipitation: Snow, Sleet: Total	Precipitation: Snow, Sleet: Greatest in 24 hours	Precipitation: Snow, Sleet: Date (s)	Relative humidity: 1:00 a.m. E S T	Relative humidity: 7:00 a.m. E S T	Relative humidity: 1:00 p.m. E S T	Relative humidity: 7:00 p.m. E S T	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	Possible sunshine	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Number of days: Sunrise to sunset: Partly cloudy, 0.4-0.7	Number of days: Sunrise to sunset: Cloudy, 0.8-1.0	Number of days: Precipitation 25mm or more	Number of days: Snow, Sleet 25.4mm or more	Number of days: Thunderstorms	Number of days: Heavy fog	Number of days: Max temp.: 32.2 °C and above	Number of days: Max temp.: 0 °C and below	Number of days: Min. temp.: 0 °C and below	Number of days: Min. temp.: -17.8 °C and below
	°C.	°C.	°C.	°C.		°C		Base 18.3 °C.	Mm.	Mm.		Mm.	Mm.		%	%	%	%	M.p.s.		M.p.s.			%	Tenths											
TENNESSEE																																				
MEMPHIS	22.4	11.3	16.8	37.8	JUL 24	- 12.2	JAN 31	1692	1087	124	MAY 26-27	201	84	FEB 24-25	75	80	57	58	.7	20	19.2	W	FEB 11	64	5.6	124	95	146	103	5	49	7	60	5	61	0
NASHVILLE	21.3	9.5	15.4	36.7	JUL 24	- 16.7	JAN 31	1987	1008	53	MAR 25-26	191	51	MAR 5-6	76	81	55	58	.9	22	21.5	NW	JUL 2	62	5.9	106	108	151	114	4	54	15	38	8	80	0
OAK RIDGE	20.3	8.2	14.3	35.0	AUG 17+	- 17.2	FEB 3	2118	1215	102	MAR 25-26	287	114	FEB 1							20.1Y		AUG 19		5.8	123	79	163	121	3			8	5	77	0
TEXAS																																				
ABILENE	25.1	12.7	18.9	40.0	SEP 15	- 9.4	MAR 20	1250	618	59	APR 25-26	T	T	MAR 25+	63	72	50	44	2.1	17	24.1	W	DEC 23	66	5.3	138	97	130	62	0	45	16	105	0	44	0
AMARILLO	21.9	6.8	14.3	36.7	SEP 14+	- 16.1	FEB 24	2164	510	78	JUN 10-11	333	86	JAN 22-23	62	73	45	40	2.1	21	23.2	SE	SEP 9	77	4.8	151	121	93	61	7	47	27	65	8	103	0
AUSTIN	25.6	14.7	20.1	38.3	JUL 28	- 5.0	FEB 24	891	1030	102	SEP 22	64	51	MAR 3	78	86	60	58	.8	16	17.9	SE	MAY 17	54	5.8	103	120	142	86	1	46	26	105	0	17	0
BROWNSVILLE	27.8	18.3	23.1	36.1	SEP 10	2.2	JAN 17	274	539	80	SEP 23-24	0	0		87	91	61	70	2.8	13	24.6	NW	FEB 24	65	5.6	104	132	129	70	0	20	30	98	0	0	0
CORPUS CHRISTI	27.4	16.9	22.2	37.8	SEP 10+	- 1.7	MAR 4	474	642	58	FEB 16-17	0	0		86	91	64	69	2.8	13	18.8	N	FEB 24	53	6.1	92	125	148	81	0	31	24	107	0	6	0
DALLAS	24.4	13.8	19.2	38.9	SEP 14	- 7.8	FEB 24	1223	902	122	SEP 21-22	T	T	MAR 19+	73	82	60	55	1.9	16	17.4	SE	OCT 15	59	5.6	123	98	144	84	0	43	10	99	0	37	0
DEL RIO	27.2	14.6	20.9	39.4	SEP 10	- 3.9	FEB 14	732	435	48	APR 26-27	76	76	MAR 3	66	79	56	45	2.5	12	15.6	12	JUN 4+		5.5	125	95	145	51	1	40	19	133	0	14	0
EL PASO	25.0	10.4	17.7	38.9	AUG 7	- 9.4	MAR 4	1349	137	39	SEP 6-7	8	8	FEB 23	52	35	26	41	.8	25	25.0	W	MAR 16	83	3.8	196	90	79	45	0	26	0	99	0	44	0
FORT WORTH	24.7	13.1	18.9	39.4	AUG 19	- 7.8	FEB 24	1227	929	123	MAY 9-10	T	T	MAR 19+	73	82	57	55	1.4	17	19.2	35	JUN 15		5.4	135	95	135	78	0	49	13	101	0	39	0
GALVESTON U	24.1	18.8	21.4	36.1	JUL 22	- 2.2	FEB 24	528	880	97	DEC 18	0	0								20.1	NW	APR 19	60					72	0			11	0	3	0
HOUSTON U	26.3	17.6	21.9	37.2	JUL 28	- 2.8	FEB 24	530	918	85	MAY 18-19	T	T	FEB 24															92	0			87	0	3	0
HOUSTON	26.9	16.2	21.6	37.8	JUL 28	- 5.0	JAN 17	606	964	73	MAY 21-22	T	T	FEB 24	83	86	59	64	1.3	14	19.7	17	JUN 5	63	6.3	73	136	156	105	0	50	47	105	0	8	0
LUBBOCK	24.1	8.8	16.5	38.3	JUL 8	- 13.3	MAR 20	1678	359	71	SEP 18-19	104	51	FEB 8-9	62	73	46	39	1.8	18	26.4	28	JAN 25		4.8	149	112	104	55	2	40	10	95	4	84	0
MIDLAND	24.9	10.3	17.6	38.3	JUL 9	- 10.0	MAR 20+	1407	309	61	AUG 15	114	64	FEB 17	64	77	44	36	1.9	17	18.3	27	JAN 25		4.7	159	94	112	45	3	30	25	105	1	63	0
PORT ARTHUR	26.6	15.5	21.1	36.7	JUL 28	- 6.7	JAN 17	678	875	128	FEB 28-1	T	T	MAR 3+	88	90	61	71	1.2	14	26.8	W	APR 19	61	6.3	73	134	158	86	0	55	45	90	0	14	0
SAN ANGELO	26.0	12.3	19.2	39.4	SEP 15+	- 8.3	MAR 20	1178	413	42	MAY 13-14	28	20	MAR 2	67	78	50	44	1.6	18	19.7	30	OCT 18		5.1	142	101	122	67	0	33	15	124	0	47	0
SAN ANTONIO	26.2	14.4	20.3	37.2	SEP 11+	- 5.0	MAR 4	852	931	77	MAY 18	T	T	MAR 3+	78	86	59	55	1.4	12	20.1	SE	MAY 17	59	5.7	111	116	138	87	0	39	25	106	0	27	0
VICTORIA	26.9	16.3	21.6	37.8	JUL 28	- 3.9	JAN 17	601	784	71	SEP 22-23	T	T	FEB 24	85	88	61	65	1.5	12	22.8Y	N	FEB 24		6.5	67	130	168	87	0	46	46	104	0	6	0
WACO	25.6	14.3	20.0	38.9	AUG 20	- 6.7	FEB 24	1054	1069	88	MAY 9-10	56	51	FEB 24	72	79	55	54	1.7	17	17.9	17	MAY 9		5.3	136	95	134	76	1	40	20	109	0	32	0
WICHITA FALLS	24.8	10.5	17.7	41.7	SEP 14	- 12.8	MAR 20	1559	621	53	OCT 18	36	36	MAR 19	74	82	52	51	1.7	18	19.7	1	AUG 23		5.3	131	106	128	71	1	54	18	96	1	68	0
UTAH																																				
MILFORD	18.1	.4	9.2	36.7	JUL 28	- 24.4	DEC 24	3490	274	13	SEP 16-17	1392	170	SEP 16-17		43	34								5.3	132	98	135	94	17			41	18	183	8
SALT LAKE CITY	17.2	3.3	10.3	36.7	JUL 28+	- 16.1	JAN 22	3224	468	35	APR 23	1311	135	MAY 5	68	47	43	64	1.0	17	16.5	SW	AUG 3	69	6.0	104	100	161	97	16	34	16	31	24	133	0
WENDOVER	16.2	5.3	10.7	35.6	AUG 8+	- 15.0	DEC 20	3168	135	11	DEC 12-13	89	61	DEC 13	55	43	36								5.2	130	102	133	66	1			22	24	118	0
VERMONT																																				
BURLINGTON	11.6	.8	6.2	33.3	JUN 7	- 28.3	JAN 15	4532	737	46	JUN 7-8	1265	198	NOV 17-18	79	77	57	65	.[illegible]	24	22.4	SE	FEB 25	55	7.1	56	105	204	146	16	36	16	5	69	172	16
VIRGINIA																																				
LYNCHBURG	19.1	6.9	13.1	35.0	AUG 16	- 17.8	FEB 1	2453	718	67	OCT 7	378	102	JAN 16-17		81	53	65			15.2	W	FEB 25	62	5.6	111	118	136	100	5	41	36	13	10	94	1
NORFOLK	19.9	9.7	14.8	35.0	AUG 19+	- 13.3	FEB 1	2057	677	53	JUN 15-16	368	132	JAN 30-31	77	79	57	67	.5	21	29.5	SW	FEB 25	60	5.8	104	120	141	98	3	31	27	33	4	68	0
RICHMOND	19.7	7.6	13.7	34.4	AUG 19+	- 16.7	JAN 19	2349	756	67	JUL 25	508	216	JAN 15-16	78	82	51	64	.4	23	15.6	N	JUN 30	62	5.8	108	115	142	97	5	27	26	33	6	93	0
ROANOKE	19.3	7.3	13.3	35.0	AUG 18+	- 15.0	FEB 1	2398	806	60	OCT 7	521	127	JAN 30	75	77	51	59	1.2	28	16.5	32	FEB 19		5.7	113	125	127	106	5	41	27	17	11	88	0

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA
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State and Station	Temperature							Heating degree days	Precipitation						Relative humidity				Wind					Possible sunshine	Average sky cover sunrise to sunset	Number of days										
	Averages			Extremes								Snow, Sleet									Fastest mile (1.6 kilometers)					Sunrise to sunset							Max. temp.		Min. temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date		Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1:00 am EST	7:00am EST	1:00pm EST	7:00pm EST	Resultant speed	Resultant direction	Speed	Direction	Date			Clear, 0–0.3	Partly cloudy, 0.4–0.7	Cloudy, 0.8–1.0	Precipitation 25mm or more	Snow, Sleet 25.4mm or more	Thunderstorms	Heavy fog	32.2°C and above	0°C and below	0°C and below	−17.8°C and below
	°C.	°C	°C.	°C		°C.		Base 18.3°C.	Mm.	Mm.		Mm.	Mm.		%	%	%	%	M.p.s.		M.p.s.			%	Tenths											
WASHINGTON																																				
OLYMPIA	16.2	4.5	10.4	37.2	JUL 31	- 7.8	MAR 24+	2934	1034	59	APR 19	737	160	JAN 23	91	77	63	85	1.4	21	15.6	22	APR 30+		7.5	55	78	232	146	10	2	98	9	1	78	0
SEATTLE-TACOMA	15.7	7.1	11.4	34.4	JUL 30	- 3.9	DEC 15	2588	852	47	APR 19	574	244	DEC 23-24	84	75	62	75	.8	21	19.2	21	FEB 27		7.4	54	82	229	142	7	8	55	6	0	27	0
SPOKANE	14.2	2.8	8.6	36.7	AUG 1	- 12.2	DEC 25+	3724	367	25	JAN 23-24	1173	234	JAN 23-24	76	61	50	66	1.3	19	20.1	SW	FEB 27	55	6.6	90	91	184	100	16	8	57	21	43	138	0
STAMPEDE PASS R	7.9	1.4	4.7	30.6	AUG 1+	- 12.2	MAR 18	4958	1692	76	JAN 26-27	7546	414	JAN 27-28	88	80	74								7.6	59	66	240	188	67			0	82	160	0
TATOOSH ISLAND R	11.6	7.3	9.4	22.8	JUL 29	- 1.1	JAN 23	3197	1952	76	FEB 3-4	348	152	DEC 27	89	84	82	87	2.0	14	32.2	SW	JAN 1	39	7.8	50	68	247	187	4	9	86	0	0	3	0
WALLA WALLA U	17.9	7.4	12.7	40.0	JUL 31	- 7.8	MAR 18	2447	355	35	AUG 25	284	84	JAN 10-11							15.2	W	FEB 8+	61	6.1	123	58	184	92	4			31	9	60	0
YAKIMA	17.4	2.7	10.1	38.9	AUG 1	- 15.0	JAN 9	3179	151	24	DEC 26-27	726	241	DEC 26-27	75	55	44	65	1.5	28	17.4	24	OCT 4		6.0	109	97	159	49	10	5	19	29	14	133	0
WEST INDIES																																				
SAN JUAN P.R.	29.6	22.8	26.2	33.9	JUL 27	16.7	JAN 28+	0	1672	90	JUN 15	0	0		83	81	67	77	3.0	9	17.9	E	FEB 7	63	6.0	50	207	108	211	0	46	0	14	0	0	0
SWAN ISLAND	29.2	24.8	27.0	32.2	SEP 13	21.1	FEB 26+	0	1251	152	SEP 23-24	0	0												6.0	83	161	121	129	0			1	0	0	0
WEST VIRGINIA																																				
BECKLEY	16.4	5.0	10.7	32.2	AUG 17+	- 20.6	FEB 3+	3000	829	45	JAN 9-10	1283	130	MAR 20+	81	84	57	67	1.7	24	20.6	15	MAR 17+		7.1	57	109	199	145	16	58	41	2	28	113	3
CHARLESTON	18.7	6.5	12.6	35.0	AUG 16	- 17.2	FEB 5+	2613	888	46	APR 11	803	117	MAR 20+	79	83	54	60	1.3	23	16.5	26	JUL 9		6.7	62	128	175	131	11	51	117	12	18	109	0
ELKINS	16.8	2.9	9.9	33.3	AUG 17	- 24.4	FEB 1	3256	865	38	JAN 1-2	1361	168	JAN 28-29	88	90	57	69	1.6	27	20.6	27	JAN 26		7.2	45	132	188	164	19	50	80	3	26	137	9
HUNTINGTON	19.1	7.2	13.2	34.4	AUG 17+	- 18.3	JAN 31	2459	947	45	SEP 23-24	533	150	JAN 10	79	84	59	63	1.0	23	16.1	32	APR 8		6.5	71	119	175	124	6	50	51	20	15	95	1
PARKERSBURG U	18.2	6.8	12.5	35.0	AUG 16	- 17.2	FEB 5+	2654	787	66	SEP 11-12	439	97	MAR 20							17.9	W	JAN 26	50					129	6			15	19	101	0
WISCONSIN																																				
GREEN BAY	11.6	1.4	6.5	35.6	AUG 14	- 29.4	JAN 29	4459	828	64	SEP 19-20	1128	206	MAR 17-18	81	83	65	68	1.0	28	20.1Y	W	JUN 20	49	6.6	83	102	180	137	17	43	31	6	75	160	20
LA CROSSE	12.2	1.2	6.7	37.2	JUL 23	- 35.0	FEB 2	4428	1056	55	SEP 27-28	950	213	MAR 17	83	86	66	69	.7	24	15.6	23	JUN 20		6.6	93	77	195	128	9	46	23	8	68	159	36
MADISON	12.9	1.1	7.0	36.7	JUL 22	- 31.7	JAN 29	4300	955	74	AUG 8-9	1242	175	MAR 17	84	86	65	69	.9	26	24.1	SW	JUN 27	55	6.6	84	92	189	133	12	50	21	8	64	165	17
MILWAUKEE	12.2	3.1	7.7	35.0	JUN 27	- 26.7	JAN 29	4063	978	48	SEP [illegible]	2007	267	DEC 24-25	81	83	69	73	1.0	26	19.2	SW	MAR 18	61	6.3	100	91	174	133	21	41	33	6	54	137	11
WYOMING																																				
CASPER	14.1	- .4	6.9	35.6	AUG 12	- 29.4	MAR 25	4246	308	28	JUN 9-10	1783	147	DEC 22-23+	66	45	41	61	2.8	25	23.7	32	SEP 6		5.8	108	117	140	94	24	31	7	10	43	180	21
CHEYENNE	14.3	.6	7.4	32.2	AUG 13+	- 23.3	MAR 18	4011	356	37	JUN 9-10	820	107	JAN 28	65	42	44	62	3.0	30	26.8	W	JAN 27	66	5.9	109	101	155	99	12	49	27	5	34	167	18
LANDER	14.1	- .2	6.9	33.9	AUG 12+	- 25.6	MAR 18	4242	355	35	MAY 7-8	2555	366	SEP 16	64	49	44	57	1.2	25	26.4	W	JAN 27	66	6.0	95	111	159	80	28	28	1	10	40	179	18
SHERIDAN	14.6	- .9	6.8	37.8	AUG 12	- 30.6	MAR 25	4289	289	23	JUN 23-24	1557	183	MAR 21-22	69	49	48	68	1.5	30	27.3	SW	JAN 4	58	6.5	81	112	172	113	22	42	3	17	40	189	23

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day and may include precipitation from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

Data in this table are obtained by conversion from data in the English Units table.

+ And also on an earlier date or dates.

B Number of days maximum 21.1°C. or above for Alaskan Stations.

Y Peak gust.

V Sun below horizon November 19 - January 23, inclusive.

X Sun below horizon November 24 - January 17, inclusive.

NOTE Correction to above Metric Table in 1964 Annual Climatological Data National Summary, pages 32-41 in wind columns under Average speed multiply each value by 0.868; under Fastest mile multiply each value by 8.68. Slight differences from direct conversions derive from the arithmetic rounding of figures.

NORMALS, MEANS AND EXTREMES

State and Station	Elevation ground (feet)	Temperature(°F)									Normal degree days (1931-1960)		Precipitation (inches)									Relative humidity (percent)						Wind Speed (mph)			Sunshine (percent of possible)		Annual mean number of days									
		NORMAL (1931-1960)					Extremes					NORMAL (1931-1960)			Extremes			Snow, sleet			January			July			Mean hourly		Fastest mile			Sunrise to sunset			Precipitation .01 inch or more	Snow, sleet 1.0 inch or more	Thunderstorms	Heavy fog	Temperature		
		January		July		Annual												Mean total		Extreme																			Max	Min	
		Daily maximum	Daily minimum	Daily maximum	Daily minimum		Length yrs	Record highest	Record lowest	January	Seasonal	Wettest month	Driest month	Annual	Wettest month	Driest month	Maximum in 24 hours	January	Seasonal	Maximum in 24 hours	7 00 a m EST	1 00 p m EST	7 00 p m EST	7 00 a m EST	1 00 p m EST	7 00 p m EST	January	July		January	July	Clear	Partly cloudy	Cloudy					90° and above	32° and below	Zero and below
ALABAMA							82	112	-8							0.00	20.33																								
Birmingham	620	56.6	36.3	92.5	70.7	64.1	2	99	8	592	2551	6.00	2.95	53.05	17.67	T	6.57	0.5	1.5	8.4	82	58	65	94	69	74	9.0	6.2	65	40	59	100	117	148	117	1	56	8	33	61	0
Huntsville	600	52.4	33.4	92.4	69.8	62.0	7	101	-4	694	3070	5.57	2.72	48.67	12.55	T	5.84	1.6	7.4	17.1	80	62	67	86	56	60	8.2	5.5	---	---	---	108	103	154	113	2	54	12	66	70	1
Mobile	211	62.3	43.7	92.0	73.1	68.2	4	100	8	415	1560	9.67	3.03	68.13	19.29	.05	13.36	.1	.4	3.5	81	62	70	91	64	75	11.4	7.4	---	---	---	104	119	142	123	*	83	35	77	24	0
Montgomery	194	58.5	37.7	91.9	71.7	65.0	2	99	15	543	2291	6.16	2.28	50.69	21.32	.02	8.81	.2	.2	2.5	84	60	65	94	67	74	7.9	6.0	60	49	64	107	108	150	108	*	63	21	58	41	0
ALASKA							82	100	-76							.00	37.67																								
Anchorage	114	20.5	4.3	64.6	49.5	35.2	1	77	-30	1631	10864	2.57	.42	14.71	4.60	.30	1.66	8.5	89.1	16.4	76	76	74	83	74	63	5.5	6.8	---	37	43	68	61	236	137	24	1	30	#12	181	46
Anchorage, Pk Strp 2/	85	20.5	4.3	64.6	49.5	35.2	43	86	-38	1631	10864	2.57	.42	14.71	5.91	.00	2.06	10.9	59.8	17.7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	113	22	---	---	#13	202	41
Annette	110	38.4	30.3	63.2	51.4	45.6	5	90	1	949	7069	16.88	5.67	118.36	34.87	.71	7.59	12.2	49.6	14.2	82	83	78	87	77	68	12.9	8.3	---	---	---	41	57	267	222	16	2	17	#26	77	0
Barrow	22	-9.4	-23.0	44.9	33.3	9.6	45	78	-56	2517	20174	.90	.11	4.26	2.81	.00	1.00	2.3	28.8	15.0	63	64	63	94	91	88	11.2	11.7	---	---	---	x60	x54	x185	73	7	*	66	*	323	169
Barter Island	39	-9.9	-23.6	47.5	35.0	10.4	16	72	-59	2536	19862	1.05	.17	6.28	4.91	T	2.25	6.8	46.8	17.0	68	68	67	93	89	86	14.1	10.2	---	---	---	v48	v68	v194	99	13	*	71	*	309	167
Bethel	125	10.8	-3.7	61.8	47.5	28.7	7	86	-39	1903	13196	4.20	.58	18.42	5.81	.02	1.31	4.9	50.9	6.5	73	74	73	92	85	65	14.7	12.2	---	---	---	61	62	242	145	17	1	65	#12	224	82
Cold Bay	94	32.6	22.9	54.3	45.0	37.9	21	78	-9	1153	9880	4.59	1.46	34.30	9.97	.02	3.43	7.4	46.4	9.7	85	86	83	93	91	82	18.1	15.7	---	---	---	12	49	304	206	14	0	26	*	162	1
Fairbanks	436	-.8	-21.4	71.7	47.6	25.8	2	82	-56	2359	14279	2.20	.25	11.29	4.35	T	1.63	10.9	61.5	12.9	73	73	73	81	70	60	2.9	6.0	---	---	---	69	79	217	101	20	5	20	#48	235	131
Cordova (1963)	41	31.6	14.5	60.3	46.1	38.2	20	84	-33	1299	9764	12.51	3.48	80.98	27.72	.08	7.92	25.0	124.7	22.9	83	82	81	92	86	80	4.6	4.1	---	---	---	51	52	262	215	35	2	12	# 8	189	18
Juneau	12	30.1	20.0	62.7	47.8	40.1	22	84	-21	1237	9075	8.33	2.87	54.62	13.29	.27	4.66	19.4	99.9	31.0	80	80	78	89	79	68	8.4	7.7	---	29	30	44	36	285	222	27	*	21	#20	146	9
King Salmon	43	20.8	5.9	63.0	46.8	33.8	2	76	-30	1600	11343	3.43	.64	19.18	7.30	.00	2.00	6.3	44.6	9.5	77	78	76	90	79	69	11.2	9.9	---	---	---	57	63	245	151	15	1	32	#12	222	56
Kotzebue	10	1.3	-12.7	58.6	46.8	20.7	23	85	-52	2192	16105	2.16	.28	8.18	5.18	T	1.78	5.5	46.2	8.6	72	72	72	88	86	78	14.5	12.7	---	---	---	89	68	208	113	14	*	21	# 3	252	120
McGrath	349	.8	-18.7	68.6	48.7	25.8	23	88	-67	2294	14283	3.79	.47	18.58	6.26	T	2.39	15.3	88.1	15.2	69	68	69	87	75	56	2.7	5.9	---	---	---	68	64	233	138	27	6	14	#28	232	114
Nome	13	11.5	-2.7	54.6	44.4	26.1	19	81	-42	1879	14171	3.80	.69	17.88	7.82	T	2.38	10.7	58.1	8.4	77	77	77	90	86	82	12.0	10.0	---	38	31	82	64	219	131	19	*	24	# 2	240	89
Northway (1956)	1713	-8.5	-25.7	69.8	48.5	22.4	14	88	-72	2545	15506	2.89	.22	11.35	6.42	T	3.91	7.7	40.1	11.5	68	67	65	87	67	50	3.0	5.9	---	---	---	45	84	236	102	11	12	17	#37	247	138
St. Paul Island	22	29.7	21.1	49.4	41.6	34.3	48	64	-26	1228	11199	3.29	.96	23.60	9.32	.08	1.93	13.3	56.6	13.8	87	87	86	96	96	91	19.1	12.7	---	---	---	23	64	278	202	19	*	49	# 0	190	5
Shemya	122	33.9	28.6	49.2	43.6	38.4	20	63	16	1045	9687	2.76	1.32	27.27	8.59	.14	5.26	11.7	60.7	15.3	84	84	83	95	97	93	20.2	13.3	n139	---	---	6	57	302	211	20	0	80	# 0	123	0
Yakutat	28	34.4	20.2	60.5	47.7	40.0	17	86	-22	1169	9092	19.59	5.06	131.81	43.88	.52	7.13	36.3	214.9	32.4	82	83	81	96	85	79	8.5	7.2	---	---	---	41	46	278	226	50	2	32	# 5	168	9
ARIZONA							71	127	-37							.00	13.09																								
Flagstaff	6993	40.4	14.1	81.4	49.6	45.6	16	94	-20	1169	7152	2.84	.51	18.31	6.63	T	3.43	17.6	79.0	22.0	77	54	51	70	33	37	8.7	6.3	---	---	---	174	91	100	72	19	47	7	1	211	9
Phoenix	1117	64.0	35.3	104.6	75.0	69.0	5	114	20	474	1765	1.12	.09	7.20	5.56	.00	3.07	T	T	.6	62	44	30	48	28	20	4.6	6.4	75	77	84	211	85	69	34	0	22	2	162	15	0
Prescott (1964)	5014	51.0	23.1	90.8	61.1	55.7	22	103	-5	865	4362	2.66	.24	12.23	9.61	.00	3.08	5.9	16.7	12.4	71	49	44	59	30	31	7.1	8.3	72	73	74	184	99	82	60	6	46	4	48	130	*
Tucson	2584	62.6	37.0	98.5	74.1	67.7	25	111	16	471	1800	2.88	.13	11.00	7.93	.00	3.93	.4	1.5	6.4	62	40	34	57	32	28	7.6	7.9	59	81	76	194	91	80	50	1	40	1	144	21	0
Winslow	4895	45.2	16.8	95.7	64.6	55.7	6	105	-13	1054	4782	1.43	.26	7.23	4.80	.00	2.12	2.6	9.4	7.8	79	63	52	55	28	26	7.6	9.2	---	---	---	180	95	90	53	4	36	5	73	136	3
Yuma	194	69.3	41.5	108.2	80.3	74.3	13	120	28	307	974	.50	.01	3.03	2.68	.00	2.42	.0	.0	.0	53	35	25	47	29	20	7.2	9.6	54	85	92	253	66	46	15	0	7	1	187	2	0
ARKANSAS							75	120	-29							.00	12.00																								
Fort Smith	447	50.2	29.4	94.7	71.2	61.8	4	106	-3	781	3292	5.26	2.66	42.22	14.01	T	7.13	1.8	4.7	5.6	80	61	63	92	58	56	8.4	6.6	58	47	70	130	95	140	92	2	57	13	84	72	1
Little Rock	257	50.6	30.5	92.7	71.1	61.7	6	108	-4	756	3219	5.28	2.82	48.66	12.53	T	7.71	2.2	5.2	11.3	81	57	60	88	58	61	8.9	7.1	65	45	68	122	99	144	101	2	57	15	84	66	1
Texarkana	372	54.9	35.2	93.3	71.9	64.3	22	106	-3	626	2533	5.30	2.73	49.19	15.33	T	6.55	1.3	2.3	7.5	84	67	70	90	58	59	7.9	6.4	---	---	---	---	---	---	98	1	63	18	83	40	*
CALIFORNIA							81	134	-45							.00	26.12																								
Bakersfield	494	57.4	37.4	100.3	68.2	65.1	2	111	25	546	2122	1.17	T	6.36	4.61	.00	1.68	T	T	T	83	76	61	46	33	21	4.9	7.1	---	---	---	199	82	84	37	0	3	22	98	16	0
Bishop	4108	53.7	19.8	98.0	55.2	56.2	18	109	-6	874	4227	1.18	.09	5.84	5.03	.00	3.32	3.4	6.2	9.0	---	46	34	---	18	14	---	---	---	---	---	204	86	75	29	2	13	*	98	144	*
Blue Canyon	5280	43.6	30.5	77.0	59.0	50.7	22	93	5	865	5507	11.70	.06	60.37	45.12	.00	9.33	50.2	240.0	38.5	---	60	---	---	32	---	m10.7	m7.1	---	---	---	175	65	125	88	39	12	68	1	100	0
Burbank	724	64.9	42.3	86.2	61.4	63.6	2	106	32	366	1646	3.22	T	14.53	13.84	.00	7.76	.2	.2	4.7	62	45	37	82	50	38	4.5	5.9	---	---	---	187	102	76	38	*	4	28	49	1	0
Eureka U	43	53.6	41.1	60.5	52.0	52.3	55	85	22	546	4643	6.71	.10	38.43	13.97	.00	5.83	.2	.2	3.0	---	---	---	---	---	---	6.9	6.8	56	41	52	81	100	184	117	*	5	49	0	4	0
Fresno	328	55.4	36.7	100.0	62.6	63.0	2	110	25	586	2492	2.19	T	11.14	6.73	.00	1.91	.1	.1	1.5	91	85	68	64	39	23	5.4	7.1	43	52	97	204	68	93	43	*	5	41	102	31	0
Long Beach	34	65.3	40.8	82.0	61.1	62.8	6	111	25	375	1711	2.31	T	9.84	9.05	.00	6.86	T	T	T	67	52	45	86	66	57	5.6	6.7	---	---	---	155	129	81	28	0	3	64	13	1	0
Los Angeles U	270	65.0	46.6	83.3	62.6	64.4	25	110	28	310	1349	3.33	T	14.68	12.42	.00	6.11	T	T	.3	63	45	50	84	49	53	6.8	5.4	49	72	82	186	105	74	36	0	6	17	18	*	0
Los Angeles	97	63.8	45.0	75.9	62.3	61.9	7	110	30	347	1799	2.88	.01	12.63	11.07	.00	6.19	T	T	T	63	49	55	86	68	69	6.4	7.0	62	---	---	142	114	109	36	0	3	49	5	*	0
Mount Shasta R	3544	41.4	25.1	85.3	50.7	49.9	23	103	-2	983	5722	6.36	.18	36.72	17.60	.00	5.90	32.2	106.2	37.4	---	75	70	---	41	30	---	---	---	---	---	163	85	117	89	19	13	7	20	134	*
Oakland	6	55.4	40.6	72.7	55.9	57.5	2	89	32	527	2870	3.83	T	17.93	11.29	.00	5.45	T	T	1.0	83	80	74	85	76	68	6.2	9.1	---	---	---	145	115	105	63	*	2	18	0	1	0
Point Arguello(1963)	364	59.0	40.3	65.5	51.5	55.2	4	97	24	474	3596	2.35	.02	11.27	8.36	T	2.28	T	T	T	---	---	---	---	---	---	7.3	6.9	---	---	---	116	89	160	68	0	2	140	1	9	0
Red Bluff	341	53.4	37.5	99.6	67.9	63.5	21	114	21	605	2515	4.29	.04	22.05	11.38	.00	4.00	1.2	1.7	9.9	81	71	59	48	29	17	9.0	8.2	68	53	96	178	68	119	70	1	11	18	96	22	0
Sacramento U	19	54.4	38.3	90.0	58.0	60.7	31	112	22	577	2587	3.58	T	18.02	12.20	.00	5.07	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	58	---	---	---	66	10	0
Sacramento	17	53.2	37.2	93.4	57.4	60.4	5	115	23	614	2773	3.24	T	16.29	12.64	.00	5.59	T	T	T	92	90	74	77	47	27	8.7	9.7	70	43	97	194	68	103	57	0	5	36	76	21	0
Sandberg R	4517	46.0	33.8	85.6	63.2	55.5	33	102	3	778	4209	2.58	.02	12.10	11.12	.00	4.87	8.9	26.5	38.5	---	56	---	---	25	---	17.3	12.9	---	---	---	210	80	75	40	7	4	79	20	56	0
San Diego	13	64.6	45.4	76.8	63.4	63.2	5	111	31	313	1439	2.15	.01	10.40	7.60	.00	3.07	T	T	T	67	49	51	83	69	66	5.5	6.8	51	69	68	153	121	91	42	0	3	29	4	*	0
San Francisco U	52	55.8	45.5	64.3	53.3	56.8	29	101	30	443	3001	4.55	.01	20.78	11.47	.00	3.65	T	T	T	---	c82	c68	---	c85	c75	6.7	11.2	47	55	65	---	---	---	67	0	2	---	1	*	0
San Francisco	8	55.4	41.7	71.9	53.5	56.9	2	94	30	508	3012	4.09	.01	18.69	12.30	.00	3.74	T	T	1.5	88	82	71	88	67	62	7.0	13.7	62	---	---	162	104	99	62	*	2	20	3	4	0
Santa Catalina	1568	59.7	47.4	77.9	59.4	60.9	3	101	36	353	2052	3.16	.02	14.36	7.49	.00	2.51	.0	T	T	---	---	---	---	---	---	---	---	---	---	---	174	87	104	45	0	4	151	15	0	0
Santa Maria	236	62.3	38.1	71.6	52.8	57.0	2	100	25	459	2967	2.84	.03	13.37	9.69	.00	3.07	T	T	T	81	61	57	93	65	62	6.7	6.5	---	---	---	176	110	79	46	0	2	87	8	34	0
Stockton	22	52.4	37.0	95.4	60.9	61.3	6	113	19	629	2676	2.66	T	13.37	8.05	.00	3.01	.0	.0	.0	90	88	71	65	40	24	6.2	7.6	---	---	---	194	71	100	47	0	3	41	81	25	0
COLORADO							78	118	-60							.00	11.08																								
Alamosa	7536	35.6	- .8	82.5	47.2	41.9	20	91	-50	1476	8529	1.07	.17	6.56	2.45	T	1.82	4.5	32.0	14.7	75	59	58	83	38	36	---	---	---	---	---	150	139	76	66	12	44	15	1	227	47
Colorado Springs	6145	41.9	15.2	84.2	56.7	48.5	5	99	-21	1128	6423	2.37	.24	13.19	8.00	T	3.09	4.4	38.3	18.0	54	36	44	70	36	41	10.2	9.8	---	---	---	136	120	109	85	11	60	21	19	154	10
Denver	5283	42.1	14.8	88.4	57.4	49.5	6	100	-25	1132	6283	2.70	.47	14.81	7.31	T	3.43	8.8	59.1	19.4	60	44	49	69	32	33	9.8	8.9	56	72	72	115	135	115	87	18	41	10	37	158	13
Grand Junction	4855	34.8	17.1	92.5	63.8	52.5	2	102	-3	1209	5641	1.07	.42	8.29	3.48	.00	1.35	8.2	27.7	9.1	75	57	56	50	31	24	5.6	9.5	66	59	78	142	104	119	71	9	37	8	56	127	1
Pueblo	4684	45.3	14.7	92.1	60.8	52.7	23	105	-31	1085	5462	1.85	.30	11.84	6.17	T	3.77	6.1	32.6	16.8	69	46	49	73	35	34	7.7	8.2	80	75	77	142	121	102	71	10	44	8	56	156	9
CONNECTICUT							78	105	-32							.00	12.12																								
Bridgeport	7	37.4	22.9	82.6	64.8	51.5	3	97	-5	1079	5617	4.45	2.96	44.89	13.29	.07	4.67	7.7	26.2	15.0	74	62	68	82	61	72	11.9	9.3	---	---	---	105	108	152	115	7	22	28	4	108	1
Hartford (Bradley Fld)	169	34.7	17.3	85.0	61.8	49.8	6	101	-26	1209	6172	4.01	2.94	42.92	21.87	.35	12.12	12.9	52.3	14.3	75	59	65	81	51	63	10.2	7.8	51	55	60	84	113	168	125	14	23	33	18	143	9
New Haven	6	37.1	22.0	80.5	63.2	50.2	22	100	-8	1097	5897	4.62	3.19	46.02	10.95	.12	5.55	9.7	36.8	17.2	76	63	---	81	66	---	8.3	6.3	57	54	67	103	106	156	129	11	27	28	3	113	1

See reference notes at end of table.

NORMALS, MEANS AND EXTREMES

State and Station	Elevation ground (feet)	Temperature (°F) Normal (1931-1960) January Daily maximum	January Daily minimum	July Daily maximum	July Daily minimum	Annual	Extremes Length yrs	Record highest	Record lowest	Normal degree days (1931-1960) January	Seasonal	Precipitation (inches) Normal (1931-1960) Wettest month	Driest month	Annual	Extremes Wettest month	Driest month	Maximum in 24 hours	Snow, sleet Mean total January	Seasonal	Extreme Maximum in 24 hours	Relative humidity (percent) January 7:00 a m EST	January 1:00 p m EST	January 7:00 p m EST	July 7:00 a m EST	July 1:00 p m EST	July 7:00 p m EST	Wind Speed (m p h) Mean hourly January	July	Fastest mile	Sunshine (percent of possible) January	July	Annual mean number of days Sunrise to sunset Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow sleet hail 1.0 inch or more	Thunderstorms	Heavy fog	Temperature Max 90 and above	Min 32 and below	Zero and below
DELAWARE							73	110	-17							0.00	7.83																								
Wilmington	78	41.3	25.5	86.2	65.8	54.1	18	102	-4	980	4930	5.59	2.91	44.56	12.09	.16	6.24	5.8	21.4	15.6	76	62	70	80	53	67	9.6	7.5	---	---	---	99	106	160	118	6	30	41	20	104	*
DIST. OF COLUMBIA																																									
Washington (U)(1958)	72	44.0	28.9	87.1	68.4	56.8	87	106	-15	884	4258	4.49	2.64	41.44	17.45	.14	7.31	5.9	19.4	25.0	73	56	64	78	52	67	7.7	5.7	62	46	64	125	116	124	124	6	33	12	28	81	*
Washington Nat'l. AP	14	44.3	29.5	87.0	69.3	57.0	5	100	3	871	4224	4.90	2.47	40.78	14.31	T	6.39	4.9	16.9	14.4	69	54	59	76	51	60	10.3	8.4	78	49	64	105	106	154	112	5	29	14	36	82	0
FLORIDA							76	109	-2							.00	38.70																								
Apalachicola (U)	13	62.3	47.9	87.6	75.4	68.8	36	102	13	347	1308	8.53	2.44	56.23	22.55	.01	11.71	T	T	1.2	87	69	80	85	72	76	8.4	6.6	67	60	63	132	112	121	106	*	72	25	17	4	0
Daytona Beach	31	69.6	48.7	88.2	72.0	70.3	22	102	21	248	879	7.00	1.95	49.90	19.89	.06	9.29	.0	T	T	90	60	79	90	67	80	9.4	7.8	---	---	---	95	134	136	116	0	83	33	57	6	0
Fort Myers	15	74.8	52.2	91.0	73.3	73.7	6	98	26	146	442	9.08	1.20	53.34	16.32	.00	10.85	.0	.0	.0	87	58	74	84	59	73	8.5	7.0	---	---	---	105	157	103	116	0	99	22	123	1	0
Jacksonville(U)(1956)	18	65.9	48.7	89.6	73.7	69.8	86	104	10	303	1113	7.89	1.57	52.40	23.32	T	9.86	----	----	----	--	--	--	--	--	--	---	---	---	---	---	---	---	---	122	*	--	--	61	5	0
Jacksonville	20	66.8	45.0	92.0	73.2	69.5	24	105	12	332	1239	7.68	1.69	53.36	19.36	.04	10.17	T	.1	1.5	88	56	74	86	57	75	8.5	8.0	82	59	59	99	125	141	116	*	61	34	88	11	0
Key West (U) (1957)	9	75.8	65.8	89.1	78.3	77.6	90	97	41	28	77	6.78	1.54	39.57	23.56	T	19.88	.0	.0	.0	84	69	79	77	68	74	10.3	8.2	91	68	69	140	157	68	112	0	59	*	33	0	0
Key West (Int'l. AP)	4	73.7	65.4	87.4	79.1	76.8	13	95	46	40	108	6.73	1.53	39.99	18.45	.00	8.89	.0	.0	.0	84	69	78	76	66	72	12.3	10.4	122	69	71	107	166	92	111	0	59	1	58	0	0
Lakeland (U)	214	71.2	52.2	90.5	72.6	72.3	25	101	20	195	661	8.30	1.59	51.37	15.67	T	10.12	T	T	T	--	--	--	--	--	--	7.3	5.7	---	61	60	98	156	111	121	0	100	19	86	1	0
Miami (U) (1961)	8	74.4	62.6	86.8	76.4	75.3	49	95	27	57	173	7.88	1.73	47.26	25.34	T	15.10	.0	.0	.0	--	--	--	--	--	--	---	---	122	70	61	155	96	---	---	--	--	--	--	--	--
Miami Beach (1964)	9	74.2	63.9	87.0	77.6	76.2	24	98	35	56	141	7.36	1.65	46.26	18.02	.01	8.35	.0	.0	.0	--	--	--	--	--	--	11.7	10.9	122	67	63	147	121	97	123	0	--	--	14	0	0
Miami (Int'l. AP)	7	75.8	57.9	88.8	74.7	75.1	22	98	32	74	214	9.47	1.67	59.76	24.40	.01	9.95	.0	.0	.0	86	56	74	84	64	75	9.2	7.9	---	---	---	82	172	111	125	0	77	8	63	*	0
Orlando	108	70.7	50.0	92.0	73.0	72.0	2	97	27	220	766	8.00	1.57	51.37	19.57	T	9.67	T	T	T	89	58	70	94	62	77	9.0	7.7	---	---	---	97	149	119	115	0	80	29	98	2	0
Pensacola (U) (1961)	13	61.1	46.9	86.9	75.0	68.0	22	103	13	383	1435	7.59	3.84	61.60	18.80	T	9.16	T	.2	2.1	86	64	79	85	64	74	8.1	6.7	91	56	66	---	---	---	112	*	65	--	39	9	0
Pensacola 1/	112	62.3	44.6	89.2	74.1	68.4	2	97	20	400	1463	8.02	2.98	62.87	15.52	.00	7.51	T	T	T	78	58	69	92	70	73	8.1	5.9	48	47	52	---	---	---	127	0	69	--	37	15	0
Tallahassee	55	65.1	42.7	90.5	72.0	68.0	3	99	10	375	1485	8.05	2.43	56.86	20.12	T	9.26	T	T	T	87	60	73	92	61	73	9.7	7.5	---	---	---	93	134	138	122	0	89	51	90	30	0
Tampa	19	71.3	51.0	89.7	73.4	72.2	2	97	27	202	683	8.62	1.46	51.57	20.59	T	12.11	T	T	T	87	60	75	88	64	75	9.2	7.8	---	67	60	97	146	122	111	0	91	26	75	4	0
West Palm Beach	15	75.5	58.3	90.8	74.3	75.3	11	98	30	87	253	9.66	2.35	61.70	24.86	.12	15.23	.0	.0	.0	86	58	73	84	62	75	9.9	7.6	---	---	---	75	155	135	131	0	78	8	88	*	0
GEORGIA							74	112	-17							.00	18.00																								
Athens	802	54.6	34.5	90.2	69.2	61.9	22	105	2	642	2929	5.10	2.86	48.53	14.98	T	5.54	.5	1.5	5.0	81	57	65	91	60	70	9.5	6.9	---	---	---	111	107	147	111	1	51	32	55	52	0
Atlanta	1010	52.0	37.3	87.0	70.7	61.4	5	98	-3	639	2983	5.37	2.44	47.14	15.72	T	5.67	.8	1.6	8.3	77	58	62	91	66	72	11.1	7.6	70	48	62	111	109	145	115	*	50	28	17	57	*
Augusta	145	59.4	35.7	91.3	70.0	64.0	13	106	6	549	2397	4.50	2.01	39.18	9.91	T	5.98	T	.2	1.3	85	55	70	88	54	68	6.8	5.8	---	---	---	108	104	153	103	*	56	24	84	55	0
Columbus	385	59.0	36.6	91.5	70.6	64.4	20	104	3	552	2383	6.01	1.77	48.67	12.53	.00	5.63	T	T	T	85	59	72	87	59	70	8.6	6.0	---	---	---	112	99	154	110	0	59	19	79	46	0
Macon	354	60.2	38.2	92.8	71.0	65.6	15	106	5	505	2136	5.64	2.01	44.08	11.77	.00	4.97	.3	.3	3.7	83	53	63	87	53	65	8.8	7.4	70	57	63	117	103	145	112	*	58	24	96	36	0
Rome	637	52.8	31.3	90.6	67.4	60.4	20	106	-5	710	3326	5.87	2.93	52.26	17.37	T	7.53	.5	1.9	8.2	81	58	73	88	54	67	---	---	---	---	---	105	117	143	122	1	61	26	64	81	*
Savannah	46	62.5	40.9	91.2	71.4	66.4	13	104	9	437	1819	6.62	2.05	48.91	20.10	.02	6.36	T	.1	1.0	86	56	70	88	58	75	9.3	7.6	66	56	66	105	116	144	110	*	66	37	71	31	0
Thomasville (U)(1963)	283	63.4	44.0	92.0	72.0	68.2	41	106	8	394	1529	6.81	2.08	51.01	18.83	T	9.00	T	T	2.0	85	60	70	85	60	78	5.3	4.1	---	54	57	122	119	124	116	*	72	13	77	15	0
HAWAII							61	100	18							.00	51.35																								
Hilo	31	78.7	62.8	82.4	67.4	73.1	19	93	53	----	---	15.18	6.79	136.62	50.82	.36	15.59	.0	.0	.0	84	80	66	88	81	66	7.7	7.3	---	47	43	29	124	212	284	0	7	0	*	0	0
Honolulu (U) (1964)	12	-	----	----	----	75.1	42	88	57	----	----	3.86	.62	23.96	18.70	.06	17.41	.0	.0	.0	--	--	--	--	--	--	---	---	---	---	---	---	---	---	147	0	--	--	0	0	0
Honolulu	7	79.1	65.8	84.6	73.0	75.9	3	93	56	----	----	3.76	.33	21.89	20.79	T	17.07	.0	.0	.0	77	76	65	68	66	52	10.3	13.5	67	65	77	97	166	102	99	0	7	0	5	0	0
Kahului	48	80.8	63.4	86.4	70.1	75.2	2	91	53	----	----	3.14	.18	16.33	9.46	.00	5.82	.0	.0	.0	83	83	63	80	73	57	15.3	20.2	---	66	77	103	176	86	90	0	5	0	3	0	0
Lihue	103	78.2	63.5	83.1	72.0	74.5	15	90	51	----	----	5.51	1.46	43.00	18.45	.30	11.20	.0	.0	.0	84	84	67	79	75	64	10.5	12.8	73	52	61	56	166	143	206	0	10	0	*	0	0
IDAHO							73	118	-60							.00	7.17																								
Boise	2838	36.1	22.1	91.4	59.0	51.0	26	111	-17	1113	5809	1.33	.16	11.43	4.00	.00	2.24	8.4	21.6	13.0	82	75	73	53	34	22	8.6	8.6	61	42	89	124	91	150	91	8	16	20	41	128	2
Idaho Falls 46W (R)	4932	27.5	3.2	87.9	50.1	42.4	16	101	-40	1538	8475	1.10	.26	7.57	4.42	.00	1.73	6.7	27.4	8.5	--	--	--	--	--	--	5.6	8.0	51	---	---	---	---	---	68	10	13	14	25	211	33
Idaho Falls 42NW (R)	4790	26.5	.2	89.0	49.2	41.7	15	103	-43	1600	8760	1.24	.33	7.02	5.04	.00	1.78	----	----	----	--	--	--	--	--	--	4.7	8.1	50	---	---	---	---	---	67	--	--	--	30	218	42
Lewiston	1413	37.7	23.7	89.8	57.8	51.6	19	115	-22	1063	5542	1.73	.43	13.24	4.80	T	1.73	7.2	18.3	11.9	80	74	72	61	36	23	---	---	---	---	---	95	77	193	103	6	16	21	36	99	3
Pocatello	4454	31.6	13.0	89.6	55.1	47.0	2	99	-19	1324	7033	1.21	.51	10.85	3.30	.00	1.30	11.3	37.4	10.1	82	78	74	68	37	26	10.5	9.8	72	37	84	114	97	154	90	13	26	15	26	178	14
Salmon (1960)	3949	28.2	1.1	89.6	46.8	44.0	48	---	---	1513	7922	1.28	.42	8.64	3.88	.00	1.50	----	----	----	--	--	--	--	--	--	---	---	---	---	---	---	---	---	---	--	--	--	-	---	--
ILLINOIS							76	117	-35							.00	16.17																								
Cairo (U)	314	44.6	30.2	90.3	71.8	59.6	23	104	-5	856	3821	4.79	2.88	45.23	14.95	T	7.56	2.8	9.0	7.3	80	67	--	84	59	--	9.8	6.5	60	46	77	110	105	150	114	3	53	7	53	65	*
Chicago (Midway)	607	33.0	19.0	84.1	67.1	50.8	2	98	-9	1209	6155	4.07	1.60	33.18	14.17	.20	6.24	8.5	37.6	12.5	73	64	68	78	57	57	11.3	7.9	60	43	69	93	105	167	119	11	36	15	23	123	5
Moline	582	31.6	13.6	88.0	63.2	50.1	6	99	-26	1314	6408	4.37	1.35	32.79	11.00	.01	6.29	7.1	27.9	9.6	75	65	69	87	58	60	10.4	7.4	77	47	72	102	100	163	110	9	47	20	23	136	20
Peoria	652	33.7	17.6	87.0	65.0	51.4	6	99	-20	1218	6025	4.27	1.71	34.84	13.09	.03	5.06	5.3	23.2	9.0	78	69	71	88	60	61	11.2	8.2	75	45	69	102	100	163	109	8	48	20	19	134	14
Rockford	724	30.2	13.7	86.3	62.1	48.6	2	99	-20	1333	6830	4.30	1.44	35.62	11.81	.01	5.56	8.7	34.1	10.9	79	68	74	85	57	57	9.4	7.9	---	---	---	95	106	164	113	12	41	24	12	143	10
Springfield	588	36.3	20.5	89.6	66.4	53.6	6	103	-22	1135	5429	4.45	1.82	34.83	9.91	.15	5.12	4.3	21.3	10.3	77	67	71	85	60	61	13.2	8.6	75	43	73	112	92	161	112	7	51	17	28	123	11
INDIANA							79	116	-35							.00	10.50																								
Evansville	381	42.7	25.6	90.3	67.2	57.0	5	102	-18	955	4435	4.31	2.57	41.45	13.50	.01	6.05	3.4	11.5	10.6	80	66	70	88	57	59	9.7	6.5	59	41	76	104	102	159	114	4	47	14	48	110	7
Fort Wayne	791	34.1	19.6	85.1	63.2	50.3	5	101	-18	1178	6205	4.17	2.09	35.31	9.72	.14	4.60	6.8	30.1	13.6	79	71	75	84	55	57	11.2	8.1	65	39	71	80	110	175	129	9	43	20	18	133	15
Indianapolis(U)(1955)	781	38.7	23.4	88.3	67.7	54.5	--	---	---	1051	5134	4.18	2.08	39.24	----	----	---	---	----	----	--	--	--	--	--	--	---	---	---	---	---	---	---	--	---	--	-	--	--	- -	- -
Indianapolis	793	37.1	21.0	86.0	64.3	52.1	7	97	-18	1113	5699	4.62	2.28	39.25	12.69	.17	3.90	4.6	20.0	12.5	80	68	71	90	62	64	11.7	7.7	90	41	72	94	99	172	121	7	46	21	15	124	11
South Bend	773	33.0	18.1	84.5	62.6	49.1	2	97	-12	1221	6439	3.62	1.88	35.70	9.75	.02	3.33	14.3	61.0	15.0	80	72	73	80	53	55	11.9	8.4	- -	---	--	75	105	185	138	21	43	24	20	131	4
IOWA							93	118	-47							.00	12.99																								
Burlington	703	32.7	16.1	87.6	65.6	51.2	68	111	-27	1259	6114	5.01	1.39	34.60	15.10	.06	6.28	7.2	26.1	13.0	81	69	74	85	57	60	11.2	8.0	73	53	77	104	103	158	104	10	53	18	33	128	11
Des Moines	938	28.5	11.3	87.3	65.2	49.2	3	100	-22	1398	6808	4.71	1.10	30.37	14.19	.03	5.50	8.7	33.6	19.8	81	72	74	86	61	60	11.9	9.2	76	50	70	101	97	167	104	11	49	18	17	140	22
Dubuque	1056	27.3	11.1	83.7	61.5	46.6	14	99	-26	1420	7376	4.22	1.40	35.71	15.46	T	6.28	9.0	43.0	15.5	81	70	76	85	58	62	---	---	--	---	--	93	99	173	110	14	45	28	8	154	19
Sioux City	1095	27.9	9.5	89.5	65.2	49.1	6	101	-26	1435	6951	4.33	.74	24.77	9.69	T	4.28	6.2	32.4	11.4	78	68	71	88	59	56	11.0	8.9	91	59	75	108	105	152	99	11	47	19	17	150	27
Waterloo	868	26.8	8.9	85.7	61.8	47.2	6	98	-31	1460	7320	4.83	.92	31.48	11.38	T	4.33	7.0	31.6	12.2	81	71	76	89	62	63	10.6	8.2	--	---	---	94	108	163	91	10	41	24	14	156	29

See reference notes at end of table.

NORMALS, MEANS AND EXTREMES

State and Station	Elevation ground (feet)	Temperature (°F)									Normal degree days (1931-1960)		Precipitation (inches)									Relative humidity (percent)						Wind Speed (m p h)			Sunshine (percent of possible)		Annual mean number of days									
		NORMAL (1931-1960)					Extremes					NORMAL (1931-1960)			Extremes			Snow, sleet			January			July			Mean hourly		Fastest mile	January	July	Sunrise to sunset			Precipitation .01 inch or more	Snow, sleet 1.0 inch or more	Thunderstorms	Heavy fog	Temperature		
		January		July														Mean total		Extreme																			Max	Min	
		Daily maximum	Daily minimum	Daily maximum	Daily minimum	Annual	Length yrs	Record highest	Record lowest	January	Seasonal	Wettest month	Driest month	Annual	Wettest month	Driest month	Maximum in 24 hours	January	Seasonal	Maximum in 24 hours	7:00 am EST	1:00 pm EST	7:00 pm EST	7:00 am EST	1:00 pm EST	7:00 pm EST	January	July				Clear	Partly cloudy	Cloudy					90 and above	32 and below	Zero and below
KANSAS							79	121	-40							0.00	12.59																								
Concordia (U)(1961)	1375	37.6	18.6	91.2	68.7	54.5	77	116	-25	1144	5323	4.23	0.59	25.40	13.74	T	6.46	4.5	21.4	17.2	78	63	68	67	47	48	7.7	7.0	65	60	78	142	126	97	86	7	45	10	48	118	6
Concordia	1470	37.3	17.6	92.1	68.4	54.1	4	108	-13	1163	5479	4.20	.70	25.39	8.51	.03	3.01	3.4	17.4	13.2	78	61	62	79	51	47	13.1	11.9	63	61	76	136	95	134	90	5	69	20	54	128	9
Dodge City	2582	42.4	19.7	92.8	67.5	55.4	2	107	-6	1051	4986	3.03	.47	19.25	9.13	T	4.17	4.2	18.6	9.3	71	49	48	76	44	38	14.2	13.5	78	69	77	142	104	119	77	6	55	24	70	124	2
Goodland	3645	40.9	13.9	91.8	61.3	50.8	45	111	-26	1166	6140	2.67	.39	16.50	8.09	.00	2.95	5.5	32.7	15.2	76	53	60	78	45	41	12.3	12.0	--	--	--	144	125	96	76	11	52	29	58	157	8
Topeka	876	38.5	19.0	91.6	68.1	54.9	17	109	-21	1122	5182	4.51	1.02	32.36	12.02	T	4.66	5.8	21.0	9.3	78	64	67	87	57	56	11.0	9.7	81	54	66	115	99	151	95	7	60	14	51	127	5
Wichita	1321	41.6	22.3	92.4	69.4	57.1	13	113	-12	1023	4620	4.21	.81	28.41	10.46	T	4.98	4.7	15.1	13.0	80	63	65	80	50	46	12.9	11.4	66	61	75	127	99	139	83	5	58	17	66	111	2
KENTUCKY							77	114	-34							.00	10.40																								
Lexington	966	42.9	26.1	88.2	66.5	55.6	2	98	-10	946	4683	4.94	2.28	44.73	16.65	.24	5.88	5.3	14.3	9.5	76	65	67	83	57	61	12.4	7.7	--	--	--	102	105	158	128	5	49	18	25	103	3
Louisville(U)(1955)	457	43.2	27.9	87.9	69.3	57.3	f	f	f	911	4279	4.67	2.48	41.60	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f
Louisville	477	43.5	26.5	88.5	66.6	55.7	5	101	-20	930	4660	4.59	2.25	41.32	14.91	.23	6.97	5.4	16.3	9.5	79	65	65	90	60	61	9.7	6.5	61	39	67	100	103	162	121	5	46	10	26	99	3
LOUISIANA							75	114	-16							.00	22.00																								
Alexandria	92	60.7	39.9	91.8	72.6	66.4	6	104	5	471	1921	5.73	3.13	56.69	12.06	.29	6.18	.3	.4	7.3	87	63	70	96	62	70	6.6	4.5	--	--	--	110	111	144	100	*	71	37	79	49	0
Baton Rouge	64	63.5	42.3	92.0	73.4	68.1	7	102	10	409	1560	6.27	2.45	54.46	13.23	.09	8.38	T	.1	1.0	85	65	67	92	63	71	9.8	6.2	--	--	--	99	121	145	104	*	73	37	86	27	0
Lake Charles	9	62.3	45.0	90.5	74.0	68.6	2	103	15	381	1459	7.29	3.06	56.04	17.36	T	14.10	T	T	T	84	68	74	95	60	69	11.9	6.8	--	--	--	94	130	141	83	0	66	52	82	20	0
New Orleans(U)(1961)	9	63.5	48.3	90.3	75.8	70.4	47	102	17	341	1175	7.09	3.66	63.54	25.11	T	14.01	T	.1	1.3	†85	†67	†73	†84	†63	†71	7.5	5.6	98	49	61	110	135	120	119	*	74	15	68	4	0
New Orleans(Audubon)	6	64.8	46.2	91.4	73.7	69.5	2	97	17	344	1254	8.12	3.15	62.96	10.15	.00	4.03	.0	2.3	4.5	80	68	72	96	72	80	5.4	3.2	26	37	47	99	129	137	115	1	79	18	84	14	0
New Orleans(Int'l.AP)	3	64.4	44.8	90.6	72.6	68.6	19	100	14	363	1385	6.72	2.84	53.90	19.09	.00	9.86	T	.2	2.7	87	66	73	91	66	74	9.8	6.5	--	--	--	111	126	128	112	*	72	32	70	10	0
Shreveport	252	56.7	38.3	94.2	73.2	66.1	13	107	3	552	2184	4.94	2.28	46.28	12.39	.00	7.17	.5	1.5	4.0	83	62	64	90	55	56	10.7	8.4	--	53	76	126	97	142	94	1	55	20	95	32	0
MAINE							78	105	-48							.00	7.72																								
Caribou	624	19.8	1.1	75.1	53.9	38.4	26	96	-41	1690	9767	4.07	2.02	36.31	8.45	.12	6.23	22.1	107.2	18.2	74	68	73	83	58	71	12.4	9.8	--	--	--	58	101	206	161	30	20	27	2	191	43
Portland	47	31.8	11.7	79.5	56.7	45.0	23	100	-39	1339	7511	4.37	2.42	42.85	12.27	.26	7.71	18.9	71.0	21.0	79	64	73	80	59	75	9.5	7.7	76	55	67	111	98	156	126	18	19	53	6	162	15
MARYLAND							70	109	-40							.00	14.75																								
Baltimore (U)(1964)	14	44.1	30.4	87.4	70.7	57.6	94	107	-7	859	4111	4.60	2.98	44.21	17.69	.05	7.82	6.1	22.7	24.5	72	58	66	71	52	65	10.3	8.8	66	48	65	121	123	121	122	6	32	15	26	71	*
Baltimore (Int'l.AP)	148	44.2	25.3	87.2	66.4	55.2	15	102	-7	936	4654	5.19	2.89	43.05	18.35	T	7.82	5.6	23.3	15.5	74	58	65	81	53	65	10.5	8.9	80	52	67	109	113	143	112	9	28	31	31	102	1
Frederick (1961)	294	41.4	24.0	87.9	65.4	54.7	12	102	-11	1001	4854	4.03	2.58	40.23	11.26	.15	5.56	5.2	22.0	16.0	--	64	--	--	57	--	---	---	--	--	--	---	---	---	123	8	--	9	28	119	1
MASSACHUSETTS							78	106	-34							.00	11.14																								
Blue Hill Obs.	629	34.4	19.5	80.2	61.6	48.7	80	101	-21	1178	6368	4.54	3.27	47.50	18.78	.06	9.93	15.6	59.7	27.2	77	62	69	81	57	75	17.4	13.0	121	44	57	---	---	---	136	16	--	---	5	132	4
Boston	15	36.8	23.0	81.9	65.4	51.4	12	100	-12	1088	5634	4.22	2.88	42.77	17.09	.35	8.40	12.7	40.9	19.4	69	58	63	72	54	65	14.7	11.0	65	52	65	100	107	158	129	11	20	24	14	96	1
Nantucket	43	39.2	26.8	74.3	61.7	49.5	18	95	-3	992	5891	4.54	2.71	43.66	12.92	.01	4.48	9.7	35.6	20.1	80	72	76	86	74	89	14.7	11.3	73	41	62	87	93	185	125	8	21	98	*	94	*
Pittsfield	1170	30.5	13.1	79.2	56.4	44.9	27	95	-25	1339	7578	4.89	2.51	44.42	10.32	.42	4.25	18.6	75.7	14.5	--	--	--	--	--	--	---	---	--	--	--	57	127	181	152	23	28	45	3	162	14
Worcester	986	31.2	16.8	79.0	60.5	46.8	10	94	-19	1271	6969	4.26	2.92	45.41	8.56	.83	4.79	16.6	76.7	24.0	73	60	67	74	56	67	13.4	9.2	--	--	--	96	107	162	129	19	21	84	2	148	7
MICHIGAN							79	112	-51							.00	9.91																								
Alpena (U) (1959)	587	28.1	14.2	76.8	57.9	43.5	45	104	-28	1358	8073	3.20	1.45	26.63	7.43	.16	4.40	16.0	64.4	16.7	80	70	76	77	61	68	11.7	9.2	61	29	70	82	119	164	144	19	29	20	3	155	10
Alpena	689	28.9	10.4	80.4	51.4	42.1	7	97	-28	1404	8506	3.61	1.61	29.92	5.99	.16	2.54	18.6	73.2	11.5	78	68	73	83	51	59	7.6	6.4	43	44	73	73	105	187	143	22	32	19	5	187	30
Detroit (City AP)	619	33.0	20.7	83.9	64.8	50.1	32	105	-16	1181	6232	3.53	2.05	30.95	8.05	.23	3.72	7.9	31.8	10.0	80	70	75	75	51	55	11.5	8.2	77	32	70	80	108	177	133	11	33	11	15	125	2
Detroit (Metro. AP)	633	33.9	19.1	84.7	61.1	49.7	7	97	-13	1194	6293	3.54	1.92	30.80	7.70	.27	3.71	7.6	36.0	10.3	78	69	73	82	50	56	10.8	8.2	--	--	--	76	108	181	131	13	35	27	13	143	7
Detroit (Willow Run)	711	33.4	19.8	86.0	62.4	50.0	3	99	-13	1190	6258	3.48	1.94	30.67	8.71	.25	4.78	7.5	32.4	8.7	80	71	74	84	49	52	11.7	8.7	--	--	--	78	108	179	121	11	34	29	18	139	8
Escanaba (U) (1961)	594	25.0	10.0	75.3	58.4	41.9	52	100	-31	1473	8657	3.22	1.37	28.08	9.93	.07	5.05	13.5	55.7	14.5	78	70	74	80	65	69	10.2	9.0	68	41	66	102	108	155	129	18	33	19	*	163	20
Flint	770	30.0	14.2	82.8	57.3	46.0	2	97	-11	1330	7377	3.39	1.70	30.14	8.68	.07	6.04	10.0	40.2	13.4	74	68	71	81	51	54	11.9	8.1	--	--	--	69	106	190	130	13	33	20	11	142	6
Grand Rapids(U)(1956)	638	31.8	19.7	84.0	63.2	49.3	f	f	f	1215	6474	3.47	1.73	31.35	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f
Grand Rapids	784	31.3	16.7	84.5	60.0	47.6	2	100	-13	1271	6998	3.46	1.75	31.19	6.62	.60	2.65	21.4	84.2	12.1	85	75	79	83	53	53	12.5	8.4	58	36	67	69	103	193	139	27	40	28	14	148	5
Lansing	841	31.1	17.4	83.4	59.9	47.6	2	100	-17	1262	6909	3.73	1.95	31.18	7.63	.35	4.35	9.3	44.7	11.0	84	76	80	85	52	56	12.8	9.3	63	32	72	83	104	178	137	14	33	23	18	153	9
Marquette (U)	677	25.7	13.2	75.7	57.6	42.6	29	102	-21	1411	8393	3.46	1.65	31.61	10.20	.21	4.65	19.0	102.5	16.1	75	68	72	76	63	66	8.9	7.1	59	33	66	61	104	200	156	30	28	17	5	160	11
Muskegon	627	32.3	19.7	81.9	60.6	48.2	6	99	-12	1209	6696	3.06	1.80	30.07	8.54	.19	3.61	26.0	86.4	20.1	83	77	79	84	58	58	12.0	8.4	--	--	--	81	89	195	139	29	37	24	4	137	5
Sault Ste. Marie	721	23.1	8.4	75.6	53.5	40.6	25	98	-27	1525	9048	3.81	1.50	31.22	7.12	.16	3.58	22.6	103.1	14.3	84	77	82	88	61	67	10.2	8.4	--	33	63	65	94	206	162	34	30	47	2	177	27
Houghtom Lake	1149	----	----	----	----	44.4	47	107	-48	1434	7772	3.12	1.29	28.34	8.38	.18	5.18	12.9	53.9	14.5	--	--	--	--	--	--	---	---	--	--	--	---	---	---	---	--	--	---	5	167	22
MINNESOTA							79	114	-59							.00	10.75																								
Duluth (U) (1959)	1162	18.7	1.9	75.8	55.8	39.2	84	106	-41	1696	9574	3.72	1.00	26.67	11.52	.07	5.35	11.1	56.0	23.0	78	74	74	87	61	66	12.3	10.5	75	46	67	110	119	136	126	16	31	37	2	173	41
Duluth	1428	17.9	-.6	77.1	53.9	37.9	5	95	-38	1745	10000	4.27	.96	28.97	8.48	.13	4.05	14.6	75.1	25.4	74	64	65	85	59	60	12.5	10.3	75	51	67	76	105	184	133	22	35	53	2	183	53
International Falls	1179	14.2	-8.1	78.4	52.8	36.2	26	98	-42	1919	10606	3.87	.71	24.69	11.26	.10	4.82	9.5	57.8	13.9	73	68	70	88	57	58	9.2	7.5	--	--	--	82	105	178	135	18	31	14	4	198	67
Minneapolis	834	22.4	2.3	83.9	60.7	43.7	6	99	-32	1631	8382	4.00	.70	24.78	8.03	T	4.12	6.3	42.2	16.2	76	68	69	86	57	57	10.5	9.3	92	51	69	102	102	161	112	13	36	11	14	160	35
Rochester	1297	23.0	4.2	84.0	60.5	44.0	6	97	-31	1593	8295	4.46	.80	28.46	6.26	.04	3.28	6.6	45.0	8.4	78	73	75	86	61	62	13.5	9.6	--	--	--	92	99	174	117	13	48	39	7	163	34
St. Cloud	1034	20.4	-.2	83.1	58.9	42.0	26	103	-40	1702	8879	4.49	.72	25.92	9.34	.01	4.62	6.5	42.4	14.5	77	69	72	87	55	57	8.2	7.0	--	--	--	97	105	163	108	13	36	20	11	178	44
MISSISSIPPI							77	115	-16							.00	12.35																								
Jackson	310	58.3	37.4	92.9	71.7	65.5	2	99	17	547	2203	5.74	2.04	50.82	11.88	.00	6.97	.8	.8	1.8	82	59	65	91	58	66	9.2	7.0	43	59	62	107	106	152	105	1	65	26	91	46	0
Meridian	290	59.4	36.8	92.6	70.3	64.8	18	104	0	543	2289	6.32	2.22	53.13	16.82	T	6.95	.6	1.8	15.0	89	64	71	93	57	69	7.4	5.4	--	--	--	121	110	134	103	*	58	21	92	50	*
Vicksburg (U)	234	57.4	40.5	90.4	73.2	65.9	28	101	2	512	2041	5.73	2.04	49.50	16.58	T	9.97	1.0	1.7	10.0	83	62	70	93	62	71	9.3	6.7	56	45	67	111	114	140	104	1	62	12	66	22	0
MISSOURI							78	118	-40							.00	18.18																								
Columbia	778	39.3	21.3	89.7	67.6	55.0	27	113	-18	1076	5046	4.70	1.71	36.96	13.30	.09	4.05	4.6	20.4	10.3	79	65	69	85	55	56	11.1	8.0	63	50	73	115	101	149	107	7	55	15	42	109	4
Kansas City	742	39.9	23.4	91.9	71.0	56.8	6	104	-9	1032	4711	4.57	1.24	34.07	11.94	.04	5.96	6.0	21.0	12.8	72	59	59	79	59	55	9.9	8.9	72	52	76	118	105	142	99	6	50	12	42	98	4
St. Joseph	811	37.2	17.1	91.0	67.8	53.8	2	101	-13	1172	5484	5.93	1.09	34.18	13.73	.03	7.12	6.0	21.2	11.3	83	68	71	86	66	64	11.6	8.4	--	46	62	127	97	141	96	6	59	19	33	126	4
St. Louis (U)(1958)	465	41.0	25.6	89.6	71.6	57.3	23	112	-12	983	4469	4.10	1.88	37.86	20.45	.03	8.78	3.8	14.6	12.4	b77	b65	b68	b73	b50	b55	12.6	9.5	82	45	72	128	106	131	110	6	51	8	46	83	2
St. Louis	535	40.2	23.5	89.2	66.9	55.3	3	105	-11	1026	4900	4.29	1.97	35.31	7.97	.25	3.29	4.5	17.8	11.2	77	60	65	85	60	57	10.2	7.5	60	51	70	105	103	157	103	7	42	9	34	107	6
Springfield	1268	43.4	23.8	90.3	67.2	56.5	6	102	-10	973	4561	5.28	1.96	41.08	18.75	.08	6.85	2.9	12.7	12.5	76	57	62	90	62	61	12.9	9.8	66	49	70	114	101	150	106	5	59	19	38	104	3

NORMALS, MEANS AND EXTREMES

State and Station	Elevation ground (feet)	Temperature (°F) NORMAL (1931-1960) January Daily maximum	Temperature NORMAL January Daily minimum	Temperature NORMAL July Daily maximum	Temperature NORMAL July Daily minimum	Temperature NORMAL Annual	Temperature Extremes Length yrs	Temperature Extremes Record highest	Temperature Extremes Record lowest	Normal degree days (1931-1960) January	Normal degree days Seasonal	Precipitation (inches) NORMAL (1931-1960) Wettest month	Precipitation NORMAL Driest month	Precipitation NORMAL Annual	Precipitation Extremes Wettest month	Precipitation Extremes Driest month	Precipitation Extremes Maximum in 24 hours	Snow sleet Mean total January	Snow sleet Mean total Seasonal	Snow sleet Extreme Maximum in 24 hours	Relative humidity (percent) January 7 00 a m EST	Relative humidity January 1 00 p m EST	Relative humidity January 7 00 p m EST	Relative humidity July 7 00 a m EST	Relative humidity July 1 00 p m EST	Relative humidity July 7 00 p m EST	Wind Speed (m p h) Mean hourly January	Wind Speed Mean hourly July	Wind Speed Fastest mile	Sunshine (percent of possible) January	Sunshine July	Annual mean number of days Sunrise to sunset Clear	Sunrise to sunset Partly cloudy	Sunrise to sunset Cloudy	Precipitation .01 inch or more	Snow sleet hail 1.0 inch or more	Thunderstorms	Heavy fog	Temperature Max 90 and above	Temperature Min 32 and below	Temperature Min Zero and below
MONTANA							99	117	-70							0.00	10.10																								
Billings	3567	33.2	13.1	88.5	60.8	47.5	7	105	-26	1296	7049	2.55	0.54	13.23	7.64	T	2.83	8.2	54.8	23.7	65	60	55	63	39	30	13.0	9.8	73	52	78	93	119	153	93	19	30	18	30	146	18
Butte (1961)	5530	28.0	.4	79.8	45.0	38.3	29	100	-52	1575	9760	2.28	.55	12.69	5.40	T	2.02	7.1	51.0	13.0	--	--	--	--	--	--	6.9	8.0	--	--	--	79	107	179	105	19	41	6	4	228	43
Glasgow	2284	19.6	-.1	85.3	56.1	41.4	8	104	-37	1711	8996	2.98	.41	12.27	5.36	T	3.98	4.6	22.9	5.0	83	78	80	70	39	30	---	---	--	--	--	87	105	173	83	8	28	11	23	179	41
Great Falls	3662	31.6	12.5	84.7	54.1	44.7	5	106	-36	1349	7750	2.90	.60	14.07	8.13	T	3.20	8.6	53.9	11.0	67	62	62	68	38	30	16.8	10.7	82	52	80	86	107	172	98	19	28	13	15	144	30
Havre (U) (1961)	2852	26.3	6.1	85.9	56.6	43.6	57	107	-57	1513	8213	2.98	.39	12.31	7.09	T	2.94	7.3	37.4	22.9	82	71	--	74	38	--	8.8	7.2	70	49	78	121	124	120	90	13	25	5	22	172	38
Havre	2582	24.2	3.6	85.3	54.6	42.1	5	111	-35	1584	8700	2.73	.43	11.89	4.72	.05	1.96	4.6	26.2	5.5	73	67	--	74	39	--	10.8	8.3	71	54	82	94	97	174	87	10	24	5	24	180	41
Helena	3828	28.8	8.4	84.4	52.3	43.4	2	95	-38	1438	8129	2.23	.43	10.85	4.74	.02	2.06	7.9	47.9	21.5	73	67	68	72	41	31	6.8	8.0	73	51	79	83	109	173	97	14	38	9	12	190	16
Kalispell	2965	27.6	12.0	83.7	47.6	42.8	6	105	-29	1401	8191	2.21	.96	15.42	4.44	T	1.99	19.0	66.9	15.4	92	84	88	84	42	37	6.2	6.0	--	--	--	75	81	209	132	22	24	33	15	196	18
Miles City	2629	27.4	5.6	90.2	60.4	45.8	28	110	-37	1504	7723	2.71	.37	12.17	9.78	T	2.71	6.2	29.6	10.5	74	69	67	70	38	31	9.2	9.7	--	--	--	101	108	156	89	13	30	9	38	172	32
Missoula	3190	28.0	10.3	85.0	49.0	43.2	6	105	-30	1420	8125	1.91	.72	12.83	4.19	.02	1.82	12.7	47.9	11.2	85	83	78	82	47	33	5.0	6.6	72	30	80	74	83	208	124	16	26	28	17	197	13
NEBRASKA							90	118	-47							.00	13.15																								
Grand Island	1841	34.1	11.0	90.7	63.7	50.1	5	106	-28	1314	6530	3.85	.56	21.85	9.60	.00	5.41	5.9	28.3	9.1	78	60	63	86	54	51	11.6	11.1	--	--	--	123	102	140	85	9	50	16	37	150	20
Lincoln (U)	1150	34.0	16.2	92.3	67.9	52.8	5	107	-15	1237	5864	4.50	.90	27.43	11.40	.05	5.38	6.5	29.9	19.0	--	--	--	--	--	--	9.8	9.4	64	61	75	113	107	145	98	9	49	8	41	131	15
Norfolk	1544	30.1	8.6	89.2	64.7	48.9	20	113	-26	1414	6979	4.26	.73	23.95	9.11	T	3.46	5.5	29.1	8.3	77	63	68	84	54	51	---	---	--	--	--	118	104	143	88	10	50	11	35	157	21
North Platte	2775	37.3	10.7	90.0	62.2	49.2	12	112	-23	1271	6684	3.25	.40	18.27	8.01	T	3.80	4.7	32.2	9.7	80	62	65	85	49	44	9.7	10.2	72	62	75	123	108	134	81	10	49	17	42	174	15
Omaha	977	31.7	12.9	89.7	67.3	51.5	2	107	-16	1324	6218	4.53	.80	27.56	13.75	T	6.47	8.3	32.9	18.3	76	63	63	82	60	60	11.4	9.4	73	55	76	115	106	144	98	10	50	15	33	135	12
Scottsbluff	3957	38.7	11.9	89.2	60.1	48.7	21	107	-32	1231	6673	3.10	.29	14.38	8.33	T	3.74	6.0	37.0	12.1	72	55	58	78	45	39	10.6	9.7	--	--	--	121	111	133	84	12	45	10	39	177	15
Valentine	2587	33.3	6.7	90.6	60.2	46.9	11	109	-29	1395	7425	3.11	.34	17.30	8.96	T	3.19	3.5	22.4	8.2	81	68	66	84	50	42	10.1	10.1	72	69	77	122	105	138	77	8	45	5	39	177	26
NEVADA							77	122	-50							.00	7.13																								
Elko	5050	35.1	10.0	90.8	48.3	45.4	33	104	-43	1314	7433	1.16	.30	9.05	3.35	.00	1.62	10.7	37.9	16.7	78	72	63	54	24	18	5.4	6.3	--	--	--	135	98	132	77	14	22	6	43	213	18
Ely	6253	36.8	8.7	86.8	48.1	44.3	27	99	-27	1308	7733	.95	.49	8.33	3.53	.00	1.50	8.7	46.0	13.1	72	60	55	48	22	20	11.0	10.7	74	64	81	137	104	124	70	15	31	2	15	217	19
Las Vegas	2162	54.2	32.0	103.5	75.8	65.7	6	113	8	688	2709	.53	.04	3.90	2.59	.00	2.59	1.2	1.5	5.0	48	34	24	25	16	11	6.8	10.2	54	78	86	220	79	66	23	1	14	1	133	43	0
Reno	4404	44.6	16.2	89.4	45.9	48.4	2	101	-4	1073	6332	1.19	.17	7.15	5.25	.00	2.37	6.3	24.9	16.9	81	71	59	66	31	22	6.0	6.5	59	66	92	167	92	106	48	9	13	9	37	186	2
Winnemucca	4299	39.7	14.7	92.0	49.9	47.4	16	105	-24	1172	6761	1.05	.15	8.63	2.86	.00	1.79	6.8	24.3	9.9	78	67	59	45	21	14	7.7	8.2	66	45	85	143	85	137	67	9	15	4	50	194	8
NEW HAMPSHIRE							89	106	-46							.00	8.00																								
Concord	342	31.7	10.6	82.8	56.4	45.6	23	100	-37	1358	7383	3.75	2.48	38.80	10.10	.41	4.47	17.8	60.5	19.0	78	59	70	80	50	67	7.3	5.5	72	49	61	99	107	159	124	17	22	53	13	169	18
Mt. Washington Obs.	6262	14.7	-2.2	54.9	43.3	27.0	33	71	-47	1820	13817	7.00	5.21	74.09	18.23	.75	7.03	29.6	199.2	32.0	82	83	82	91	87	91	46.5	25.1	231	34	31	53	77	235	204	59	16	308	0	243	64
NEW JERSEY							81	110	-34							.00	14.81																								
Atlantic City(U)(1958)	8	42.4	29.1	79.3	67.9	54.1	85	104	-9	905	4741	4.72	2.98	41.77	14.87	.01	9.21	4.2	14.6	18.0	79	68	74	81	72	82	16.2	13.3	91	51	67	118	122	125	122	5	23	21	3	75	*
Atlantic City(NAF Exp.)	64	42.9	26.6	83.8	66.3	54.1	20	102	-8	936	4812	4.90	2.83	42.36	13.09	.10	6.46	5.1	15.5	14.4	77	58	69	83	55	68	12.8	9.5	--	57	63	105	106	154	112	4	23	44	13	93	*
Newark	11	40.5	26.0	87.1	67.5	54.6	24	105	-7	983	4859	4.43	2.80	42.38	11.84	.21	4.17	7.5	29.6	26.0	72	59	64	74	51	62	11.2	8.8	--	--	--	100	112	153	122	8	26	23	25	94	*
Trenton (U)	56	40.0	26.2	85.2	66.7	53.9	33	106	-14	989	4980	4.77	2.59	41.28	14.10	.05	4.85	5.6	22.9	16.6	--	--	--	--	--	--	9.8	7.8	64	50	67	100	116	149	122	7	33	--	18	90	*
NEW MEXICO							74	116	-50							.00	11.28																								
Albuquerque	5311	46.4	23.5	91.2	65.8	56.6	6	103	-7	930	4348	1.33	.38	8.13	3.25	.00	1.92	2.0	10.1	14.2	66	49	37	61	35	27	7.9	9.0	90	71	76	177	110	78	58	4	44	5	62	116	1
Clayton	4969	46.2	20.2	88.4	60.6	53.1	21	102	-21	986	5158	2.74	.33	14.51	7.77	.00	4.67	3.4	18.8	12.7	63	42	48	76	41	42	---	---	--	--	--	170	94	101	67	6	54	11	40	142	3
Raton	6379	45.3	12.6	86.6	52.9	48.9	21	98	-31	1116	6228	2.63	.26	14.75	11.93	.00	5.60	4.8	24.7	10.1	--	45	--	--	38	--	---	---	--	--	--	136	130	99	78	9	75	8	17	183	9
Roswell	3617	55.1	20.6	95.4	61.7	58.5	6	107	-24	840	3793	1.82	.34	11.62	5.64	.00	3.37	3.1	10.2	15.3	70	45	39	72	39	33	8.5	9.5	75	85	78	183	100	82	49	4	41	9	110	127	3
Silver City	5373	52.6	26.4	90.3	63.9	58.2	5	102	-9	791	3705	2.40	.28	10.76	4.47	.00	2.08	2.1	7.3	6.0	--	43	39	--	36	36	---	---	--	--	--	195	100	70	61	3	55	1	46	108	*
NEW YORK							76	108	-52							.00	11.17																								
Albany	275	31.0	14.4	83.7	60.5	47.6	18	100	-26	1311	6875	3.58	2.20	35.08	8.96	.20	4.08	16.4	61.0	17.9	78	65	73	77	50	62	9.7	7.3	71	45	64	76	112	177	131	15	28	23	13	146	12
Binghampton (U)	858	34.2	18.9	83.1	60.4	48.8	75	103	-28	1190	6451	3.81	2.38	36.68	9.59	.16	4.55	12.7	51.8	21.0	--	--	--	--	--	--	---	---	--	--	--	---	---	---	151	15	--	--	9	133	7
Binghampton	1590	30.1	17.4	78.3	58.5	45.8	14	96	-20	1277	7286	3.85	2.18	36.24	9.46	.26	3.88	21.2	88.7	23.0	82	74	76	84	56	65	12.0	8.5	72	35	67	51	102	212	162	25	32	50	3	150	8
Buffalo	705	30.8	18.2	80.1	59.4	46.7	5	94	-20	1256	7062	3.60	2.54	35.65	9.13	.11	3.88	25.1	97.5	19.9	74	71	74	79	55	63	14.8	10.9	91	34	70	61	108	196	166	29	29	21	3	140	4
New York (U) (1960)	10	39.9	25.8	82.3	66.9	53.4	90	102	-14	995	5050	4.34	3.04	42.03	14.51	.11	9.40	7.3	30.1	25.8	72	a62	66	76	a58	67	16.4	14.5	113	51	65	104	131	130	124	8	30	20	7	91	*
New York Central Pk.	132	39.5	26.9	85.3	68.2	54.5	97	106	-15	986	4871	4.44	2.84	42.37	16.85	.02	11.17	7.8	29.7	26.4	68	60	61	76	56	63	11.0	7.8	70	50	66	107	124	134	121	8	16	--	16	81	1
New York(LaGuardia)	11	39.6	27.5	84.8	68.8	54.7	4	97	-2	973	4811	5.08	3.09	44.22	16.05	.03	7.11	7.1	29.9	22.8	65	59	61	72	51	60	14.7	10.5	70	--	--	96	116	153	120	8	23	14	15	73	*
New York(J.F.Kendy.AP)	13	38.0	25.6	84.7	67.1	53.2	5	102	-2	1029	5219	4.97	2.93	43.93	17.41	T	6.59	8.7	29.0	18.0	69	58	66	73	56	70	13.4	10.9	--	--	--	100	120	145	120	9	26	32	9	93	*
Rochester	547	32.6	17.8	82.5	60.7	48.0	2	98	-6	1234	6748	3.01	2.38	31.50	9.70	.22	3.13	19.5	81.4	18.7	75	67	72	76	45	53	11.6	7.9	73	36	71	65	113	187	153	25	30	13	13	138	3
Syracuse	410	31.5	16.5	82.4	62.0	48.0	2	97	-16	1271	6756	3.60	2.84	37.60	8.41	.21	4.27	25.4	107.1	21.4	78	66	75	78	51	58	10.7	8.5	63	36	68	69	103	193	168	32	29	9	13	143	6
NORTH CAROLINA							79	109	-23							.00	22.22																								
Asheville (U)(1964)	2203	49.0	30.4	85.0	63.7	56.5	34	99	-7	784	4042	4.31	2.22	37.88	13.75	T	6.78	2.5	12.2	15.8	81	59	66	89	57	70	9.4	5.6	52	48	60	105	124	136	128	3	50	47	13	84	*
Cape Hatteras (R)	7	53.2	39.9	83.8	72.2	62.2	8	94	14	580	2612	6.42	2.99	54.47	14.63	.45	8.11	.5	2.3	7.0	80	67	77	85	70	83	12.1	10.3	72	62	70	106	102	157	122	1	45	17	3	32	0
Charlotte	736	51.4	34.0	88.8	69.5	60.8	5	100	2	691	3191	4.88	2.53	43.38	10.89	T	4.84	2.1	4.5	10.2	78	53	59	91	58	69	8.2	6.7	59	55	68	113	107	145	110	1	44	24	40	72	0
Greensboro	897	49.6	29.8	87.7	66.9	58.2	2	98	7	784	3805	4.79	2.68	42.16	13.26	.13	7.49	3.0	8.1	14.3	80	54	62	91	67	77	8.3	6.7	63	51	63	114	108	143	118	2	48	31	23	84	0
Raleigh	434	51.9	31.3	88.1	67.6	59.5	19	105	4	725	3393	5.49	2.71	43.58	12.94	.25	5.20	2.9	7.0	9.1	81	56	68	87	56	72	8.3	6.6	--	58	63	116	104	145	115	2	47	35	46	75	0
Wilmington	28	58.4	37.3	89.0	70.9	63.8	2	97	19	546	2347	7.68	2.85	51.29	15.51	.17	8.24	.3	1.5	5.3	79	52	70	83	65	76	10.3	9.1	88	59	63	120	111	134	116	1	46	21	30	38	0
Winston-Salem(1964)	963	49.8	31.5	88.2	67.8	59.1	10	100	1	753	3595	4.63	2.78	44.13	10.86	.12	3.60	3.2	9.2	10.9	72	52	59	84	57	67	9.3	7.4	--	--	--	121	102	142	115	3	42	32	34	76	0
NORTH DAKOTA							74	121	-60							.00	7.70																								
Bismarck	1647	19.6	.1	85.7	57.7	42.2	6	108	-38	1708	8851	3.40	.36	15.15	8.29	T	3.25	6.7	36.2	13.5	70	64	66	81	49	44	10.2	9.8	72	55	76	97	107	161	96	12	35	12	23	185	49
Devils Lake(U)(1961)	1471	14.2	-4.7	81.7	56.9	38.7	58	112	-46	1866	9940	3.18	.40	17.61	8.55	T	4.82	6.2	35.4	13.4	76	72	76	86	53	52	9.7	8.4	57	53	71	112	109	144	101	11	30	9	10	189	60
Fargo	896	17.3	-2.8	83.8	59.0	41.1	6	100	-38	1789	9226	3.04	.51	18.45	8.52	.02	4.72	5.6	32.0	11.2	71	68	70	86	55	54	13.5	11.0	88	51	69	90	111	164	99	10	33	12	16	178	56
Williston (U) (1961)	1877	19.8	.2	83.5	58.2	41.3	46	110	-50	1705	9068	3.59	.46	14.66	7.88	T	3.06	5.5	32.9	10.6	74	67	69	77	45	41	6.8	6.9	60	52	78	122	116	127	89	12	27	7	18	178	43
Williston	1899	19.4	-2.9	85.9	56.7	40.9	4	103	-41	1758	9243	3.31	.48	13.70	7.38	T	5.03	3.1	32.8	5.7	75	68	69	86	49	43	10.3	9.3	70	51	74	91	109	165	91	10	19	9	17	188	57

NORMALS, MEANS AND EXTREMES

State and Station	Elevation ground (feet)	Temperature (°F)								Normal degree days (1931-1960)		Precipitation (inches)						Snow, sleet			Relative humidity (percent)						Wind Speed (m p h)			Sunshine (percent of possible)		Annual mean number of days									
		NORMAL (1931-1960)					Extremes					NORMAL (1931-1960)			Extremes			Mean total		Extreme	January			July			Mean hourly					Sunrise to sunset							Temperature		
		January		July																																			Max	Min	
		Daily maximum	Daily minimum	Daily maximum	Daily minimum	Annual	Length yrs	Record highest	Record lowest	January	Seasonal	Wettest month	Driest month	Annual	Wettest month	Driest month	Maximum in 24 hours	January	Seasonal	Maximum in 24 hours	7 00 a m EST	1 00 p m EST	7 00 p m EST	7 00 a m EST	1 00 p m EST	7 00 p m EST	January	July	Fastest mile	January	July	Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow, sleet 1.0 inch or more	Thunderstorms	Heavy fog	90 and above	32 and below	Zero and below
OHIO							92	113	-39							0.00	8.70																								
Akron	1208	35.6	20.9	83.2	61.9	50.3	2	94	-9	1138	6037	4.26	2.25	36.43	11.43	.20	4.18	9.7	47.5	8.5	78	71	74	82	48	57	11.9	7.6	--	--	--	74	104	187	149	15	40	28	14	135	5
Cincinnati (1961)	869	39.7	23.8	85.9	64.3	53.6	17	---	---	1021	5195	4.04	2.17	39.16	----	----	-----	----	----	----	82	70	74	84	52	60	---	---	--	--	--	108	115	142	---	--	--	--	--	---	--
Cincinnati Abbe Obs.	761	41.3	26.1	87.5	66.3	55.2	50	109	-17	970	4806	4.18	2.24	39.51	13.68	.10	4.77	5.4	19.0	11.0	--	--	--	--	--	--	8.3	5.2	49	42	71	---	---	---	132	7	50	--	29	98	2
Cincinnati(Grt.Cin.AP)	869	40.5	22.7	87.4	63.3	53.4	4	102	-19	1035	5265	3.89	2.26	38.02	12.18	.18	5.21	7.2	23.8	8.3	79	64	68	87	56	60	10.8	7.2	--	--	--	84	98	183	128	8	46	18	24	116	10
Cleveland	777	34.8	20.3	82.8	60.2	49.2	5	98	-19	1159	6351	3.52	2.33	35.35	9.50	.36	3.73	10.2	50.9	15.0	77	70	73	83	56	61	12.5	8.9	74	30	68	73	105	187	153	18	37	14	9	130	7
Columbus	812	37.8	22.0	86.6	62.9	52.0	6	98	-15	1088	5660	4.16	2.11	36.67	9.75	.11	4.81	6.9	27.5	8.7	76	66	69	85	55	58	9.8	6.1	63	39	69	79	108	178	135	9	42	19	18	126	6
Dayton	1002	36.9	22.2	85.3	65.1	52.3	2	100	-12	1097	5622	4.10	2.23	36.04	10.89	.10	4.30	6.7	26.6	10.0	73	66	68	77	52	53	12.1	8.1	78	40	69	82	104	179	128	8	42	22	28	116	4
Mansfield	1295	34.8	19.8	82.6	60.8	49.1	5	91	-20	1169	6403	4.23	2.27	38.16	7.04	.43	2.79	9.3	45.3	8.0	82	74	--	83	55	--	---	---	--	--	--	74	106	185	136	14	39	27	5	135	10
Portsmouth(R)(1955)	670	42.7	23.4	87.7	61.6	54.1	34	107	-25	989	4965	4.26	2.28	38.56	9.92	.51	3.43	8.8	32.9	10.1	b71	b59	b59	b88	b47	b54	7.7	3.4	60	--	--	39	75	142	106	9	63	64	36	113	0
Sandusky (U)(1961)	603	35.7	21.8	83.7	65.5	51.3	34	105	-12	1122	5859	3.73	1.92	33.16	12.51	.19	5.95	6.2	26.9	12.3	--	--	--	--	--	--	10.1	6.9	75	35	75	93	115	157	137	10	37	8	19	111	2
Toledo	676	34.1	18.4	85.1	60.2	49.0	10	98	-17	1200	6494	3.79	1.88	30.50	8.47	.27	2.50	8.8	34.7	9.8	81	70	75	87	53	60	10.6	7.6	72	45	71	78	110	177	130	11	41	20	15	144	8
Youngstown	1178	34.4	20.2	81.7	59.3	48.8	22	100	-18	1169	6417	4.32	2.50	39.27	9.87	.27	4.31	12.4	57.0	20.7	83	73	78	83	53	64	11.8	7.9	--	--	--	72	100	193	161	19	36	29	9	136	5
OKLAHOMA							74	120	-27							.00	19.75																								
Oklahoma City	1280	45.9	28.1	92.8	72.2	60.3	12	107	-4	868	3725	5.19	1.31	30.82	10.78	T	4.82	3.3	8.8	8.4	81	63	62	83	53	48	14.6	12.1	87	59	77	146	93	126	82	3	51	18	70	85	1
Tulsa	650	45.9	26.5	92.9	71.4	59.7	6	110	-3	893	3860	5.26	1.62	37.08	18.00	T	7.54	3.5	9.1	9.0	77	56	55	81	55	51	11.4	9.2	75	52	71	126	104	135	90	4	54	9	78	89	1
OREGON							76	119	-54							.00	31.10																								
Astoria	8	46.5	34.8	68.6	52.5	50.8	12	100	14	753	5186	13.65	1.27	80.44	21.89	.01	4.32	2.1	5.8	7.2	87	84	78	91	75	69	8.9	8.5	--	--	--	50	70	245	199	2	8	43	1	37	0
Burns (U)	4151	35.2	14.3	86.8	52.1	46.7	15	103	-26	1246	6957	1.62	.29	10.96	5.47	.00	2.15	16.6	49.6	10.9	83	76	68	54	34	21	---	---	--	--	--	129	86	150	91	17	14	12	20	184	5
Eugene	359	45.3	32.8	82.2	51.0	52.5	2	99	10	803	4726	6.61	.27	39.56	20.99	T	4.82	4.3	7.0	7.2	93	92	83	91	60	39	8.4	8.2	--	--	--	78	85	202	139	3	5	58	14	41	0
Meacham	4050	32.7	19.3	77.6	49.2	43.5	21	105	-23	1209	7874	4.53	.50	33.87	9.29	.00	3.00	32.8	149.5	22.9	--	80	--	--	40	--	---	---	--	--	--	92	70	203	153	45	16	31	3	169	4
Medford	1298	42.4	28.4	88.3	55.7	52.6	5	109	0	918	5008	3.38	.18	19.78	12.72	.00	3.75	4.0	8.3	7.9	93	90	76	78	47	27	4.2	5.7	--	--	--	117	81	167	102	3	9	47	44	101	*
Pendleton	1482	39.3	25.1	89.3	57.8	52.8	30	113	-22	1017	5127	1.49	.22	12.38	3.23	.00	1.49	8.0	17.2	13.3	82	78	77	54	34	23	8.0	9.8	--	--	--	107	90	168	101	6	11	30	31	85	3
Portland (U) (1964)	30	44.9	35.5	79.2	57.9	54.6	62	107	3	769	4109	7.42	.39	42.37	17.45	.00	5.01	5.1	9.1	16.0	--	--	--	--	--	--	---	---	--	--	--	---	---	---	152	3	--	--	8	21	0
Portland	21	43.7	33.0	78.6	55.7	52.9	25	107	-3	825	4635	6.38	.41	37.18	12.83	T	2.60	4.9	7.8	10.6	86	81	77	84	62	46	10.1	7.4	88	24	68	66	70	229	154	2	7	32	8	46	*
Roseburg (1964)	505	47.2	33.4	84.0	51.8	53.4	11	106	-1	766	4491	5.69	.21	33.11	15.74	T	4.80	3.2	6.5	9.4	--	86	73	--	54	34	3.9	5.9	50	26	79	75	89	201	135	2	5	59	21	56	*
Salem	196	45.5	31.5	81.7	50.4	52.4	3	104	9	822	4754	7.37	.35	41.75	15.40	.00	3.16	3.6	6.5	10.8	89	85	77	91	61	43	8.8	6.6	--	--	--	76	85	204	151	2	6	41	11	65	0
Sexton Summit (R)	3836	39.3	28.9	75.5	51.6	48.0	21	100	-2	958	6254	5.59	.25	33.12	20.03	.00	5.20	24.6	100.0	33.5	--	80	72	--	61	44	12.8	11.8	--	--	--	124	67	174	130	29	6	160	2	111	*
PACIFIC AREA																																									
Canton Island	8	88.4	77.8	89.4	77.7	83.5	19	98	70	0	0	4.35	1.10	29.43	16.85	T	5.21	.0	.0	.0	79	79	65	80	80	65	14.5	13.1	--	--	--	74	149	142	102	0	4	0	159	0	0
Eniwetok	13	84.6	77.8	86.5	79.1	82.3	12	93	70	0	0	9.09	1.02	51.46	24.54	.12	4.04	.0	.0	.0	76	76	68	82	84	75	17.0	11.5	--	--	--	---	---	---	202	0	5	0	11	0	0
Guam (R)	361	83.9	72.4	86.7	72.3	79.3	9	95	54	0	0	13.36	2.64	88.53	22.27	.50	7.50	.0	.0	.0	--	--	--	--	--	--	8.1	4.9	80	52	44	---	---	---	267	0	28	*	5	0	0
Johnston Is.	7	80.7	73.4	85.0	77.1	79.3	10	88	62	0	0	3.89	.84	26.11	15.80	.22	9.51	.0	.0	.0	75	76	67	78	77	68	13.3	15.2	49	70	78	53	198	114	165	0	2	0	0	0	0
Koror (R)	94	86.0	74.6	86.6	75.1	80.9	16	93	69	0	0	15.76	7.13	147.49	34.82	1.65	11.57	.0	.0	.0	91	82	77	92	83	79	7.9	5.3	59	53	50	*	45	320	273	0	40	0	42	0	0
Kwajalein, Marshall Is.	8	82.2	78.0	85.2	77.9	81.1	13	97	69	0	0	12.13	2.15	94.76	30.38	.18	6.68	.0	.0	.0	79	79	70	85	86	78	18.2	10.5	--	--	--	24	95	246	241	0	10	0	25	0	0
Majuro, Marshall Is.	10	84.1	76.3	84.6	75.7	80.4	10	91	69	0	0	15.92	6.98	143.63	24.26	.86	10.01	.0	.0	.0	80	81	75	83	84	77	13.0	8.6	38	64	51	10	69	286	259	0	19	0	*	0	0
Marcus Is.	20	76.0	68.2	87.2	78.0	78.2	2	93	58	0	0	7.19	1.61	42.57	13.51	.10	5.66	.0	.0	.0	73	69	68	79	68	67	14.0	11.7	114	57	85	81	149	135	150	0	5	1	23	0	0
Ponape (R)	123	85.6	75.3	86.6	72.7	80.1	18	96	67	0	0	20.31	9.74	191.92	38.65	2.40	22.48	.0	.0	.0	85	77	78	93	80	80	7.7	3.7	36	49	49	*	59	306	301	0	31	0	33	0	0
Truk, Moen Is.	5	84.9	76.5	86.1	74.8	80.7	15	94	70	0	0	14.12	6.29	137.52	34.89	.84	14.92	.0	.0	.0	83	77	77	91	80	79	7.9	5.6	45	57	47	1	55	309	271	0	22	0	5	0	0
Wake	11	81.5	73.3	86.6	77.4	80.0	18	92	64	0	0	7.08	1.14	36.86	ø17.66	.06	ø15.00	.0	.0	.0	74	75	65	81	82	72	13.1	12.3	--	--	--	116	156	93	179	0	7	0	6	0	0
Yap (R)	62	85.3	75.6	87.6	75.1	81.3	17	97	69	0	0	14.70	4.64	121.50	29.44	1.08	10.45	.0	.0	.0	88	79	77	92	81	78	10.3	5.5	72	54	46	7	47	311	263	0	15	0	49	0	0
PENNSYLVANIA							78	111	-42							.00	34.50																								
Allentown	387	36.7	21.3	85.2	63.0	51.1	22	102	-12	1116	5810	4.82	2.64	44.12	12.10	.09	4.79	8.1	32.3	17.5	78	62	70	82	51	62	11.1	7.3	--	--	--	95	117	153	124	9	33	30	17	129	2
Avoca(W-B Scranton AP)	930	33.6	21.7	81.6	63.2	49.4	10	97	-11	1156	6254	4.79	1.99	38.48	7.78	.03	3.09	11.4	50.0	20.1	75	63	67	82	53	61	9.0	7.5	60	41	59	74	111	180	135	13	32	27	9	137	5
Erie	731	34.0	20.5	80.1	62.0	48.7	6	94	-15	1169	6451	3.67	2.32	37.50	9.87	.58	4.84	18.4	78.9	23.0	78	71	75	75	60	61	12.6	8.8	--	--	--	71	96	198	153	26	39	17	4	124	5
Harrisburg	338	38.9	23.6	87.0	65.3	53.3	27	102	-8	1045	5251	3.90	2.31	37.65	9.07	.04	4.36	9.7	35.1	21.0	72	58	64	78	51	61	8.2	6.2	68	47	69	86	106	173	124	9	34	22	25	107	1
Philadelphia	5	40.3	24.3	85.9	65.2	53.5	6	100	-5	1014	5101	4.63	2.78	42.48	9.70	.09	5.45	5.6	20.5	14.6	75	60	67	79	54	62	10.2	8.1	73	50	63	93	115	157	117	6	27	28	15	112	1
Pittsburgh (U)	749	40.4	26.2	85.4	66.1	53.9	31	103	-13	983	5053	3.95	2.31	36.87	8.84	.16	3.57	7.6	30.5	20.1	--	--	--	--	--	--	---	---	--	25	53	---	---	---	146	8	--	--	18	95	1
Pittsburgh (Gr. AP)	1137	36.5	21.2	83.3	60.9	50.3	6	95	-18	1119	5987	3.91	2.19	36.14	8.20	.16	3.56	10.3	43.7	14.7	75	66	67	84	51	59	10.7	7.6	--	41	67	61	106	198	148	13	36	17	6	128	6
Reading (U)	266	39.1	26.3	86.4	67.3	54.3	25	102	-2	1001	4945	4.26	2.64	41.43	14.85	.17	6.08	8.4	29.7	18.7	71	--	--	75	--	--	11.4	8.5	80	46	63	95	109	161	122	8	32	8	23	92	*
Scranton (U)(1955)	746	35.4	21.0	83.2	61.9	50.1	f	f	f	1141	6047	4.43	2.02	36.61	f	f	f	f	f	f	f	f	--	f	f	--	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f
Shippingport (1957)	736	33.8	20.7	80.5	60.0	51.0	2	92	-3	1163	5647	5.17	1.40	38.96	7.01	.71	3.30	3.6	17.4	9.0	g76	g64	--	g80	g55	--	3.3	2.0	63	--	--	---	---	---	144	5	40	21	10	126	1
Williamsport	524	36.1	21.4	85.3	61.8	50.7	21	102	-15	1122	5934	4.18	2.51	40.65	9.45	.19	4.38	9.9	42.3	23.1	76	62	69	86	52	63	9.2	6.9	--	--	--	70	117	178	142	12	34	38	17	131	4
RHODE ISLAND							78	102	-23							.00	12.13																								
Block Island	110	37.9	26.3	75.9	63.2	50.1	15	91	-4	1020	5804	4.07	2.56	40.45	11.51	T	8.52	5.8	23.1	16.9	73	65	--	87	72	--	---	---	--	--	--	101	111	153	111	7	17	82	*	87	*
Providence	51	37.3	21.0	81.4	62.7	50.1	2	97	-3	1110	5954	4.14	2.76	42.13	11.89	.39	6.63	10.0	39.1	18.3	69	57	63	77	56	67	11.9	10.0	--	56	61	110	104	151	124	10	22	28	9	127	3
SOUTH CAROLINA							81	111	-13							.00	13.25																								
Charleston	40	61.2	38.3	89.2	72.0	65.2	23	103	8	487	2033	7.71	2.09	49.16	18.46	.08	8.84	T	.1	2.1	85	55	74	89	64	81	9.5	8.0	62	58	62	97	116	152	116	*	58	29	48	34	0
Charleston(U)(1961)	9	61.4	39.2	89.4	70.8	65.2	18	103	14	472	1973	8.04	1.92	46.11	17.31	.08	8.84	T	.1	2.1	87	56	75	90	65	82	9.9	8.3	--	65	80	96	116	153	121	*	60	31	48	31	0
Columbia	217	58.2	35.6	92.5	70.7	64.0	18	107	4	570	2484	6.09	2.36	46.82	16.72	T	7.66	.2	1.0	8.8	85	54	68	86	53	66	7.1	6.7	--	61	65	125	101	139	111	*	55	26	86	55	0
Florence (1964)	146	58.3	36.7	90.9	70.4	64.0	17	108	8	552	2387	6.24	2.18	42.69	13.68	.00	6.36	.1	1.0	4.8	82	52	66	88	57	73	8.2	7.2	--	--	--	121	107	137	110	*	53	29	71	46	0
Greenville (1961)	1018	51.6	35.0	87.9	68.8	61.0	2	98	8	673	3060	4.81	3.00	47.65	10.10	.52	5.79	.5	4.1	6.4	70	41	50	85	56	70	9.4	7.7	70	58	63	107	104	154	116	1	50	23	48	54	0
Spartanburg (1961)	801	52.1	34.7	88.7	69.1	61.2	18	104	3	670	3044	4.70	2.97	46.66	10.33	.13	6.85	.8	3.6	7.1	73	44	51	89	56	70	8.6	6.8	--	--	--	127	87	151	114	1	47	23	48	52	0
Greenville-Spartanburg	957	53.3	34.7	90.0	69.7	61.8	3	98	9	660	2980	4.75	2.84	46.42	11.30	.24	4.45	2.7	5.4	5.7	72	50	59	88	60	71	7.4	6.8	47	60	57	128	95	142	109	2	42	35	34	65	0

See reference notes at end of table.

NORMALS, MEANS AND EXTREMES

State and Station	Elevation ground (feet)	Temperature (°F)								Normal degree days (1931-1960)		Precipitation (inches)									Relative humidity (percent)						Wind Speed (mph)			Sunshine (percent of possible)		Annual mean number of days									
		NORMAL (1931-1960)					Extremes					NORMAL (1931-1960)			Extremes			Snow, sleet			January			July			Mean hourly					Sunrise to sunset							Temperature		
		January		July														Mean total		Extreme																			Max	Min	
		Daily maximum	Daily minimum	Daily maximum	Daily minimum	Annual	Length of record (yrs)	Record highest	Record lowest	January	Seasonal	Wettest month	Driest month	Annual	Wettest month	Driest month	Maximum in 24 hours	January	Seasonal	Maximum in 24 hours	7:00 am EST	1:00 pm EST	7:00 pm EST	7:00 am EST	1:00 pm EST	7:00 pm EST	January	July	Fastest mile	January	July	Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow, sleet 1.0 inch or more	Thunderstorms	Heavy fog	90° and above	32° and below	Zero and below
SOUTH DAKOTA							76	120	-58							0.00	13.52																								
Huron	1282	23.1	1.9	90.3	59.6	44.7	6	110	-39	1628	8223	3.14	0.48	17.33	7.69	T	4.20	6.0	37.3	17.5	77	70	74	89	52	49	11.8	10.9	77	54	77	105	110	150	93	12	43	15	32	176	45
Rapid City	3162	34.1	9.8	87.7	59.9	46.8	16	109	-26	1333	7345	3.08	.30	14.71	7.05	T	4.01	5.5	35.4	14.7	70	60	66	71	45	40	10.3	9.9	66	55	71	111	113	141	94	12	45	15	33	165	21
Sioux Falls	1418	25.1	5.2	86.0	62.5	45.7	2	101	-30	1544	7839	4.35	.62	25.16	7.94	T	4.32	5.7	41.4	26.0	78	64	70	90	60	55	10.9	9.5	--	--	--	105	104	156	93	11	45	21	24	170	33
Aberdeen	1296	----	----	----	----	----	6	112	-32	----	----	----	----	-----	8.88	.00	5.83	7.1	34.4	14.3	75	69	73	83	53	51	---	---	--	--	--	84	110	171	85	12	34	10	23	184	49
TENNESSEE							83	113	-32							.00	11.00																								
Bristol	1507	46.8	29.7	86.4	65.4	56.8	4	95	-9	828	4143	5.55	2.15	41.06	9.73	.07	3.65	4.1	14.8	16.2	77	59	64	92	61	66	6.7	4.2	--	--	--	89	113	163	132	4	46	41	16	98	2
Chattanooga	665	49.9	33.4	90.0	71.4	61.2	26	106	-7	722	3254	5.64	3.02	51.96	13.68	.20	5.40	1.3	3.7	8.9	82	62	68	88	57	64	7.3	5.1	82	42	63	108	110	147	120	2	56	34	57	73	*
Knoxville	980	50.1	32.6	88.5	68.2	59.6	5	96	-6	732	3494	4.88	2.54	45.85	11.74	T	5.08	3.4	12.1	18.2	79	62	63	90	61	65	8.6	6.5	73	38	58	102	107	156	126	3	48	29	22	75	*
Memphis	255	50.6	32.4	91.1	71.5	61.5	24	106	-13	729	3232	6.07	2.72	49.73	12.29	T	4.94	1.8	5.4	14.3	81	65	70	85	57	60	10.9	7.6	56	48	74	118	102	145	103	2	51	11	69	59	*
Nashville	590	48.8	30.9	90.7	69.6	60.0	25	107	-15	778	3578	5.49	2.32	45.14	13.92	T	5.34	3.5	10.7	10.2	83	67	72	86	55	61	8.9	6.1	73	40	64	105	108	152	118	4	56	15	59	75	1
Oak Ridge (R)	905	49.2	30.6	87.7	66.7	58.2	18	105	-8	778	3817	5.95	2.67	54.71	13.27	T	7.48	2.4	9.1	12.0	--	--	--	--	--	--	4.8	3.9	--	--	--	116	91	158	126	3	53	34	36	81	*
Oak Ridge Area(1964)	886	48.9	31.2	88.0	66.7	58.5	20	103	-8	772	3742	5.44	2.82	51.52	12.84	.00	7.75	---	---	---	--	--	--	--	--	--	5.7	3.8	--	--	--	---	-	---	119	--	--	-	35	79	*
TEXAS							85	120	-24							.00	38.20																								
Abilene	1762	56.4	32.8	94.3	72.1	64.3	2	105	12	642	2624	4.33	.88	23.32	13.19	.00	6.70	1.4	3.7	5.7	65	46	39	61	36	29	12.4	10.9	73	62	78	153	95	117	64	2	41	6	106	48	0
Amarillo	3604	49.8	23.5	91.2	67.0	58.7	3	104	-9	877	3985	3.37	.62	19.67	10.73	.00	6.75	3.8	13.6	12.2	67	43	39	72	41	36	13.1	12.3	84	d70	d78	162	106	97	67	4	49	24	78	105	3
Austin	597	60.3	40.5	95.1	73.9	68.3	5	105	12	468	1711	3.71	1.94	32.58	12.31	.00	7.22	.6	1.0	7.0	75	55	53	88	47	40	9.9	8.7	57	49	78	121	113	131	81	*	41	23	111	24	0
Brownsville	16	70.5	52.2	92.5	75.5	73.7	28	104	19	205	600	4.99	1.04	26.75	17.12	T	8.18	T	T	T	89	65	74	92	55	65	12.0	11.9	57	46	81	97	139	129	70	0	23	25	111	2	0
Corpus Christi	41	67.4	47.4	93.5	74.6	71.8	4	103	14	291	914	4.40	1.44	28.34	14.54	.00	7.68	.1	.1	1.1	81	64	64	90	55	62	11.9	11.7	70	49	84	109	118	138	75	*	32	26	112	10	0
Dallas	481	55.8	36.0	94.5	75.3	65.8	7	107	8	601	2363	4.83	1.93	34.55	13.85	T	9.18	1.4	2.2	7.4	76	58	55	78	50	43	10.4	10.2	65	50	78	143	94	128	79	1	41	8	101	40	0
Del Rio (1956) e	1091	62.2	41.6	93.3	76.1	69.8	51	111	11	419	1407	2.51	.80	18.62	13.71	.00	8.88	.4	.7	4.7	81	58	53	80	50	41	7.8	9.7	62	53	75	153	118	94	61	*	24	6	118	14	0
Del Rio	1026	63.7	38.8	98.5	73.8	70.0	3	107	19	438	1504	2.73	.62	17.83	15.79	T	4.50	.0	1.5	3.0	65	46	36	71	45	32	10.3	11.4	--	--	--	132	99	134	51	1	43	14	132	20	0
El Paso	3918	56.3	29.5	94.9	68.9	63.3	6	106	-8	685	2700	1.29	.29	7.89	6.29	.00	2.89	1.4	4.3	7.8	60	42	32	54	40	29	10.0	9.6	70	77	78	197	96	72	44	1	36	2	110	59	*
Ft.Worth(Gtr.Int'l.AP)	537	56.0	34.9	95.9	74.9	65.8	2	108	4	614	2405	4.59	1.68	31.33	12.64	.02	5.91	2.0	3.2	12.1	80	56	55	72	40	34	12.5	11.1	--	-	--	149	91	125	77	1	44	11	97	50	0
Galveston (1961)	7	60.1	48.2	88.7	77.9	70.1	11	97	18	362	1233	5.82	3.14	47.98	25.06	T	11.34	T	.2	2.0	84	73	78	82	69	71	13.0	11.3	--	-		111	118	136	90	*	52	32	32	2	0
Galveston (U)	7	60.5	49.3	87.3	78.9	69.9	95	101	8	350	1235	5.09	2.59	41.81	26.01	.00	14.35	T	.2	15.4	--	--	--	--	--	--	11.6	9.8	100	19	73	---	---	---	97	*	--	--	12	4	0
Houston (U)	41	62.6	46.6	92.0	75.8	70.0	28	106	10	363	1278	5.15	2.40	45.26	17.64	.01	10.83	.2	.3	3.0	--	--	--	--	--	--	---	--	--	--	--	---	---	---	103	*	--	--	91	7	0
Houston	50	63.6	43.6	92.1	73.8	69.2	6	106	17	384	1396	4.36	2.67	45.95	22.31	T	15.65	.2	.4	4.4	84	66	67	91	58	64	12.2	9.0	--	59	80	87	128	150	102	*	60	43	103	14	0
Laredo (1964)	496	68.1	47.0	99.0	76.0	73.9	20	110	18	267	797	2.86	.62	18.63	8.62	.00	5.55	.1	.1	2.0	81	58	53	83	44	39	9.6	14.8	--	--	--	130	116	119	58	*	31	14	174	6	0
Lubbock	3254	53.0	25.4	92.4	66.5	59.7	19	107	-16	800	3578	3.18	.54	18.08	7.80	.00	5.14	1.8	8.5	12.1	73	49	49	77	47	40	13.2	12.4	--	--	--	170	104	91	59	3	43	14	87	101	1
Midland	2851	57.1	30.9	94.5	71.2	64.3	2	107	7	651	2591	2.08	.36	14.24	6.73	.00	5.99	1.3	3.1	5.9	64	40	32	61	32	24	9.4	9.8	--	--	--	168	99	98	48	2	35	15	120	67	0
Port Arthur	16	63.5	43.7	91.0	72.7	68.5	3	107	14	384	1447	6.00	2.88	53.09	18.71	.00	13.17	T	.6	4.4	88	67	76	94	62	70	11.9	8.3	73	44	65	92	127	146	102	*	64	41	97	20	0
San Angelo	1903	59.4	34.3	96.9	72.7	66.4	6	111	6	567	2255	3.20	.78	18.63	9.20	.00	6.03	.9	2.5	5.1	70	45	41	72	40	33	10.5	9.8	--	--	-	165	94	106	54	1	36	7	130	54	0
San Antonio(Int'l.AP)	788	62.3	41.6	94.0	73.9	68.7	24	106	0	428	1546	3.49	1.37	27.84	15.78	.00	6.97	.3	.5	4.7	80	60	58	88	49	43	9.1	9.1	74	49	77	114	116	135	78	*	36	24	120	19	*
Victoria	104	64.8	46.0	91.7	74.6	70.2	3	107	16	344	1173	4.23	2.32	36.20	7.64	.22	6.14	.0	T	T	83	60	64	92	53	57	11.6	9.0	99	--	--	90	127	148	78	0	43	32	116	13	0
Waco	500	58.2	37.8	96.0	74.6	67.2	2	106	7	536	2030	4.57	1.68	32.08	15.00	.00	7.18	1.0	1.5	7.0	80	57	54	70	39	34	12.9	11.7	--	--	-	135	101	129	76	1	47	13	106	38	0
Wichita Falls	994	53.9	31.6	97.9	73.3	64.5	6	113	-1	698	2832	4.60	1.12	26.20	12.03	.00	5.61	1.7	5.2	5.2	77	52	50	74	41	37	11.0	10.5	--	--	--	163	93	109	69	2	48	12	108	65	*
UTAH							75	116	-50							.00	5.08																								
Milford	5028	37.1	12.1	92.1	55.5	48.9	17	104	-28	1252	6497	1.03	.43	8.00	2.10	.00	1.20	9.5	39.9	16.3	--	65	60	--	23	20	---	--	--			152	103	110	60	14	32	7	59	178	14
Salt Lake City	4220	36.8	17.5	94.1	59.6	50.9	6	107	-18	1172	6052	1.76	.53	13.90	4.90	.00	2.41	13.3	52.7	15.4	80	72	70	49	24	18	7.5	9.5	71	47	83	131	107	127	86	17	35	11	58	141	4
Wendover	4237	35.9	18.0	92.0	66.8	52.3	28	112	-19	1178	5778	.66	.29	4.67	3.01	.00	1.33	2.4	6.8	5.5	66	58	58	29	20	14	---	---	--	--	--	154	94	117	45	3	29	5	52	128	1
VERMONT							78	105	50							.00	8.77																								
Burlington	332	25.4	6.9	81.9	56.0	43.2	20	101	-30	1513	8269	3.85	1.79	33.21	11.54	.38	3.59	16.8	68.1	14.5	79	67	75	77	54	66	9.9	7.8	72	39	62	63	104	198	148	20	25	15	9	159	24
VIRGINIA							75	110	-29							.00	12.50																								
Lynchburg	916	46.2	29.0	86.6	65.9	56.7	2	99	0	849	4166	4.41	2.58	40.30	11.36	.33	4.98	4.9	16.9	12.8	73	53	61	88	58	72	8.8	6.8	56	50	62	110	107	148	122	5	41	40	17	92	1
Norfolk	26	50.2	32.2	87.9	69.6	59.7	17	103	8	738	3421	5.97	2.74	44.94	12.83	.36	11.40	3.1	7.1	11.4	77	60	70	82	59	72	11.6	8.5	78	58	63	110	106	149	116	2	38	25	34	54	0
Richmond	162	48.3	29.0	89.1	66.7	58.1	36	104	-12	815	3865	5.61	2.90	44.21	18.87	.30	8.79	3.2	13.9	21.6	81	57	70	85	56	72	8.1	7.0	68	51	67	105	105	155	115	4	38	29	43	84	1
Roanoke	1149	47.0	29.1	88.0	65.2	56.9	16	104	-4	834	4150	4.63	2.70	41.23	9.12	.18	4.95	6.2	22.1	17.4	71	54	61	82	51	64	10.0	6.6	--	--	--	102	117	146	121	7	41	26	40	87	*
WASHINGTON							99	118	-42							.00	32.27																								
Olympia	195	45.1	31.1	79.7	48.0	50.8	6	100	3	834	5236	9.05	.76	52.37	19.84	.00	4.93	7.2	16.0	13.7	91	88	80	90	64	48	7.2	5.9	--	--	--	50	90	225	162	5	4	94	6	86	0
Seattle (U)(1964)	14	45.6	36.8	75.1	56.1	53.2	31	100	11	738	4424	5.42	.63	34.10	10.93	T	3.31	4.3	8.1	11.5	--	--	--	--	-	--	---	---	65	28	63	71	93	201	152	3	6	--	2	15	0
Seattle-Tacoma	400	43.6	33.0	75.6	54.1	51.1	6	99	10	828	5145	6.29	.81	38.94	12.92	T	3.41	6.2	14.4	21.4	81	81	76	86	66	49	10.8	9.3	--	--	--	53	82	230	163	5	8	54	3	38	0
Spokane	2356	31.1	19.2	85.6	55.1	47.8	6	108	-20	1231	6655	2.44	.38	17.19	5.71	T	2.07	19.5	57.4	13.0	83	82	76	60	38	24	8.0	7.9	56	27	81	88	87	190	117	19	12	48	21	138	5
Stampede Pass (R)	3958	27.5	19.5	65.4	47.0	39.5	22	90	-16	1287	9283	16.19	1.46	92.19	29.06	.19	7.94	79.5	443.5	36.2	93	92	91	87	67	60	---	---	--	--	-	70	55	240	205	85	7	252	*	189	3
Tatoosh Is. (R)	101	45.2	38.8	59.5	51.5	49.3	63	88	14	713	5719	12.16	1.98	77.69	22.57	.02	5.91	3.4	7.7	12.0	84	82	82	94	89	87	20.0	10.1	94	26	47	58	76	231	197	3	5	59	0	8	0
Walla Walla (U)	949	39.0	27.4	89.2	62.7	54.2	51	113	16	986	4805	1.89	.21	15.50	4.52	.00	2.02	7.8	19.7	14.0	--	76	--	--	34	-	5.1	5.4	67	24	86	119	89	157	106	7	11	14	36	65	2
Yakima	1052	36.5	18.5	88.9	53.1	49.8	19	108	25	1163	5941	1.19	.13	7.86	4.19	.00	1.40	9.7	24.6	14.0	84	77	72	69	35	25	5.4	7.6	--	--	-	109	91	165	69	8	8	20	34	152	5
WEST INDIES							63	103	40							.00																									
San Juan (U)(1964)	17	79.9	70.3	84.2	76.0	78.3	66	96	62	0	0	7.16	2.07	60.36	16.88	.05	10.55	.0	.0	.0	--	--	--	--	--		--	-	-	--	--	-		-	208	0	49	0	10	0	0
San Juan	13	81.3	67.4	87.1	73.7	78.0	11	94	60	0	0	7.13	2.20	64.21	14.99	.68	5.08	.0	.0	.0	86	66	78	82	67	80	8.4	9.5	80	66	63	52	206	107	209	0	38	0	34	0	0
Swan Island(1954) r	28	82.6	73.9	87.3	77.6	81.0	22	92	64	0	0	7.39	.63	51.61	27.61	T	10.77	.0	.0	.0	--	--	--	--	--	--	---	---	--	--	--	81	162	122	152	0	--	--	15	0	0
WEST VIRGINIA							75	112	-37							.00	19.00																								
Beckley	2504	----	----	----	----	----	2	90	-5	----	----	----	----	-----	8.27	.14	5.34	16.2	52.4	13.4	76	62	67	91	59	72	12.8	6.1	--	--	--	74	92	199	144	17	51	34	2	116	2
Charleston	939	45.2	27.9	85.6	64.2	55.6	18	102	12	880	4476	5.67	2.58	44.43	13.54	.09	5.60	7.9	27.0	15.1	77	62	66	89	61	66	7.7	5.2	--	--	--	61	116	188	148	8	43	110	24	99	1
Elkins	1970	43.0	22.0	82.3	57.9	50.7	21	97	-21	1008	5675	5.49	2.75	45.92	9.30	.31	2.94	15.7	58.2	6.6	80	62	70	97	58	71	7.3	4.2	--	--	--	53	110	202	164	21	46	84	3	142	5
Huntington	827	45.3	27.9	86.0	64.3	55.8	5	100	-15	880	4446	4.50	1.85	39.53	8.57	T	4.27	7.6	23.1	6.3	79	62	63	90	59	65	7.1	5.0	--	--	--	81	112	172	128	8	42	52	19	105	5
Parkersburg (U)	615	42.9	26.3	86.3	65.2	55.0	77	106	-27	942	4754	4.27	2.05	38.77	12.05	.07	4.81	6.8	24.2	18.3	82	66	74	80	52	67	7.2	5.1	66	31	62	109	103	153	113	8	44	12	23	97	2

See reference notes at end of table.

NORMALS, MEANS AND EXTREMES

State and Station	Elevation ground (feet)	Temperature(°F)								Normal degree days (1931-1960)		Precipitation (inches)									Relative humidity (percent)						Wind Speed (m p h)			Sunshine (percent of possible)		Annual mean number of days									
		NORMAL (1931-1960)					Extremes					NORMAL (1931-1960)			Extremes			Snow, sleet														Sunrise to sunset							Temperature		
		January		July														Mean total		Extreme	January			July			Mean hourly												Max	Min	
		Daily maximum	Daily minimum	Daily maximum	Daily minimum	Annual	Length, yrs	Record highest	Record lowest	January	Seasonal	Wettest month	Driest month	Annual	Wettest month	Driest month	Maximum in 24 hours	January	Seasonal	Maximum in 24 hours	7:00 a m EST	1:00 p m EST	7:00 p m EST	7:00 a m EST	1:00 p m EST	7:00 p m EST	January	July	Fastest mile	January	July	Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow, sleet, hail 1.0 inch or more	Thunderstorms	Heavy fog	90 and above	32 and below	Zero and below
WISCONSIN							75	114	-54							0.00	11.72																								
Green Bay	682	25.1	8.5	82.0	59.0	44.3	5	96	-29	1494	8029	3.36	1.08	25.83	7.80	T	3.68	8.2	40.1	10.1	75	69	71	89	59	61	10.9	8.1	73	44	64	96	100	169	119	14	38	29	7	157	31
La Crosse	651	25.6	7.4	84.6	63.0	46.3	13	103	-37	1504	7589	4.20	1.05	31.16	10.52	.02	3.92	7.6	42.6	15.7	76	65	70	87	58	58	9.4	8.0	--	--	--	94	95	176	109	11	43	23	13	152	24
Madison	858	25.9	9.1	82.2	60.0	45.0	6	98	-30	1473	7863	3.95	1.13	30.16	10.93	.06	5.25	9.0	39.2	10.8	77	68	72	89	57	59	10.5	8.3	77	49	70	95	99	171	114	12	41	23	10	164	27
Milwaukee	672	28.3	12.8	78.9	58.4	45.1	6	98	-24	1376	7635	3.64	1.40	29.51	9.87	.15	5.28	12.8	44.1	16.7	76	68	72	83	61	64	13.0	9.7	73	43	71	96	103	166	119	13	37	27	9	148	19
WYOMING							106	114	-63							.00	5.50																								
Casper	5338	32.8	13.9	87.1	56.3	46.0	13	104	-30	1290	7410	2.03	.48	11.80	3.93	T	2.49	9.5	67.3	14.6	65	55	58	63	29	23	16.9	10.3	--	--	--	114	110	141	89	21	36	9	26	174	15
Cheyenne	6126	37.2	13.6	85.2	54.8	45.9	6	96	-27	1228	7278	2.52	.45	15.06	5.35	T	2.68	6.4	53.8	16.5	55	45	50	70	33	38	14.7	9.9	69	62	69	105	132	128	101	17	53	25	13	170	14
Lander	5563	30.8	7.7	85.8	55.4	44.4	19	101	-37	1417	7870	2.65	.42	13.58	6.88	T	3.56	8.7	92.3	23.1	66	58	58	56	34	28	6.1	7.5	77	68	77	121	127	117	70	23	32	2	20	185	20
Sheridan	3964	34.0	8.6	87.1	55.5	45.2	23	106	-35	1355	7683	2.57	.62	15.91	9.54	.02	3.84	9.2	65.2	26.7	73	63	66	72	36	34	7.7	7.4	84	59	76	102	113	150	107	22	37	6	27	181	22

Data from airport or from airport and Urban site records combined.
U indicates Urban, R indicates Rural sites.
Data for this table are based on records through 1965 except as indicated in notes.
Date in Parenthesis after station name indicates last year included in summarization of data.
Normal values are based on the period, 1931-1960, and are means adjusted to represent observations taken at the present standard location.
Degree days are based on a daily average of 65°F.
For detailed periods of record see ANNUAL LOCAL CLIMATOLOGICAL DATA,1965.

Fastest mile is the speed of the wind recorded in the shortest time on an automatic recording wind instrument.
Clear Day averages 0-3 tenths sky cover, Partly Cloudy 4-7 tenths and Cloudy 8-10 tenths.
Heavy Fog includes data formerly referred to as "Dense" or "Thick." The upper visibility limit for heavy fog is 1/4 mile.
* Less than one-half.
- No record.
# Number of days Maximum 70° or above (Alaskan stations).
† Relative humidity means for period of record through 1960.
‡ Mt. Washington excluded.
ø Estimated amounts during typhoon.
1/ Means and extremes are from post office location through 1962.
2/ Based on records from Urban office through January 1943; airport through June 1964.

a Relative Humidity readings NOON Local Time.
b Relative Humidity readings reported 30 minutes later.
c Relative Humidity readings 8:00 a.m. and NOON Local Time.
d Estimated
e Reopened 1963.
f Combined Records, city office and airport.
g 8:00 a.m., and 2:00 p.m., EST.
n Estimated, recorder pen against stop at 128 m.p.h.
T Trace, an amount too small to measure.
x Sun below horizon continuously Nov. 18 - Jan. 24.
v Sun below horizon continuously Nov. 26 - Jan. 16.
(x and v)-Yearly totals for period sun above horizon.
m Record for 1949-1951, 1958-1962.
r Resumed 1965.

ELEVATIONS OF STATION PRESSURES

State and station	Ft	Mtrs
ALABAMA		
Birmingham	630	192
Huntsville	644	196
Mobile	221	67
Montgomery	202	62
ALASKA		
Anchorage	132	40
Annette	110	34
Barrow	13	4
Barter Island	50	15
Bethel	150	46
Cold Bay	103	31
Fairbanks	454	138
Juneau	24	7
King Salmon	49	15
Kotzebue	16	5
McGrath	338	103
Nome	22	7
St. Paul Island	28	9
Shemya	102	31
Yakutat	31	[illegible]
ARIZONA		
Flagstaff	7018	2139
Phoenix	1107	337
Tucson	2555	779
Winslow	4883	1488
Yuma	206	63
ARKANSAS		
Fort Smith	463	141
Little Rock	265	81
Texarkana	368	112
CALIFORNIA		
Bakersfield	492	150
Bishop	4145	1263
Blue Canyon	5283	1610
Burbank	725	221
Eureka (U)	60	18
Fresno	327	100
Long Beach	40	12
Los Angeles (U)	512	156
Los Angeles	104	32
Mt Shasta (R)	3587	1093
Oakland	7	2
Red Bluff	353	108
Sacramento	25	8
Sandberg (R)	4523	1379
San Diego	28	9
San Francisco (U)	155	47
San Francisco	18	5
Santa Catalina	1580	482
Santa Maria	238	73
Stockton	27	[illegible]
COLORADO		
Alamosa	7541	2298
Colorado Springs	6170	1881
Denver	5332	1625
Grand Junction	4839	1475
Pueblo	4720	1439
CONNECTICUT		
Bridgeport	17	5
Hartford	179	55
New Haven	13	4
DELAWARE		
Wilmington	80	24
DISTRICT OF COLUMBIA		
Wash. Nat'l AP	65	20
FLORIDA		
Apalachicola (U)	35	11
Daytona Beach	41	12
Fort Myers	12	4
Jacksonville	31	9
Key West	21	6
Lakeland (U)	236	72
Miami	12	4
Orlando	119	36
Pensacola	118	36
Tallahassee	68	21
Tampa	11	3
West Palm Beach	21	6
GEORGIA		
Athens	811	247
Atlanta	1034	315
Augusta	148	45
Columbus	394	120
Macon	362	110
Rome	643	196
Savannah	51	16
HAWAII		
Hilo	36	11
Honolulu	15	5
Kahului	67	20
Lihue	148	45
IDAHO		
Boise	2858	871
Idaho Falls 46W (R)	4938	1505
IDAHO (Cont'd)		
Lewiston	1436	438
Pocatello	4478	1365
ILLINOIS		
Cairo (U)	357	109
Chicago (O'Hare)	674	205
Chicago (Midway)	623	190
Moline	594	181
Peoria	662	202
Rockford	743	226
Springfield	613	187
INDIANA		
Evansville	388	118
Fort Wayne	828	252
Indianapolis	808	246
South Bend	773	236
IOWA		
Burlington	702	214
Des Moines	963	294
Dubuque	1080	329
Sioux City	1103	336
Waterloo	878	268
KANSAS		
Concordia	1484	452
Dodge City	2592	790
Goodland	3688	1124
Topeka	885	270
Wichita	1358	414
KENTUCKY		
Covington	877	267
Lexington	989	301
Louisville	488	149
LOUISIANA		
Alexandria	118	36
Baton Rouge	76	23
Lake Charles	32	10
New Orleans	30	9
Shreveport	259	79
MAINE		
Caribou	628	191
Portland	63	19
MARYLAND		
Baltimore	155	47
MASSACHUSETTS		
Boston	29	9
Nantucket	12	4
Pittsfield	1169	356
Worcester	1017	310
MICHIGAN		
Alpena	693	211
Detroit (City AP)	626	191
Detroit (M. Wayne Co.)	664	202
Detroit (Willow Run)	777	237
Flint	766	233
Grand Rapids	803	245
Houghton Lake	1160	354
Lansing	874	266
Marquette (U)	734	224
Muskegon	633	193
Sault Ste. Marie	724	221
MINNESOTA		
Duluth	1417	432
International Falls	1183	361
Minneapolis	838	255
Rochester	1320	402
St. Cloud	1043	318
MISSISSIPPI		
Jackson	331	101
Meridian	310	94
Vicksburg (U)	247	75
MISSOURI		
Columbia	785	239
Kansas City	750	229
St. Joseph	817	249
St. Louis (Lambert)	564	172
Springfield	1270	387
MONTANA		
Billings	3570	1088
Glasgow	2298	700
Great Falls	3657	1115
Havre	2599	792
Helena	3898	1188
Kalispell	2973	906
Miles City	2634	803
Missoula	3189	972
NEBRASKA		
Grand Island	1856	566
Lincoln (U)	1189	362
Norfolk	1551	473
North Platte	2787	849
Omaha (Eppley AP)	982	299
Scottsbluff	3958	1206
Valentine	2598	792
NEVADA		
Elko	5077	1547
Ely	6262	1909
Las Vegas	2180	664
Reno	4400	1341
Winnemucca	4339	1323
NEW HAMPSHIRE		
Concord	341	104
NEW JERSEY		
Atlantic City (Exp. Cntr.)	67	20
Newark	30	9
Trenton (U)	190	58
NEW MEXICO		
Albuquerque	5314	1620
Clayton	4972	1515
Raton	6376	1943
Roswell	3619	1103
Silver City	5376	1639
NEW YORK		
Albany	292	89
Binghamton	1638	499
Buffalo	706	215
New York Central Park	87	27
New York (Kennedy AP)	22	7
New York (LaGuardia)	52	16
Rochester	555	169
Syracuse	408	124
NORTH CAROLINA		
Asheville	2170	661
Cape Hatteras (R)	11	3
Charlotte	769	234
Greensboro	886	270
Raleigh	441	134
Wilmington	38	12
NORTH DAKOTA		
Bismarck	1660	506
Fargo	899	274
Williston	1905	581
OHIO		
Akron	1236	377
Cleveland	805	245
Columbus	833	254
Dayton	1003	306
Mansfield	1312	400
Toledo	692	211
Youngstown	1186	361
OKLAHOMA		
Oklahoma City	1304	397
Tulsa	676	206
OREGON		
Astoria	22	7
Burns (U)	4170	1271
Eugene	373	114
Meacham	4056	1236
Medford	1329	405
Pendleton	1495	456
Portland	39	12
Salem	201	61
Sexton Summit (R)	3841	1171
PACIFIC AREA		
Canton Island	11	3
Eniwetok	21	6
Johnston Island	17	5
Koror (R)	109	33
Kwajalein	26	8
Majuro, Marshall Islands	10	3
Marcus Island	55	17
Ponape (R)	151	46
Taguac, Guam (R)	365	111
Truk (Moen Island)	8	2
Wake Island	12	4
Yap (R)	54	16
PENNSYLVANIA		
Allentown	385	117
Erie	737	225
Harrisburg	351	107
Philadelphia	28	9
Pittsburgh (U)	842	257
Pittsburgh (R)	1225	373
Reading (U)	323	98
Scranton	948	289
Williamsport	525	160
RHODE ISLAND		
Block Island	118	36
Providence	62	19
SOUTH CAROLINA		
Charleston (U)	48	15
Charleston	48	15
Columbia	225	69
Grnvl-Spartanburg	971	296
SOUTH DAKOTA		
Aberdeen	1300	396
Huron	1289	393
Rapid City	3168	966
SOUTH DAKOTA (Cont'd)		
Sioux Falls	1427	435
TENNESSEE		
Bristol	1525	465
Chattanooga	688	210
Knoxville	980	299
Memphis	284	87
Nashville	605	184
Oak Ridge	914	279
TEXAS		
Abilene	1753	534
Amarillo	3604	1099
Austin	621	189
Brownsville	20	6
Corpus Christi	44	13
Dallas	488	149
Del Rio	1027	313
El Paso	3916	1194
Fort Worth	576	176
Galveston (U)	54	16
Houston	62	19
Lubbock	3241	988
Midland	2862	872
Port Arthur	22	7
San Angelo	1908	582
San Antonio	794	242
Victoria	117	36
Waco	508	155
Wichita Falls	1030	314
UTAH		
Milford	5033	1534
Salt Lake City	4227	1288
Wendover	4239	1292
VERMONT		
Burlington	340	104
VIRGINIA		
Lynchburg	937	286
Norfolk	30	9
Richmond	164	50
Roanoke	1176	358
WASHINGTON		
Olympia	200	61
Seattle-Tacoma	450	137
Spokane	2365	721
Stampede Pass (R)	3967	1209
Tatoosh Island (R)	86	26
Walla Walla (U)	991	302
Yakima	1066	325
WEST INDIES		
San Juan, P. R.	62	19
Swan Island	35	11
WEST VIRGINIA		
Beckley	2514	766
Charleston	951	290
Elkins	2006	611
Huntington	838	255
Parkersburg (U)	637	194
WISCONSIN		
Green Bay	702	214
La Crosse	672	205
Madison	866	264
Milwaukee	693	211
WYOMING		
Casper	5290	1612
Cheyenne	6141	1872
Lander	5558	1694
Sheridan	3968	1209

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.
These are the elevations of the barometer (in feet and meters above mean sea level) to which station pressure values pertain in the "Climatological Data" table in the monthly publication CLIMATOLOGICAL DATA NATIONAL SUMMARY.

GENERAL SUMMARY OF TORNADOES, 1965

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1965 will be remembered as the year of the Palm Sunday tornadoes. It was also a year of a record number of reported tornadoes.

During the evening of April 11 and early on the morning of April 12, at least 47 separate twisters ripped through the five-State area of Indiana, Ohio, Michigan, Wisconsin, and Illinois causing 257 fatalities. The first three States were hardest hit with 247 deaths, over 1,500 injuries, and estimated property damage in excess of $200 million. The greatest number of deaths resulting from a single tornado occurred on Palm Sunday; a total of 44 persons were killed in Branch, Hillsdale, Lenawee, and Monroe Counties in Michigan.

Despite the toll of the Palm Sunday outbreak, it was overshadowed historically by the Tri-State tornado that swept through Missouri, Illinois, and Indiana on March 18, 1925. This twister killed 689 persons and injured at least 1,980 others. Another single storm on April 5, 1936 killed 216 persons and injured over 700 at Tupelo, Miss., while one on April 6, 1947 claimed 169 lives in Texas, Oklahoma, and Kansas. Comparable to the Palm Sunday tornadoes were a tornado series in Alabama on March 21, 1932, and another series on March 21-22, 1952 in Arkansas, Missouri, and Tennessee. The former killed 268 persons and injured 1,874 others; the latter killed 208 persons and injured 1,154.

More tornadoes were reported during 1965 than in any previous year. The total of 898 occurred on 180 days spread throughout all 12 months. They killed 299 persons (257 during the Palm Sunday outbreak), injured at least 4,564 others, and caused more than $1 billion worth of property damage. During the year 42 states experienced tornadoes, and from April 1 through September 30 tornadic activity occurred on the average of 3 out of every 4 days. Almost 2/3 of the total number of reported tornadoes, 290 of the yearly total of 299 deaths, and most of the property damage occurred during the 3-month period from April through June.

The tracks of 1965 tornadoes are depicted by chart. The paths plotted are those for which sufficient information is available. Discontinuities of the tracks are not represented because of lack of accurate data.

Table 1 lists by state the monthly and annual totals of tornadoes, tornado days, deaths, and injuries. The totals for the United States as a whole reflect the crossing of state boundaries by 17 twisters. Thus a storm that crossed from one state into another is included in each state total, but is counted only once in the summary for the entire country. One third of the tornadoes occurred in the area commonly termed the "tornado belt"--Nebraska, Kansas, Oklahoma, and Texas. An unusually high frequency occurred in North Dakota, South Dakota, and Colorado. In summary the six states from Texas northward to the Canadian border bore the brunt of the storms in terms of numbers.

It is interesting to note that Georgia, Alabama, and Florida had about 54% fewer tornadoes in 1965 than the average number per year from 1953-1964. The decline in the Southeast was compensated by the relative increase in the Northern Plains and Great Lakes region. This suggests that the normal L-shaped pattern of high tornado frequencies was inverted in 1965.

The relation between the 1965 statistics and those of the previous 12 years is shown in Table 2. Most striking is the record annual number of tornadoes reported. While last year's total eclipsed the old 1957 record by only 34, the number reported is about 48% higher than the mean from 1953-1964. The 299 deaths is the largest annual total since 516 persons were killed in 1953. Despite the high number of twisters and tornado days, their monthly distribution pattern was consistent with that for other years. About 60% of the total number of reported tornadoes and 43% of the tornado days occurred between April and June both in 1965 and on the average from 1953-1964.

The number of tornadoes per 10,000 square miles in selected states is shown in Table 3. Because of their relatively small area, the New England States and Maryland were not considered in the preparation of this table. Although the greatest number of tornadoes occurred in Texas, the areal frequency did not rank in the top 10 because of its large size. Indiana had the most tornadoes per unit area in the country, thus taking the spotlight away from the "tornado belt".

Table 5 lists the number of funnel clouds observed aloft during 1965. As usual the states with the most tornadoes also had the greatest number of funnels aloft. A notable exception was Florida which had relatively few tornadoes but reported the third highest number of funnels aloft. Michigan, too, experienced a large number of twisters that did not reach the surface.

The month in which the greatest number of tornadoes was observed in a particular state and the number of tornadoes observed that month are shown by chart. A distinct pattern is evident for most of the country. The region from West Virginia westward through Missouri, and including Michigan, experienced the most tornadoes in April. The next month the maximum occurred in the states from Texas through South Dakota through Wisconsin. The westward progression of the maximum was completed in June when Utah, Colorado, and New Mexico reported the greatest number of tornadoes for any month. Also in June a maximum occurred in northern New England. Montana, North Dakota, and Wyoming were hardest hit by twisters in July, and August was the month of the greatest tornadic activity in southern New England and the Middle Atlantic States. No particular pattern can be discerned in the Southeast.

Normally in April a maximum occurs in the five states from Florida and Georgia through Louisiana. May is usually the month of the greatest number of tornadoes in Oklahoma, Kansas, Missouri, and Arkansas; in June the greatest tornadic activity usually occurs in Minnesota, Iowa, Nebraska, South Dakota, and North Dakota.

In addition to the Palm Sunday outbreak already discussed there were 5 other significant periods of tornadic activity during 1965. The first reported tornado of the year occurred on January 8 in Lafayette Parish, Louisiana, but the first deaths were reported in North Carolina. On March 17 a twister killed 2 persons, injured 100 others, and damaged the New Bern Airport as it crossed Craven, Jones, and Pamlico Counties, N. C.

A family of 6 tornadoes killed 14 persons, injured 683 others, and caused heavy damage mainly in the Minneapolis, Minn., vicinity during the evening of May 6. In November a very unusual number of tornadoes occurred in the Ohio Valley. In Indiana 6 of the 7 twisters during this month were reported on the 26th, while Illinois had 4 tornadoes and Ohio reported 2 on this date. Illinois was the victim of 4 other tornadoes on the 12th that caused 2 deaths, 90 injuries, and extensive property damage. Six tornadoes also occurred in Ohio on the 16th. (Tornado records begun in 1916 show only two tornadoes in this state during November.) The last tornado of 1965 occurred on December 23 in Garza County, Texas.

An eyewitness account of the Austin, Tex., tornado of May 17 was reported by Mr. Nat Henderson, staff writer for the Austin Statesman, who stated that the tip of a tiny tornado, estimated at no more than 6 to 8 feet in diameter at its biggest part, passed about 5 feet over his head only seconds before uprooting an elm tree 15 feet away. "Although the distinct funnel roared just above my head," he stated, "it did not even stir a hair. I could not feel the breath of a breeze, but the sound was as deafening as a jet engine warming up near my ear. The only wind was in the funnel itself." The tornado was further described as snow white and not visibly connected to any other cloud.

NOTE.--This summary was oompiled from data in the monthly publication Storm Data, Environmental Data Service, Environmental Science Services Administration; and Technical Paper No. 20, revised 1960, U. S. Weather Bureau.

TABLE 1 -TORNADO SUMMARY 1965

Year 1965

State	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
ALA.													
Number		2	1	1			1		3		1		9
Days		1	1	1			1		4		1		9
Deaths		0	0	0			0		0		0		0
Injuries		10	22	2			0		0		0		34
ALASKA													
(None)													
ARIZ.													
(None)													
Ark.													
Number	2	10	2	4	2				2		2		24
Days	2	3	2	4	2				1		1		15
Deaths	0	0	0	6	0				0		0		6
Injuries	0	13	0	204	8				0		0		225
CALIF.													
Number				2			2				1		5
Days				2			1				1		4
Deaths				0			0				0		0
Injuries				0			0				0		0
COLO.													
Number			2		14	17	3	1	1				38
Days			1		5	8	3	1	1				19
Deaths			0		0	0	0	0	0				0
Injuries			0		0	25	0	0	0				25
CONN.													
Number								1					1
Days								1					1
Deaths								0					0
Injuries								0					0
DEL.													
(None)													
FLA.													
Number		4	1			4		1	2			1	13
Days		1	1			2		1	1			1	7
Deaths		0	0			0		0	0			0	0
Injuries		8	0			0		0	0			0	8
GA.													
Number			2	4	1	2	2	2	1				14
Days			2	4	1	1	2	2	1				13
Deaths			0	0	0	0	0	0	0				0
Injuries			0	0	0	0	0	0	0				0
HAWAII													
(None)													
IDAHO													
(None)													
ILL.													
Number		1		9	3	1		2	4		8		28
Days		1		3	1	1		2	2		2		12
Deaths		0		6	0	0		0	0		2		8
Injuries		0		77	5	0		0	34		95		211
IND.													
Number	2	1		20	4	4	1	4	4	1	7		48
Days	1	1		2	2	3	1	3	1	1	2		17
Deaths	0	0		137	0	0	0	0	0	0	0		137
Injuries	2	0		1370	0	0	0	0	0	0	22		1394
IOWA													
Number				5	17	6	3	8	8				47
Days				3	6	1	3	3	4				20
Deaths				0	0	0	0	1	0				1
Injuries				2	26	0	0	21	4				53
KANS.													
Number			2	1	33	14	6	2	8				66
Days			1	1	8	6	5	2	4				27
Deaths			0	0	0	0	0	0	0				0
Injuries			5	0	12	3	0	0	27				47
KY.													
Number				2	1		1				3		7
Days				2	1		1				2		6
Deaths				0	0		0				1		1
Injuries				0	0		0				11		11
LA.													
Number	11	5	1			1	5					3	26
Days	2	1	1			1	4					1	10
Deaths	0	0	0			0	0					0	0
Injuries	2	4	1			0	1					4	12
MAINE													
Number						2			1				3
Days						2			1				3
Deaths						0			0				0
Injuries						7			0				7

State	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Md.													
Number								1		1			2
Days								1		1			2
Deaths								0		0			0
Injuries								0		0			0
MASS.													
Number					1	1		2					4
Days					1	1		2					4
Deaths					0	0		1					1
Injuries					0	0		3					3
MICH.													
Number				15					2	1			18
Days				1					1	1			3
Deaths				53					0	0			53
Injuries				792					0	0			792
MINN.													
Number					15	3	7	3	1				29
Days					4	2	6	3	1				16
Deaths					14	0	0	0	0				14
Injuries					691	0	0	0	0				691
MISS.													
Number	2	3	5		1	2	3	1	2		1	1	21
Days	2	2	3		1	2	3	1	1		1	1	17
Deaths	0	0	0		0	0	0	0	0		0	0	0
Injuries	5	1	11		0	0	0	0	0		0	0	17
MO.													
Number	1			12	4	1	1	1	9				29
Days	1			3	2	1	1	1	3				12
Deaths	0			0	0	0	0	0	0				0
Injuries	0			20	4	0	0	0	0				24
MONT.													
Number					1	1	5	2					9
Days					1	1	4	2					8
Deaths					0	0	0	0					0
Injuries					0	0	6	0					6
NEBR.													
Number					32	8	6						46
Days					6	8	4						18
Deaths					4	0	0						4
Injuries					50	0	0						50
NEV.													
(None)													
N. H.													
Number						1	1	1					3
Days						1	1	1					3
Deaths						0	0	0					0
Injuries						0	0	0					0
N. J.													
(None)													
N. Mex.													
Number				1	2	9		1	1				14
Days				1	2	5		1	1				10
Deaths				0	0	0		0	0				0
Injuries				0	0	3		0	0				3
N. Y.													
Number					1		1	2	1				5
Days					1		1	2	1				5
Deaths					0		0	0	0				0
Injuries					3		0	0	0				3
N. C.													
Number	1		1	2			2		1	1			8
Days	1		1	2			2		1	1			8
Deaths	0		2	0			0		0	0			2
Injuries	0		100	1			0		0	0			101
N. DAK.													
Number					7	14	17	2	1				41
Days					3	7	8	2	1				21
Deaths					0	0	0	0	0				0
Injuries					0	1	0	0	0				1
OHIO													
Number			1	15	4		2	2			8		32
Days			1	3	2		2	1			3		12
Deaths			0	57	0		0	0			2		59
Injuries			0	510	1		0	5			29		545
OKLA.													
Number			3	21	30	8		5	5				72
Days			1	7	10	5		3	2				28
Deaths			0	0	0	0		0	0				0
Injuries			2	2	9	0		0	0				13

TABLE 1 –TORNADO SUMMARY 1965

State	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
OREG.													
Number											1		1
Days											1		1
Deaths											0		0
Injuries											0		0
PA.													
Number					1			1			1		3
Days					1			1			1		3
Deaths					1			0			0		1
Injuries					4			0			6		10
R. I.													
(None)													
S. C.													
Number			3	1	5	4	2	3		4			22
Days			2	1	5	1	2	2		1			14
Deaths			0	0	0	0	0	0		0			0
Injuries			0	0	0	0	0	46		0			46
S. Dak.													
Number					43	17	4						64
Days					9	7	3						19
Deaths					0	1	0						1
Injuries					1	0	0						1
TENN.													
Number		1	7	4									12
Days		1	1	1									3
Deaths		0	0	1									1
Injuries		0	3	50									53
TEX.													
Number	2	5	3	7	43	24	2	9	4	6		3	108
Days	2	2	2	3	13	12	2	8	3	2		2	51
Deaths	0	0	0	2	0	5	0	0	0	0		0	7
Injuries	0	1	1	2	4	85	0	0	0	0		2	95
UTAH													
Number		1				2	1						4
Days		1				2	1						4
Deaths		0				0	0						0
Injuries		0				0	0						0

Year 1965

State	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
VT.													
Number						1							1
Days						1							1
Deaths						0							0
Injuries						1							1
VA.													
Number								2		1			3
Days								2		1			3
Deaths								0		0			0
Injuries								5		0			5
WASH.													
Number											2		2
Days											1		1
Deaths											0		0
Injuries											0		0
W VA.													
Number				3				1					4
Days				2				1					3
Deaths				0				0					0
Injuries				3				0					3
WIS.													
Number				6	9	2	4		1				22
Days				1	6	2	3		1				13
Deaths				3	0	0	0		0				3
Injuries				68	5	0	0		0				73
WYO.													
Number					1	2	4						7
Days					1	2	3						6
Deaths					0	0	0						0
Injuries					0	1	0						1
TOTALS													
Number	21	33	34	135	275	151	86	60	62	15	35	8	915
		*29	*33	*130	*271	*149						*7	*898
Days	†11	†4	†9	†20	†25	†28	†26	†23	†20	† 4	†6	†4	†180
Deaths	0	0	2	265	19	6	0	2	0	0	5	0	299
Injuries	9	37	145	3103	823	126	7	80	65	0	163	6	4564

* Corrected for boundary-crossing tornadoes.

† Tornado days for country as a whole.

TABLE 2 –NUMBER OF TORNADOES, TORNADO DAYS, AND DEATHS –1953-1965

Year	January			February			March			April			May			June			July		
	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths
1953	14	6	0	17	3	3	40	10	24	45	16	34	99	21	162	114	24	244	40	19	0
1954	2	1	0	19	9	2	69	13	10	117	22	3	97	22	8	101	26	5	46	23	0
1955	2	2	0	4	3	0	41	15	4	101	18	7	150	26	103	148	28	2	50	21	5
1956	2	2	0	47	12	8	31	7	1	87	15	67	88	24	4	66	21	0	101	26	1
1957	17	3	13	5	3	0	39	7	1	216	21	29	226	26	87	148	25	14	54	19	0
1958	12	7	0	20	5	13	15	10	0	78	19	4	69	21	0	128	27	42	119	30	1
1959	15	2	3	19	5	21	42	11	9	30	12	1	225	28	8	73	25	2	62	24	0
1960	9	4	0	28	10	0	27	10	0	70	20	7	200	26	34	123	27	3	48	22	1
1961	1	1	0	31	8	0	121	17	7	73	19	3	135	25	23	101	23	2	77	27	0
1962	11	3	1	25	7	0	37	9	17	41	8	1	201	22	3	173	29	0	75	26	0
1963	14	5	1	6	3	0	49	12	8	82	14	16	69	21	1	93	23	0	62	26	0
1964	14	3	10	2	2	0	36	11	6	161	23	15	135	20	16	144	24	0	61	23	0
1965	21	11	0	29	4	0	33	9	2	130	20	265	271	25	19	149	28	6	86	26	0
TOTAL	134	50	28	252	74	47	580	141	89	1231	227	452	1965	307	468	1561	330	320	881	314	8
MEAN	10	4	2	19	6	4	45	11	7	95	17	35	151	24	36	120	25	24	68	24	1

Year	August			September			October			November			December			Annual		
	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths	Number	Days	Deaths
1953	26	15	0	5	4	0	6	4	0	11	6	0	20	8	49	437	136	516
1954	46	21	1	20	10	3	15	8	2	2	2	0	16	3	1	549	159	35
1955	34	18	0	16	8	2	23	7	1	20	4	1	3	2	0	593	153	125
1956	43	20	2	19	10	0	30	8	0	8	6	0	10	4	0	532	155	83
1957	26	14	0	17	10	2	17	11	2	61	11	25	38	4	18	864	154	191
1958	45	20	1	24	14	1	9	6	4	45	6	0	1	1	0	565	166	66
1959	37	18	0	54	15	14	19	10	0	11	4	0	2	2	0	589	156	58
1960	48	23	1	21	13	0	18	10	1	25	6	0	1	1	0	618	172	47
1961	25	16	0	53	16	15	13	5	0	36	7	1	16	5	0	682	169	51
1962	49	21	6	27	12	0	12	10	0	5	4	0	2	2	0	658	153	28
1963	27	13	2	33	12	3	14	5	0	12	6	0	0	0	0	461	140	31
1964	79	23	2	24	10	0	24	4	22	15	8	0	18	5	2	713	156	73
1965	60	23	2	62	20	0	15	4	0	35	6	5	7	4	0	898	180	299
TOTAL	545	245	17	375	154	40	215	92	32	286	76	32	134	41	70	8159	2036	1603
MEAN	42	19	1	29	12	3	17	7	2	22	6	2	10	3	5	651	157	123

TABLE 3 NUMBER OF TORNADOES PER 10,000 SQUARE MILES IN 1965 IN SELECTED STATES

State	Number of Tornadoes	Number per 10,000 sq. miles	State	Number of Tornadoes	Number per 10,000 sq. miles
Indiana	48	13.2	Ohio	32	7.8
Oklahoma	72	10.3	South Carolina	22	7.1
South Dakota	64	8.3	Nebraska	46	6.0
Iowa	47	8.3	North Dakota	41	5.8
Kansas	66	8.0	Louisiana	26	5.4

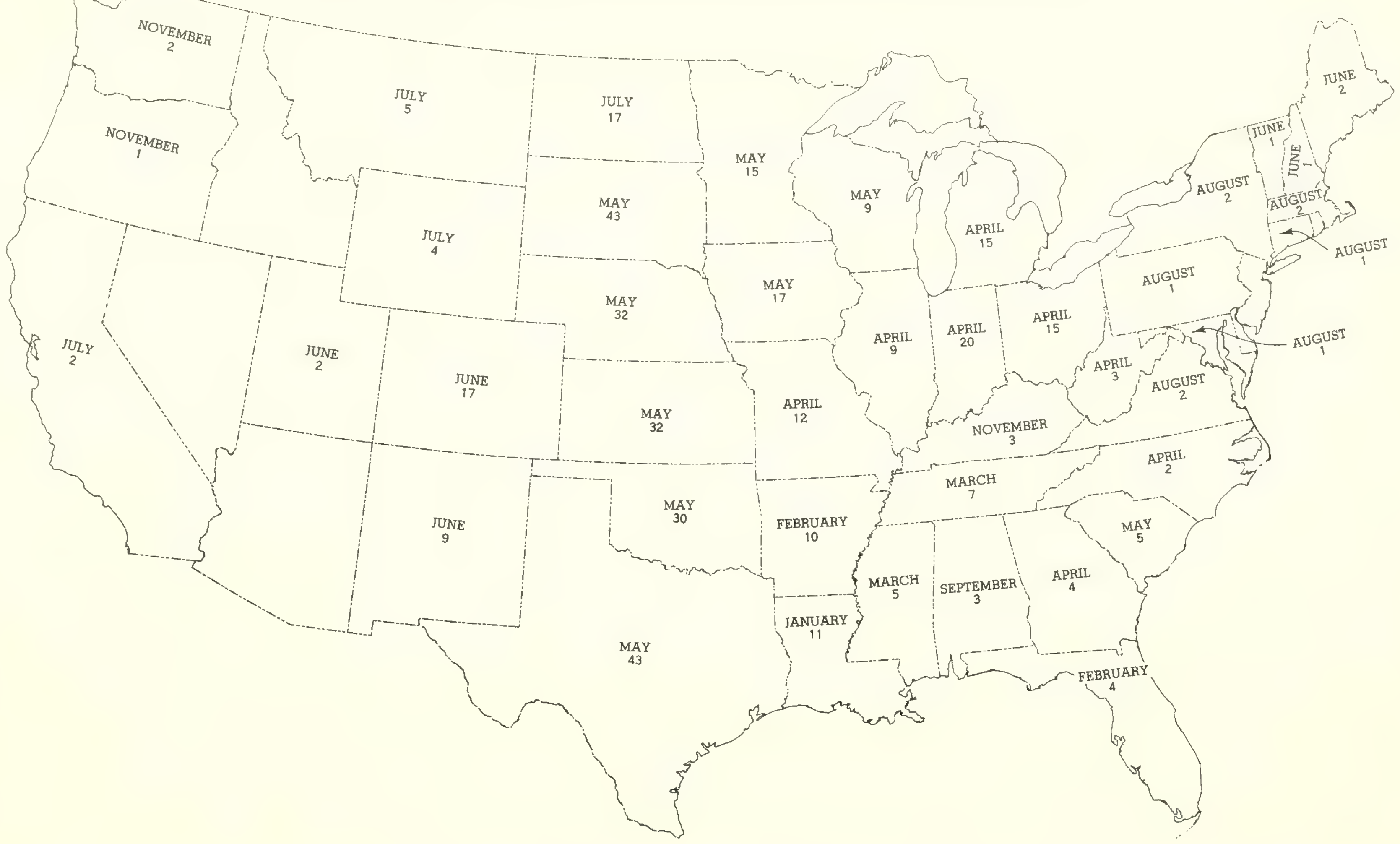
TABLE 4 SUMMARY OF TORNADO DEATHS

Year	Total	Most in single tornado	Year	Total	Most in single tornado
1916	150	30	1941	53	25
1917	509	101	1942	384	65
1918	135	36	1943	58	5
1919	206	59	1944	275	100
1920	498	87	1945	210	69
1921	202	61	1946	78	15
1922	135	16	1947	313	169
1923	109	23	1948	140	33
1924	376	85	1949	212	58
1925	794	689	1950	70	18
1926	144	23	1951	34	6
1927	540	92	1952	230	57
1928	92	14	1953	516	116
1929	274	40	1954	35	6
1930	179	41	1955	125	80
1931	36	6	1956	83	25
1932	394	37	1957	191	44
1933	362	34	1958	66	19
1934	47	6	1959	58	21
1935	70	11	1960	47	16
1936	552	216	1961	51	16
1937	29	5	1962	28	17
1938	183	32	1963	31	5
1939	87	27	1964	73	22
1940	65	18	1965	299	44

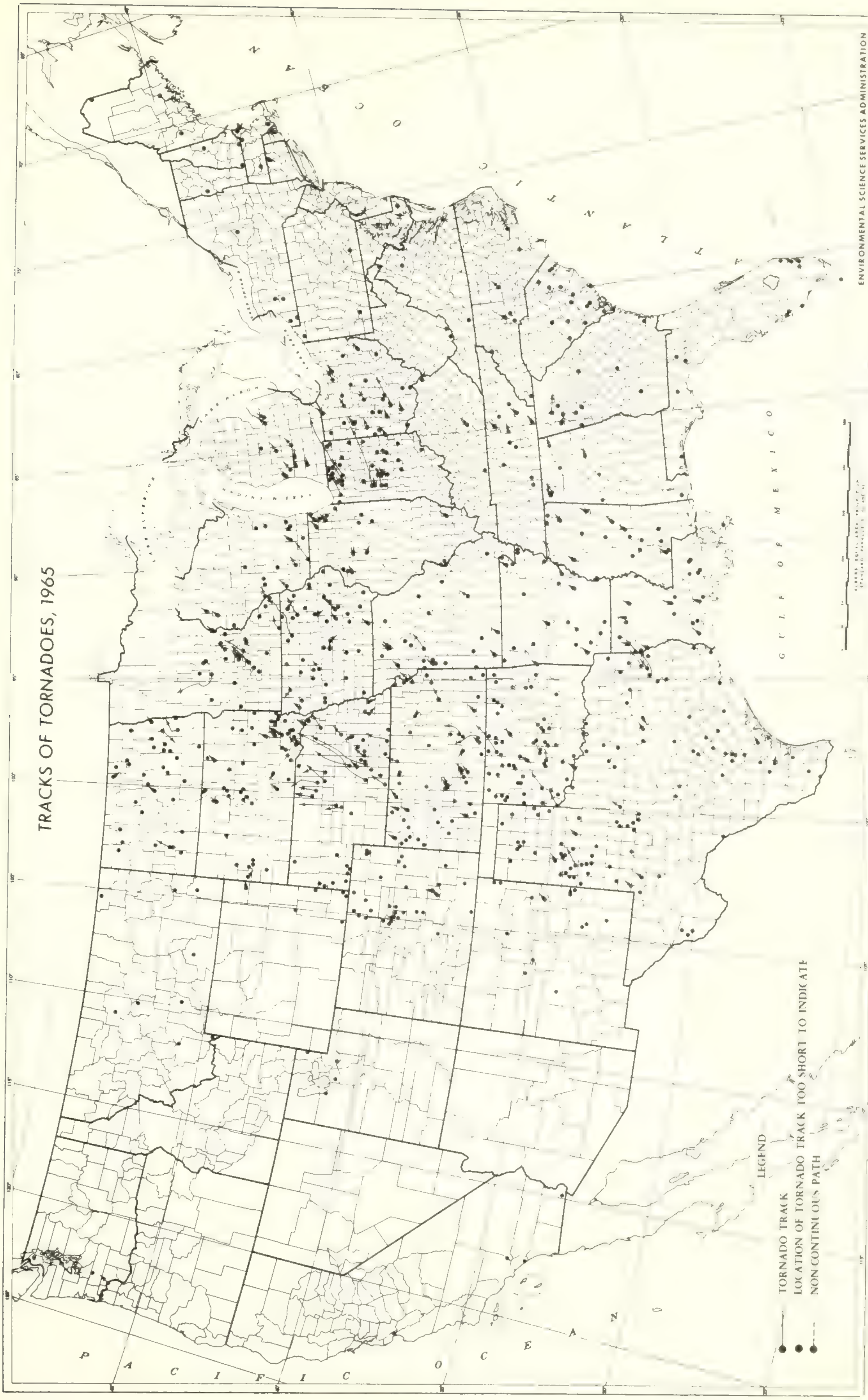
TABLE 5 — NUMBER OF FUNNEL CLOUDS ALOFT 1965

State	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Ala.			2	1	1	1							5
Alaska													0
Ariz.			1		1		1				1	1	5
Ark.	1	2		3	3		2	1			1		13
Calif.			1	2					1				4
Colo.					1	10	14	2					27
Conn.													0
Del.													0
D. C.													0
Fla.		4	3	2	2	16	31	22	2	11	2		95
Ga.					1	7							8
Hawaii									1		1		2
Idaho						1					2		3
Ill.				2		7	2	4	2		1		18
Ind.	1		3	2	14	16	2	3	2		1		44
Iowa				3	5	8	7	9	4	3			39
Kans.			3	2	65	59	6	4	9				148
Ky.					2		2						4
La.			1	1	3	12	1	2	2				22
Maine													0
Md.													0
Mass.								1					1
Mich.					42	21	2	13	3				81
Minn.					27	4	4	4					39
Miss.		4	1		2	4		4	1				16
Mo.			1	8	8	7	1	3	1		3		32
Mont.						1	8	2					11
Nebr.				2	12	17	3	1					35
Nev.													0
N. H.							1	1					2
N. J.													0
N. Mex.							1						1
N. Y.													0
N. C.				1		1							2
N. Dak.					8	11	24	1					44
Ohio					1	1	1						3
Okla.			3	13	21	12	1	3	1				54
Oreg.				1		1	1						3
Pa.													0
R. I.													0
S. C.			1				1	1					3
S. Dak.					27	22	3						52
Tenn.		3		3	2	2	1						11
Tex.			2	8	51	29	4	18	4	2	1	1	120
Utah						4							4
Vt.													0
Va.													0
Wash.													0
W. Va.													0
Wis.				4	8	4	5	6	5				32
Wyo.					3		2						5
Total	2	13	22	58	310	278	131	105	38	16	13	2	988

MONTH AND NUMBER OF MAXIMUM TORNADOES BY STATES, 1965



Environmental Data Service, ESSA


TRACKS OF TORNADOES, 1965
LEGEND
TORNADO TRACK
LOCATION OF TORNADO TRACK TOO SHORT TO INDICATE
NON-CONTINUOUS PATH
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
PACIFIC OCEAN
ATLANTIC OCEAN
GULF OF MEXICO
LAKE SUPERIOR
LAKE MICHIGAN

HAILSTORM LOSSES FOR PAST YEARS

Year	Property (exclusive of crops)	Crops	Total
1933	–	–	7
1934	–	–	7
1935	–	–	7
1936	6	7	7
1937	6	7	7
1938	6	7	7
1939	5	6	6
1940	6	7	7
1941	6	7	7
1942	6	7	7
1943	6	7	7
1944	7	7	8
1945	6	7	7
1946	7	7	7
1947	6	8	8
1948	7	8	8
1949	7	7	7
1950	7	7	7
1951	7	7	8
1952	7	7	7
1953	7	7	7
1954	7	8	8
1955	7	7	8
1956	7	8	8
1957	7	8	8
1958	7	8	8
1959	6	7	7
1960	7	8	8
1961	8	8	8
1962	9	8	9
1963	8	8	8
1964	8	8	8
1965	8	8	8

† Storm damages are placed in categories varying from 1 to 9 as follows:

1	Less than $50	4	$5,000 to $50,000	7	$5,000,000 to $50,000,000
2	$50 to $500	5	$50,000 to $500,000	8	$50,000,000 to $500,000,000
3	$500 to $5,000	6	$500,000 to $5,000,000	9	$500,000,000 to $5,000,000,000.

NOTE.--The above estimated losses are based on values at time of occurrence.

WINDSTORM LOSSES FOR PAST YEARS

(Windstorms other than tornadoes)

Year	Total loss of life	Total property loss
1916	65	7
1917	25	6
1918	79	7
1919	344	7
1920	42	6
1921	65	7
1922	133	7
1923	68	7
1924	78	7
1925	88	7
1926	357	8
1927	64	7
1928	1,947	8
1929	46	7
1930	49	7
1931	17	7
1932	306	7
1933	156	8
1934	109	7
1935	461	7
1936	121	7
1937	43	7
1938	630	8
1939	60	6
1940	251	7
1941	43	7
1942	68	7
1943	61	7
1944	448	8
1945	85	7
1946	70	7
1947	117	8
1948	52	8
1949	102	8
1950	210	8
1951	289	8
1952	137	8
1953	118	8
1954	292	9
1955	301	8
1956	196	8
1957	553	8
1958	129	8
1959	145	7
1960	85	8
1961	64	8
1962	134	9
1963	54	9
1964	64	9
1965	107	9
	Total 9,528	

† Storm damages are placed in categories varying from 1 to 9 as follows:

1	Less than $50	4	$5,000 to $50,000	7	$5,000,000 to $50,000,000
2	$50 to $500	5	$50,000 to $500,000	8	$50,000,000 to $500,000,000
3	$500 to $5,000	6	$500,000 to $5,000,000	9	$500,000,000 to $5,000,000,000.

NOTE.--The above estimated losses are based on values at time of occurrence.

NORTH ATLANTIC TROPICAL CYCLONES, 1965

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Washington, D.C.

Six tropical cyclones, including four hurricanes, developed over the North Atlantic Region in 1965. The season, extending from June 11 to October 19, was below average, as measured by frequency and duration of storms. These cyclones represent the lowest annual number since 1946 with the exception of five in 1962. This compares with an annual average of 9.5 storms, including 5.6 hurricanes during the most recent 30 years (1935-1964).

Only three tropical cyclones affected the United States in 1965. This includes two tropical storms (unnamed and Debbie) and one hurricane (Betsy). The annual average (1935-1964) is four storms, including two hurricanes.

The relatively low frequency was more than offset, however, by the tremendous damage produced by Betsy. The effects of this hurricane were felt throughout southern Florida and in the Middle Gulf Coast region from southeastern Louisiana into southern Mississippi. Betsy was the most destructive hurricane in history. The damage in Florida was less than attributed to Donna (1960) and Dora (1964); however in Louisiana, damage from Betsy alone exceeds that from any previous hurricane by millions of dollars.

Total property and crop damages for 1965 in the United States were attributed to hurricane Betsy and tropical storm Debbie. The total from these two storms was estimated near $1.5 billion, with 75 fatalities from Betsy. Betsy was the only storm to cause damage outside the United States. A total of $14 million and one death was attributed to this storm as it passed over the northern Bahamas. Summaries of each hurricane and tropical storm follow. The tracks of the storms are shown in the chart and meteorological data are given in the accompanying tables.

TROPICAL STORM, JUNE 11-18

This tropical storm was first detected in TIROS pictures on June 11 as an area of disturbed weather along and south of the Guatemalan coast. It was only the fourth North Atlantic tropical storm, and the first in June, to be traced back to the Pacific side of Central America in the 95-year climatological record.

In the two days following detection, the disturbance moved northward into the Gulf of Mexico, west of Yucatan. On the afternoon of June 13, reconnaissance aircraft found evidence of a low pressure system. Surface winds were estimated at 40 m.p.h. east of the center. On June 14 (0600 GMT), a report from NOMAD (automatic weather buoy at 25°N., 90°W.) indicated winds near 45 m.p.h. and pressure 1006 mb. (29.71 in.). This indicated some intensification as the center passed west of the bouy. Later the same date, Navy reconnaissance was unable to find a definite circulation, only a large, flat region of low pressure with a minimum around 1005 mb. (29.68 in.). The principal associated weather and maximum winds were still well east of the center.

The storm turned northeastward and the forward speed increased to 25 m.p.h. on the 14th. It moved into the Florida Panhandle between Valparaiso and Panama City on the morning of June 15. Highest sustained winds reported in Florida were 50 to 60 m.p.h., with gusts to 75 m.p.h., at Alligator Point. Dog Island reported winds of 60 m.p.h. The circulation indicated a borderline tropical storm, but lowest pressure around 1005 mb. (29.68 in.) and the high sustained winds required tropical storm classification.

The storm continued on its northeastward track and as it moved inland assumed extratropical characteristics on the afternoon of the 15th. The remnants of the storm moved through the Carolinas and eventually developed into an active wave on a frontal system off the middle Atlantic coast on June 17 and 18.

Damage was confined to the Florida coast in the vicinity of Apalachicola and was mainly the result of high tides from 2 to 6 feet above normal. General rains in excess of 5 inches were reported in the Tallahassee-Apalachicola area. There was little damage and no flooding of consequence was reported.

HURRICANE ANNA, AUGUST 21-26

TIROS X photographs on August 16 showed a weak circulation just northwest of the Cape Verde Islands. Lack of data in the succeeding days prevented positive identification of a tropical storm until the morning of August 21 when TIROS pictures indicated a tropical storm pattern some 800 miles east of Bermuda (32°N., 52°W.). On the morning of the 23d, TIROS pictures indicated an area 180 miles in diameter with an eye near 36°N., 51°W. During the afternoon the aircraft carrier RANDOLPH reported a well-defined eye displayed by radar at 37°45'N., 51°53'W. Anna was small in extent at this time; winds were probably of hurricane force near the center and gales extended outward about 75 miles.

Anna was unusual from a climatological standpoint since the point of initial hurricane intensity was farther north than any other on record, dating back to 1901. Only four other hurricanes, over this period, have reached initial hurricane intensity north of 35°N.

On the 24th Anna moved on a northeasterly course accelerating to more than 40 m.p.h in forward speed. Several ships reported winds of 86 to 92 m.p.h. during the day. The following day the SS QUISGUEYA reported winds of 85 m.p.h. and 15-to 30-foot seas, with Anna about 600 miles northwest of the western Azores and continuing on its previous track. During the day cold air began intruding into the circulation and Anna became extratropical. No reports of damage or casualties were received.

HURRICANE BETSY, AUGUST 27-SEPTEMBER 12

The TIROS weather satellite photographed a disturbed area on August 23 in the eastern Atlantic near 07.5°N., 29.5°W. This was probably the initial stages of hurricane Betsy. On the morning of August 27 Navy reconnaissance aircraft and TIROS X discovered a weak tropical depression 350 miles east-southeast of Barbados. By midday the central pressure was 1007 mb. (29.74 in.) and in the evening the depression was named Betsy. No further intensification occurred as Betsy passed through the Lesser Antilles, on a northwestward path, during the 28th. The storm was accompanied by winds of 40 to 57 m.p.h. well east of the center over the open Atlantic. Maximum winds in the Islands were briefly 40 m.p.h. in gusts. No significant damage was reported from this area.

On the 29th, reports from aircraft, ships and island stations indicated Betsy had intensified to hurricane force 200 miles north-northeast of San Juan, Puerto Rico. During the next two days Betsy slowed down, moved rather erratically, and lost some intensity. Maximum winds decreased to about 63 m.p.h. and the central pressure rose 10 mb. (0.3 in.).

On September 1 and 2 there was a marked intensification as the hurricane began moving westward. The central pressure fell approximately 40 mb. to 942 mb. (27.82 in.), the lowest recorded during the hurricane.

Winds increased to 150 m.p.h. near the center. On the 3d, hurricane Betsy skirted the Bahamas moving northwestward. During the 4th, it again slowed, and gradually moved in a small clockwise loop as a large high pressure area over the United States blocked any further northward movement.

Late on September 5, Betsy began a rather unusual southwestward movement through the northern Bahamas. On Labor Day, the 6th, the hurricane moved slowly, parallel to Great Abaco Island where hurricane force winds were reported for 20 hours, reaching a maximum of 147 m.p.h. during the late afternoon. On the morning of the 7th the hurricane center, about 40 miles in diameter, swept westward just north of Nassau. Lowest pressure at this time was 957 mb. (28.26 in.). Winds were 100-140 m.p.h. within 40 miles of the center and gales extended out 300 miles in all directions. Damage caused by winds and flooding was mainly to crops, boats and buildings with only one fatality in the Islands. Total damage in the Bahamas has been estimated at $14 million.

After leaving the Bahamas on the afternoon of the 7th, Betsy headed westward toward the Florida Keys. This storm was only the second major hurricane of record to approach Florida after moving southwestward. (The other storm passed inland November 4, 1935.) Betsy reached the coast in the upper Keys and extreme lower peninsula area during the early morning hours of the 8th. The southern edge of the hurricane eye passed over Marathon and the northern edge over Flamingo Ranger Station indicating the eye was at least 35 miles in diameter as it moved across Florida Bay.

Lowest pressure reported in southern Florida was 952 mb. (28.12 in.) at Tavernier on the southern end of Key Largo. Winds there reached 120 m.p.h. with gusts to 140 m.p.h. at 3:10 a.m., on the 8th. Wind speeds reached 100 m.p.h. or higher in gusts from Ft. Lauderdale to Everglades City; sustained winds of 100 m.p.h. or higher were recorded between Big Pine Key and Homestead. Gales lasted about 38 hours at Miami.

Damage from winds, high tides and wave action was confined principally to the area from Ft. Lauderdale southward. Northerly winds, in advance of the center, produced flooding in the Keys by waters of Florida Bay. Southerly winds following the hurricane, caused inundation by waters of the Atlantic and the Florida Straits. Tide levels reached 5 to 7 feet above m.s.l. on western Keys and 7 to 9 feet on the central and eastern Keys. Tides reached 6.1 feet above mean low water along the Miami Beach ocean front. Heaviest damage was noted on the northern sides of the islands in the Keys, and flooding on the upper Keys was extensive. Water reached depths of several feet in many places, covering highways and the first floors of many buildings. Farther north, the rising water flooded Key Biscayne. In southern Dade County, similar conditions were experienced in areas east of the coastal ridge. Streets in Miami Beach, near the ocean and Biscayne Bay, were under water. On the west side of Biscayne Bay, rising waters reached into businesses and houses near Biscayne Boulevard and Bay Shore Drive. Considerable damage was noted east of the ridge from Mercy Hospital southward to the Kings Bay area. Wave action and high tides caused considerable flooding and undermining of beach roads and low-lying property between greater Miami and the Palm Beaches. Damage was less farther north, but noticeable along the entire Florida Atlantic Coast.

Storm damages in Florida were estimated at $140 million. Direct wind damage was mainly to power and communication facilities, residential roofs, and glass breakage. Salt water inundation caused the major portion of the damage in Florida. Crop damage in some areas was heavy, but the principal citrus-producing area was spared. Broward County lost about 25 percent of its oranges and about 50 percent of its grapefruit. Limes and avocadoes in Dade County suffered extensive damage, with lime loss estimated at 50 percent and avocadoes 85 to 90 percent.

The highest rainfall amount was 11.80 inches at Plantation Key; nearby Big Pine Key had 10.52 inches. Rainfall over the remainder of extreme southern Florida ranged from 3 to 7 inches.

As Betsy moved into the Gulf of Mexico, on the 8th, her forward speed accelerated and direction of movement was north-northwest by the evening of the 9th. The storm intensified with its passage over water and winds were estimated at 150 m.p.h.

The eye arrived at Grand Isle, La., shortly after 9 p.m., CST, September 9. The sea level pressure of 28.00 inches reported in the eye at Grand Isle and at Houma a few hours later was the lowest recorded at any land station. The eye was 40 miles in diameter on the Louisiana coast; about the same as when it passed over the Keys.

During Betsy's journey from Florida to Louisiana tides caused considerable local inundations and beach erosion along the Gulf coast. Tides along the Florida coast were estimated at 3 to 5 feet above normal, south of Clearwater. Water levels were generally 4 to 5 feet, m.l.w., in northwestern and panhandle sections of Florida, with substantial variations locally due to coastline configuration. Along the Alabama coast tides ranged up to 4.7 feet above normal at Mobile. In Mississippi, water levels reached 7.4 feet, m.l.w. at Pascagoula and up to 10 feet or more above normal near the mouth of the Pearl River.

The low, marshy Mississippi River Delta of southeastern Louisiana was almost completely inundated. Tides were at least 10 to 12 feet, m.s.l. over most of the area from near Grand Isle to the Mississippi coast, but ranged locally up to 15 feet above m.s.l. in some places. The Mississippi River at New Orleans rose 10.2 feet during the storm to a stage 12.4 feet above m.s.l.

Great devastation was caused by the high water along the central Gulf coast from the point where the center of the hurricane made landfall to Mobile, Ala. Close to midnight on the 9th, with the Mississippi rising at New Orleans, ships, tugs, and barges were torn loose from their moorings. From the greater New Orleans area to Baton Rouge, barges numbering in the hundreds were either sunk or driven aground, including one containing 600 tons of chlorine gas which sank in 60 feet of water near the University of Louisiana campus. Potentially dangerous, this barge was located after a week's search and safely refloated on November 12.

Winds over the southeastern section of Louisiana were as strong as those over the Florida Keys. Grand Isle reported an estimated wind of 105 m.p.h. with gusts to 160 m.p.h., during the evening of the 9th. Winds of hurricane intensity battered the area from Grand Isle to north of Baton Rouge late on the 9th and during the early morning hours of the 10th. The maximum wind in downtown New Orleans was estimated at 125 m.p.h. Winds of gale force were observed, over the eastern half of the state, during the morning and afternoon of the 10th as Betsy moved inland.

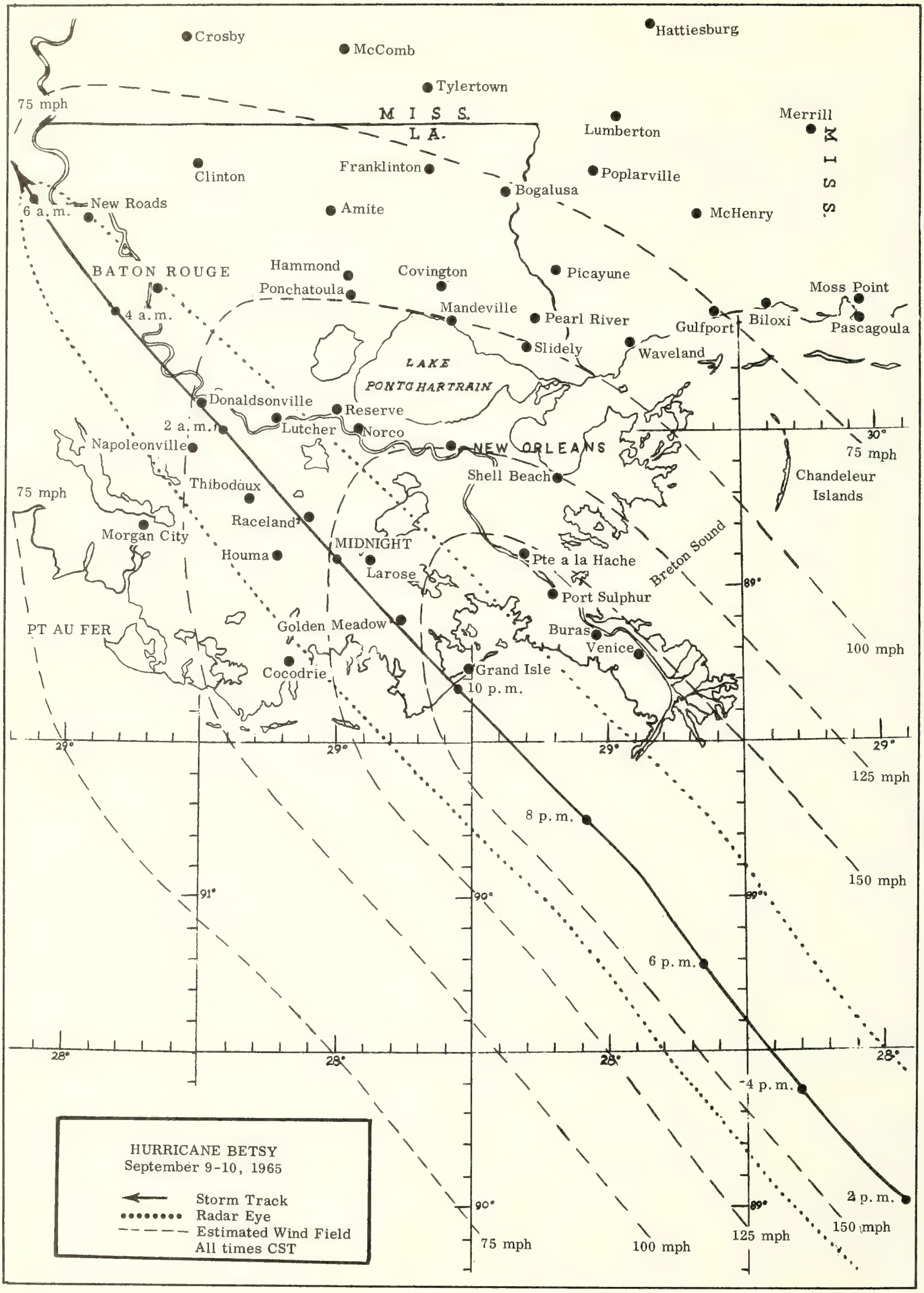
Rainfall, from Betsy, was heaviest over the eastern

TROPICAL CYCLONE DATA

HURRICANE BETSY, AUGUST 27-SEPTEMBER 12, 1965

Station	Date	Pressure (inches)		Wind (miles per hour)				Highest Tide (feet)		Storm Rainfall (inches)	Remarks
		Low	Time+	Fastest Mile	Time+	Gusts	Time+	#	Time+		
FLORIDA	Sept.										
Jacksonville WBAS	8	29.90	0140					3.2		0.13	Tide 1.6 feet above normal.
Daytona Beach WBAS	8	29.83	0453	NE 38	7/2055	NE 56	7/2055			0.19	Tide estimated 3 feet above normal.
Orlando WBAS	8	29.77	0418	E 27	1255	E 38	1255			0.24	
Lakeland WBO	8	29.66	1523	NE 33	1420	NE 50*	1441			0.87	
Melbourne Beach	8	29.72	1900			ENE 60	1900			1.01	
Vero Beach FAA	8	20.69	0800			E 65	0700			0.65	
West Palm Beach WBAS	8	29.46	0400	NNE 55	7/2340	NNE 60	7/2340			0.45	Ocean tides estimated 7 feet above normal, intercoastal waterway tides 3 feet above normal north sections of Palm Beach County estimated 5 feet above normal south sections.
Juniper Light	8	29.48	0430			NE 75	0220				
Port Everglades	8	29.38	0600			ENE 95	0600	7.0		4.25	
Fort Lauderdale	8	29.17	0425			NE 120‡	0230			4.32	
Miami Beach	8			NNE 92	0252			6.1	0512	4.24	Power failed, wind may have gone higher.
Miami WBAS	8	29.02	0333	NE 69	0410	NE 94	0410			6.02	
Miami NHC	8	28.99	0300			NE 104	0246			6.21	
Homestead AFB	8	28.71	0500			ENE 140*	0620			10.89	
North Key Largo	8					E 160*	0500				Tide estimated 9 feet.
Plantation Key	8	28.14	0630	ENE 100‡	0330	140*				11.80	In eye 0530-0730, Sept. 8. Tide estimated 4.7 feet Atlantic side, 5.5 feet Bay side.
Tavernier	8	28.12	0710	NW 120*	0300	NW 140*	0310	7.7		6.40	In eye 0430-0710, Sept. 8.
Big Pine Key	8	28.68U	1120	SW 125*	1145	165*	1145			10.52	Tide estimated 8 feet above normal.
Grassy Key	8					160*	0715				Anemometer blew away.
Key West WBAS	8	28.97	1040	SW 81	1020	SW 88	1020	3.8	0936	3.97	
Flamingo R.S.	8	28.40	0730			NNE 160*	0545	7.3		5.00*	In eye 1 1/2 hours about 0730, Sept. 8.
Everglades City	8	29.19	1030			140*	0840			2.63	Tide 1.9 feet below normal.
Clewiston	8	29.50	0630	50		NE 68	0430			2.51	
Naples	8	29.24	1500			NNE 61	1226	4.8	9/1018	2.70	
Fort Myers Beach	8			NE 53		NE 70					
Fort Myers WBAS	8	29.43	1445	ENE 46	1051	ENE 56	1051	2.9	9/1530	0.37	
Tampa WBAS	8	29.64	0856	E 31	2055			5.0	9	0.42	Tide 3.8 feet above normal on Sept. 9; below normal on 8th.
St. Petersburg	9							4.7	1342	0.26	
Cedar Key	9							6.3	1342		
Apalachicola WBO	9	29.79	0530	SE 33	0920	SE 45	0912	4.5		0	
Pensacola WBAS	9	29.78	1840 CST	SE 43	2307	SE 60	2256	4.3	10/0824	0.35	
ALABAMA											
Mobile WBAS	9	29.70	2355	SE 32	2355	SE 44	2355			2.19	Tide 4.7 feet above normal.
Dauphin Island	9					80*					
MISSISSIPPI											
Pascagoula	9	29.63	2230	ESE 46	10/0200	ESE 60	10/0200	7.4	10/0200	0.90	Tide 6.5 feet above normal.
Gulfport	10					100*					
Bay St. Louis	10					120*				3.00	Tide 7.0 feet above normal.
Purvis	10	29.35	0400	60*	0400	90*	0400			2.02	
Picayune	10			65		85				3.98	
Columbia	10	29.43	0500	SE 50	0430	SE 67	0430			1.03	
Tylertown	10			S 50*	0400	S 60*	0400			1.60	
McComb	10			NE 28	0256	NE 63	0457			3.93	
Vicksburg	10	29.45	1105	SE 34	1440	SE 55*	1440			2.23	
Jackson WBAS	10	29.61	0930	SE 43	1210	SE 52	1047			6.22	
Port Gibson	10			SSE 30*		SSE 60*				1.76	
LOUISIANA											
Grand Isle	9	28.00	2151	NNE 105*	2000	NNE 160*	2000	8.8†	2250	3.20+	
Thibodaux	10	28.02									In eye. Calm 0030-0205, sky cleared.
Houma	9	28.00						2.8†	1500	5.71	
New Orleans WBAS	9	28.65	2347	E 69	2355	E 112	2333			4.09	
New Orleans WBO	9	28.75	2340	125*	2345					1.63+	
New Orleans (Audibon)	9							12.4†		5.13	Tide is Mississippi River level.
Schriever	10	28.26	0015	N 95*	0000	NNE 110*	0000			5.80	Calm 0015-0125.
Paradis	9			E 135*						3.60	
Port Sulphur	9	28.84	2200	SSE 136	2200	SE 145	2230				
Point a la Hache	9							15.2†	2240		High water mark. Gage out 2300.
Golden Meadow	9	28.60	2230			NE 160*	2230	2.9†	1500		Calm 2300-2345.
Franklin	10	28.65	0235	WNW 68	0330	WNW 85	0330	3.8†	0800	5.25	
Lafayette	10	29.00	0358	NW 49	0358	NW 76	0358			3.97	
Morgan City	9			N 100*	2000	N 128*	10/0000			5.70	
Baldwin	10	29.00	0215			NW 100*	0200	3.5†		3.98	
Quarrantine	9	28.62	2100			163*		9*			
Covington	9			S 70*	2200	S 100*	10/0000			3.00	
Elizabeth	10	29.48	1000			NW 50	0700			3.81	
Jennings	10	29.08	0330	NE 45	0245	NE 70	0250			0.97	
Lake Charles WBAS	10	29.51	0500	NW 26	0456	NW 36	0456			0.28	
Cameron	10	29.58	0300	NNW 23	0200						
Crowley	10	29.18	0422	NNE 60*	0400	N 74*	0430			4.87	
Baton Rouge WBAS	10	28.53	0356	ENE 58		NNE 92	0215	15.5†	0445	3.49	Lowest pressure of record. Tide is Mississippi River level.
Clinton	10	28.89	0420			ENE 110*				3.83	
LSU-Ben Hur	10	28.63	0332							5.30	Calm 0250-0400.
Burtville	10	28.40	0345							3.41	Calm 0315-0400.
Alexandria WBAS	10	29.10	0918	N 46	0533	N 62	0533			3.07	
Bunkie	10	28.84	0700	NE 40*	0600	NNW 80-85*	0630			3.35	
Melville	10	28.65	0630	NE 60*	0230	NW 90*	0000			5.30	Calm 0630-0730, sky cleared, winds before calm.
New Roads	10			NE 90*	9/2330	NE 100*	0300			5.21	Near calm 0430-0530.
Opeloosa	10	29.03	0450	NW 60		NW 75				4.86	
Bastrop	10	29.32	1100			NE 55	1100			4.38	
Monroe FAA	10	29.11	1435	NNE 61	0804					4.37	
Winfield	10	29.19	1105	NE 50*	0900	ENE 70*	0815			2.90	
Cotton Valley	10	29.63	1700	ENE 37*	1320	NW 46*	1735			4.11	
TEXAS											
Port Arthur WBAS	10	29.60	0358	W 26	1134			2.4†	1500	0.02	
ARKANSAS											
Pine Bluff FAA	10			NE 34	1658	NE 46	1658			3.87	
Walnut Ridge FAA	10			NE 29	0900	NE 46	0900			6.33	
Little Rock WBAS	11	29.56	0200	NE	10/2055	NE 34	10/2055			3.25	

+ Times are Eastern Standard in Florida except where indicated.
Central Standard in all other areas.
# Tides are Mean Low Water or
† Mean Sea Level.
‡ End of Scale.
U Uncorrected.
* Estimated.


HURRICANE BETSY
September 9-10, 1965

half of Louisiana, particularly along the hurricane track. Five to six inches fell over the southern parishes of Assumption, St. Mary, and Terrebonne, also in the New Roads area, northwest of Baton Rouge.

Rainfall totaling 3 to 5 inches fell over most of the eastern half of the state with, generally, 2 to 3 inches recorded over the western and northwestern parishes. The area receiving the least rain was the southwest, with amounts generally under 1 inch.

Storm damage in Louisiana was estimated at $1.2 billion. More than 27,000 homes were destroyed or suffered major damage, three-fifths of them in Orleans Parish. The Red Cross estimated over 17,500 people injured or ill; 679 hospitalized; and 58 dead. In an area from the Louisiana coast inland to north of Baton Rouge, winds left power and communications in a snarl. More than 382,000 telephones were out of order, and over half the area had no electricity. Cities and towns up to 70 miles inland were damaged by the storm. These damages resulted from extreme winds, high tides and flooding.

In the coastal area of Louisiana, residents evacuated on September 8 and 9, in advance of the hurricane, while on September 10, residents evacuated areas as they flooded, or after they had flooded. In all, over 300,000 persons evacuated or changed their place of residence.

The heaviest damage occurred in the New Orleans area. The loss of life (41 in Orleans Parish) and great damage costs were caused, in part, by circumstances differing from those in many other localities. New Orleans has an unusual topography, which is best described as a saucer whose rim is high terrain adjacent to the surrounding streams and lakes, and various protective levees. A large part of the city is below sea level, and drainage at all times, in these areas, depends upon an extensive pumping system. The system has a capacity of 28,000 cubic feet per second and is the most powerful in the world.

The strong east and southeast winds, associated with the storm over the Gulf of Mexico southeast of New Orleans, drove water into the marshes around Lake Borgne between the Mississippi River delta and the Mississippi coast, on the evening of the 9th. The high river leeves in New Orleans easily contained the 10-foot rise in water from the morning's low stage. However, the levees around the canals and waterways east of the Mississippi are not as high as the river levees and could not contain the water. The overtopping and breaking of levees, at places along both sides of the Industrial Canal and Intracoastal waterway, introduced enormous quantities of salt water into the New Orleans area. This resulted in the overloading and failure of the pumping system when about 90 percent of the city's electric power was knocked out. Some flooding occurred several hours after the hurricane and storm surge passage as water drained into the lowest areas. Since natural drainage is not possible, flood waters remained for several days, thus increasing the overall damage and evacuation costs.

Coastal areas of Louisiana suffered heavy industrial losses due to evacuation and damage. Offshore drilling operators began hurricane precautions on September 8. Six major oil companies evacuated about 3,000 men by helicopter and boat. Fixed equipment was battened down and floating equipment sent ashore. Onshore facilities were also shut down and evacuated. Virtually all of South Louisiana's oil production was at at standstill.

Betsy hit a section of Louisiana with some of the most prolific oil, gas, and sulphur fields in the world. Many key supply bases and several major bases in the Venice-Empire-Buras-Port Sulphur, and Grand Isle areas were severely damaged or destroyed, and inaccessible because of highway damage. Much of the industry's marine fleet was beached and damaged. Many oil gathering and treating stations along with their gathering lines, serving the offshore area, were heavily damaged. Three refineries were put out of operation. As power was restored to many places, it was discovered water damage had crippled electrical installations. Natural gas treating equipment was damaged and this reduced the flow from several fields.

Crop damage was heavy in some areas of Louisiana. Wind and rain did considerable damage to agricultural products. Damage to standing crops was most severe in the southeast and south-central parts of the state where winds were strongest. Sugar cane was 90 percent lodged with some canes broken and uprooted. Cotton still in the field suffered about a 15 percent loss in northeast Louisiana, with the loss ranging to 50 percent or more in the south-central portion. Pecan losses ranged from 25 percent in northeast Louisiana to 100 percent in the southeast. Rice had been about 80 percent harvested; most of the remaining crop was flattened by the winds, but the loss was under 2 percent. The damage to the fall vegetable crop was rather extensive, especially to fall beans and cucumbers.

After battering the coastal areas on the 9th, Betsy moved northward through central Louisiana and into eastern Arkansas on the 10th. Moving over land she began to lose some of her strength, with winds 75 m.p.h. in squalls on the morning of the 10th. On the 11th the storm, now a tropical depression, moved northeastward through western Tennessee and into the Ohio Valley. Winds on the 11th diminished to 30 to 40 m.p.h. By the 12th Betsy was an extratropical cyclone in the Ohio Valley, producing beneficial rains over a widespread area.

High winds hit Mississippi after midnight on the night of the 9th. Coastal stations reported the strongest winds; gusts at Gulfport and Bay Saint Louis were estimated at 100 to 120 m.p.h. Stations in the central and western parts of the State recorded winds up to 75 m.p.h. with gusts to near 100 m.p.h. Rainfall over the southern and southwestern portions of the state ranged from about 1 to 6 inches with Jackson (WBAS) receiving 6.22 inches.

In Mississippi the damage totaled $80 million, with coastal sections and counties along the banks of the Mississippi River hardest hit. Property damage occurred along the Gulf Coast where waves and high tides swept away most of the buildings near the beach from Biloxi westward. Further inland damage was due to strong winds which unroofed many buildings and blew trees down on buildings, automobiles and utility lines. Some 918 homes were totally destroyed, and 25,960 homes received major damage. Crop damage was heaviest along the Mississippi River where cotton suffered the most ($17 million). Rice, pecan and corn losses were estimated at $2.5 million.

Alabama escaped the main effects of the storm, but did sustain some property and crop damage from winds and high tides. Maximum gusts occurred offshore at Dauphin Island and at Alabama Port on Mobile Bay where gusts reached 75 to 80 m.p.h.

Property damage was light and occurred mainly in the coastal area and extreme southwest portion of the state. Extensive damage to power lines occurred at Dauphin Island and in the southern portion of Mobile County. Minor damage to house roofs occurred on Dauphin Island and near the coast.

Crop damage was mainly to pecans, in coastal counties, with 20 percent to 25 percent of the crop destroyed. Rainfall was relatively light with 2.19 inches recorded at Mobile (WBAS).

Beneficial rains occurred in the Ohio Valley and in the states from Arkansas northeast and east as far as Maryland and Delaware. In Arkansas, losses to cotton and rice crops were more than recovered by the increased soybean yield resulting from the rains. Rainfall amounts ranged from 3 to 7 inches in some sections. The rains in the central Mississippi Valley, the Ohio Valley, and eastward, were associated with the remnants of Betsy after it lost tropical characteristics.

Fatalities associated with Betsy in the United States totaled 75. (This represents the greatest loss of life in a single hurricane since Audrey in 1957). Fifty-eight people lost their lives in Louisiana. There were four deaths in Florida and nine others lost their lives in the adjacent waters of the Gulf and the Atlantic while boating or fishing. Mississippi reported one and Arkansas reported 3 storm-connected deaths.

Six tornadoes were associated with Betsy. Two were confirmed in Florida, one on Big Pine Key (1600 EST, September 8) and the other at Marathon (0545 EST September 8). Two tornadoes resulted from thunderstorms set off in Alabama. One occurred at Theodore (0000 CST, September 10) and one in Cullman County (2000 CST, September 11). Two tornadoes occurred in Mississippi, one at Walnut (1830 CST, September 10) and the other at Magee (time unknown).

HURRICANE CAROL, SEPTEMBER 16-OCTOBER 1

Hurricane Carol probably developed as a weak circulation off the coast of West Africa on the evening of September 15. Pictures from TIROS X on the 16th and 17th indicated the system was moving westward at about 19 m.p.h. and gradually developing. The disturbance was near 12°N., 30°W. at 1522 GMT on the 17th. On the 18th reports from the SUNPALERMO showed southeast winds of 40 m.p.h. and 12- to 15-ft. waves. The next TIROS X pictures, on the 19th, showed cloud organization indicative of tropical storm intensity, centered at 16°N., 39°W., although no eye was visible. The storm slowed and turned northward on the 19th.

Carol moved north-northwestward the next day. Reconnaissance aircraft reached the circulation on the afternoon of September 20, and although unable to reach the center due to the extreme range, located an eye by radar at 19.5°N., 40.2°W., and measured 46 m.p.h. winds and surface pressure 1001 mb. (29.56 in.), some 50 miles from the eye. Carol continued on a north-northwest course at 10 knots and then gradually picked up forward speed. On the 21st at 1130 GMT Air Force reconnaissance located the center at 22.3°N., 41.2°W. Central pressure was measured at 990 mb. (29.24 in.) and maximum winds were estimated at 75 m.p.h. Late on the 21st winds increased to 98 m.p.h. as the hurricane continued northward.

On the 22d winds ranged from 87 to 98 m.p.h. as Carol began to slow down near 35°N. From September 23 through 27 Carol remained quasistationary. It drifted eastward, then southeastward and southward back to near 32.5°N., 41.5°W., then turned northward again. On the 23d winds slowly diminished, and on the 24th Carol was downgraded to a tropical storm when maximum winds dropped to 70 m.p.h. By the 25th Carol had regained hurricane force with winds of 81 m.p.h.

The hurricane accelerated northeastward on the 28th and intensified briefly. Highest winds were estimated near 100 m.p.h. on the 29th, and during the night the center passed north of the Azores. The highest wind reported at any land station was 64 m.p.h. with gusts to 80 m.p.h. at Corvo, an island in the northwestern section of the Azores. On the 30th the circulation began to weaken as cold air entered the hurricane, and by October 1 the storm was extratropical.

No damage to shipping or the Azores was reported from Carol.

TROPICAL STORM DEBBIE, SEPTEMBER 24-30

Weather conditions became disturbed over the extreme western Caribbean late on September 23, and a weak tropical depression formed in the Gulf of Honduras on Friday, September 24. At 11:00 a.m. EST the center was located at approximately 17.5°N., 85.0°W. or 75 miles west of Swan Island. Heavy showers and thunderstorms occurred in an area extending 150 miles from the center in the northeast quadrant. Swan Island received a total of 6.24 inches of rain during the two-day period.

The depression remained weak, crossing the extreme northeastern tip of Yucatan on the 25th and emerging into the extreme southern Gulf of Mexico on the morning of the 26th. The sea level pressure at this time was 1007 mb. (29.74 in.) and the shower activity indicated no organization. The slow northwestward movement increased slightly on the 26th and the course became more directly northward during the 27th.

By the morning of the 28th, slight intensification occurred and the depression was upgraded to a tropical storm. The sea level pressure was 1001 mb. (29.56 in.), with winds of 35 to 50 m.p.h. in squalls extending out about 200 miles in the northeastern semicircle. At this time the center was located near 26.5°N., 89.7°W.; about 300 miles southwest of Pensacola, Florida. Debbie moved northeastward during the 28th at about 12 m.p.h., but that night it became almost stationary about 125 miles south-southwest of Pensacola and a short distance east of the mouth of the Mississippi River. The storm began to weaken as cool and dry air entered the circulation. Aircraft and coastal radar reports showed that Debbie's eye had dissipated by the evening of the 28th. On the morning of the 29th all that remained was a trough of low pressure along 89°W. with 35- to 50-m.p.h. winds in a few squalls from Mississippi Sound to Apalachee Bay. No gale force winds were reported at land stations, but vessels did experience gales. Tides were generally 2 to 4 feet above normal from the mouth of the Mississippi River to Apalachee Bay. A 6-foot tide was reported on the Industrial Canal in New Orleans. There was some inundation around Lake Borgne southward and on the highways east of New Orleans. By midday on the 29th winds were only 23 to 35 m.p.h. and by sundown the storm had broken up over the Chandeleur Islands, and no organized circulation remained.

The Gulf moisture brought into the coastal areas resulted in torrential rains over much of southern Alabama. This rain began during the night of the 29th and ended during the afternoon of the 30th. Other sections of Alabama, Georgia, northern Florida and southern Mississippi also received locally heavy rains.

The greatest totals were reported from Mobile and heavy amounts extended to the northeast into Monroe, Lee, and Tallaposa Counties. In downtown Mobile, rainfall from 9 p.m. CST on the 29th to the afternoon of the 30th totaled 16.85 inches. About half of this fell in 3-1/2 hours, from 5 a.m. to 8:30 a.m. on the 30th. The 24-hour rainfall was the greatest in 95 years of record. Rainfall amounts of 3 to 5 inches were general over much of Alabama, Georgia, and northern Florida.

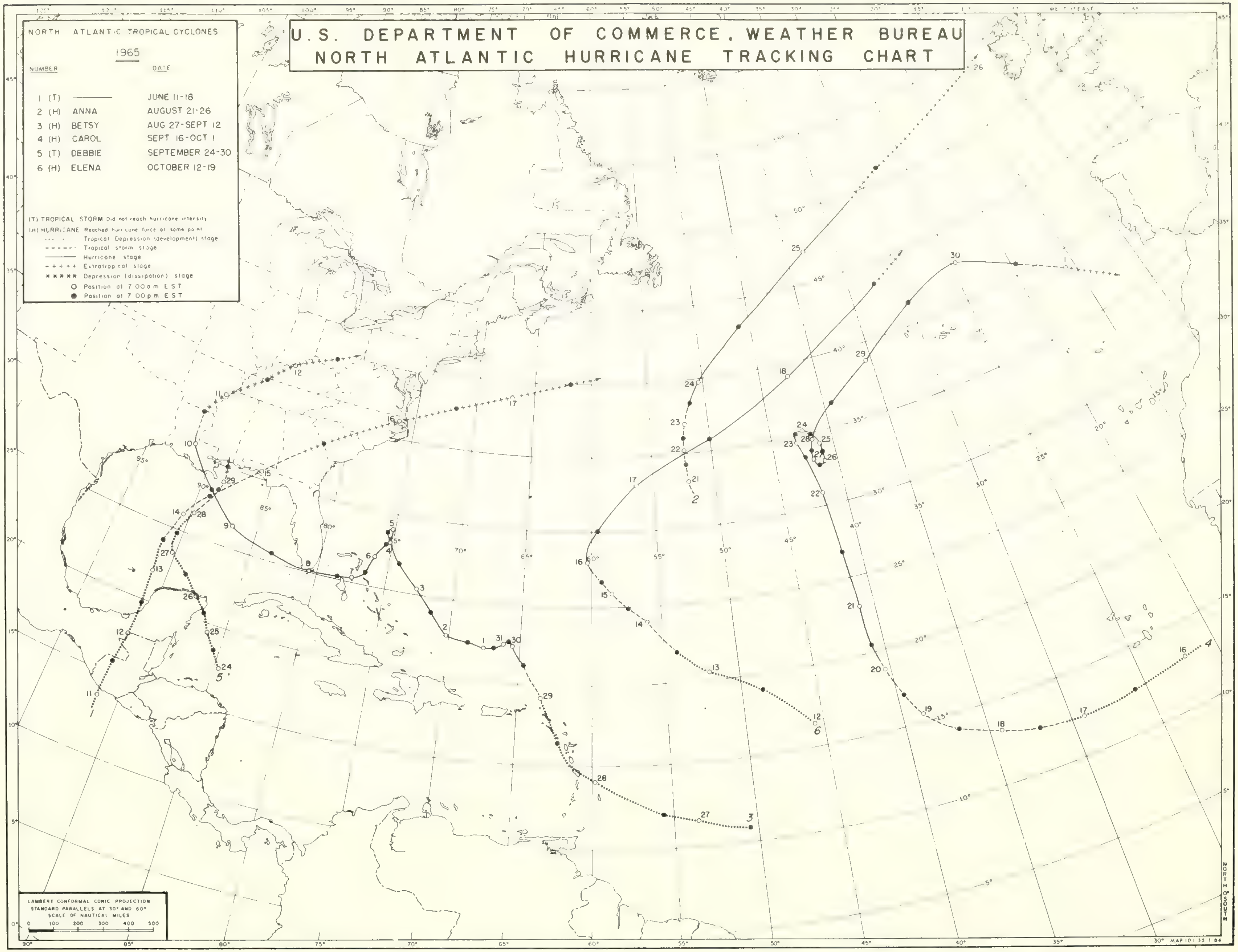
Main flooding damage occurred in southwestern Alabama where small streams and lowland areas were inundated. In Mobile and Pritchard flooding was severe and affected large areas of the city. Water entered many homes and buildings and extensive damage occurred to roads, streets, and bridges. Crops over a wide area were heavily damaged. Flood damages were estimated at $25 million.

HURRICANE ELENA, OCTOBER 12-19

A TIROS picture on October 11 showed a very weak circulation near 12°N., 40°W. On the evening of the 12th, ship reports indicated a more organized disturbance. Air Force reconnaissance found the circulation on the 13th and indicated winds near 50 m.p.h., during the late afternoon.

Tropical storm Elena continued moving in a northwesterly direction on the 14th, slowly becoming better organized. On the morning of the 15th Air Force reconnaissance reported minimum pressure 1001 mb. (29.56 in.) with winds around 50 m.p.h. On the 16th, at 1000 GMT, winds had increased to hurricane force and pressure had dropped to 991 mb. (29.26 in.). The hurricane was beginning a recurvature toward the northeast from its position 350 miles east-southeast of Bermuda.

Elena moved rapidly northeastward during the night of the 16th and on the 17th. By 2200 GMT reconnaissance found a central pressure of 986 mb. (29.12 in.) with winds near 80 m.p.h. The forward speed accelerated to about 46 m.p.h. on the 18th as cold air began intruding into the circulation. Elena became an extratropical storm by 0000 GMT on the 19th. No damage was reported in connection with Elena.


U.S. DEPARTMENT OF COMMERCE, WEATHER BUREAU
NORTH ATLANTIC HURRICANE TRACKING CHART
NORTH ATLANTIC TROPICAL CYCLONES
1965
NUMBER
DATE
1 (T) ——— JUNE 11-18
2 (H) ANNA AUGUST 21-26
3 (H) BETSY AUG 27-SEPT 12
4 (H) CAROL SEPT 16-OCT 1
5 (T) DEBBIE SEPTEMBER 24-30
6 (H) ELENA OCTOBER 12-19
(T) TROPICAL STORM Did not reach hurricane intensity
(H) HURRICANE Reached hurricane force at some point
Tropical Depression (development) stage
Tropical storm stage
Hurricane stage
+ + + + + Extratropical stage
✱✱✱✱✱ Depression (dissipation) stage
○ Position at 7:00 a m EST
● Position at 7:00 p m EST
LAMBERT CONFORMAL CONIC PROJECTION
STANDARD PARALLELS AT 30° AND 60°
SCALE OF NAUTICAL MILES
0 100 200 300 400 500
2
3
4
5
6

NORTH ATLANTIC TROPICAL CYCLONES, 1965

Storm name	Date	Area where first reported	Coast lines crossed	Highest wind speed reported	Lowest pressure reported	Place of dissipation reported	Intensity	Remarks
1 TROPICAL STORM	June 11-18	Pacific-just south of Guatemala	Florida Panhandle	60 m.p.h., on Alligator Point, Fla., June 15	1005 mb (29.68 in.) Gulf of Mexico, June 14	Southeast of Newfoundland	Tropical Storm	Little damage and no flooding of consequence.
2 ANNA	Aug. 21-26	Central North Atlantic	None	85 m.p.h., SS QUISGUEYA August 25		West of Ireland	Hurricane	
3. BETSY	Aug. 27-Sept 12	South-central North Atlantic	Lesser Antilles, Bahamas, southern Florida, Louisiana	178 m.p.h., Great Abaco Island in Bahamas, September 6	942 mb. (27.82 in.) September 2	Eastern Ohio	Hurricane	Damage estimated at $1.2 billion in Louisiana, $140 million in Florida, $80 million in Mississippi, and $0.5 million in Alabama. 75 deaths in the U.S. Damage in the Bahamas estimated at $14 million with one fatality
4. CAROL	Sept. 16-Oct 1	North Atlantic southeast of the Cape Verde Islands	None	100 m.p.h., recon. near Azores on September 29	974 mb (28.76 in.) recon. south-central North Atlantic on September 21	West of Morocco	Hurricane	
5. DEBBIE	Sept. 24-30	Western Caribbean north of eastern Honduras	None	50 m.p.h., recon. northern Gulf of Mexico September 28	1001 mb. (29.56 in.) recon. northern Gulf of Mexico September 28	Off coast of Mississippi	Tropical Storm	Damage resulting from flooding, in Mobile, Alabama area, were estimated at $25 million.
6. ELENA	Oct. 12-19	South-central North Atlantic	None	80 m.p.h., recon. about 600 mi. west of the Azores on October 18	977 mb (28.85 in.) recon. about 600 mi. west of Azores on October 18	North Atlantic 300 mi. north of the Azores	Hurricane	

NORTH ATLANTIC TROPICAL CYCLONES FOR PAST YEARS

TOTAL NUMBER OF TROPICAL CYCLONES, LOSS OF LIFE AND DAMAGE

	Total Number Tropical Cyclones*		Total Number Hurricanes		Loss of Life		Damage by Categories**	
Year	All Areas	Reaching U.S. Coast	All Areas	Reaching U.S. Coast	Total All Areas	United States	Total All Areas	United States
1886	10	7	8	6				
1887	17	4	10	3				
1888	10	6	5	3				
1889	9	4	5	2				
1890	1	0	1	0				
	47	21	29	14				
1891	11	4	8	2				
1892	9	3	4	0				
1893	12	7	10	6				
1894	6	3	5	2				
1895	6	4	2	1				
	44	21	29	11				
1896	6	4	6	4				
1897	5	4	2	1				
1898	9	6	4	3				
1899	6	4	5	3				
1900	7	3	3	1		6,000		7
	33	21	20	12				
1901	10	6	3	2		10		6
1902	5	3	3	1		#		#
1903	9	2	8	2		9		6
1904	5	3	2	2		#		6
1905	5	2	1	0		#		#
	34	16	17	7				
1906	11	6	6	4		285		7
1907	4	3	0	0		#		#
1908	8	2	5	1		#		#
1909	10	7	4	3		404		7
1910	4	[illegible]	3	2		13		6
	37	20	18	10				
1911	4	2	3	2		17		6
1912	6	4	4	2		12		6
1913	4	3	3	2		#		#
1914	1	1	0	0		#		#
1915	5	4	4	3		600		8
	20	14	14	9				
1916	14	8	11	6		107		7
1917	3	1	2	1		5		5
1918	5	2	3	1		34		6
1919	3	2	1	1		287		7
1920	4	3	4	2		2		6
	29	16	21	11				
1921	6	2	4	2		5		6
1922	4	1	2	0		0		#
1923	7	4	3	2		0		4
1924	8	3	5	2		2		3
1925	2	2	1	1		6		3
	27	12	15	7				
1926	11	4	8	4		269		8
1927	7	1	4	0		0		#
1928	[illegible]	3	4	2		1,836		7
1929	3	2	3	2		3		[illegible]
1930	2	1	2	0		0		2
	29	11	21	8				
1931	9	2	2	0		0		#
1932	11	5	6	2		0		#
1933	21	7	9	5		63		7
1934	11	5	6	3		17		6
1935	6	2	5	2		414		7
	58	21	28	12				
1936	16	7	7	3		9		6
1937	9	4	3	0		0		4
1938	8	4	3	2		600		8
1939	5	3	3	1		3		3
1940	8	3	4	2		51		6
	46	21	20	8				
1941	6	4	4	2		10		7
1942	10	3	4	2	17	8	7	7
1943	10	4	5	1	19	16	7	7
1944	11	4	7	3	1,076	64	8	8
1945	10	5	4	3	29	7	8	8
	47	20	24	11				
1946	6	4	3	1	5	0	7	7
1947	9	7	5	3	72	53	8	8
1948	9	4	6	3	24	3	7	7
1949	13	3	7	2	4	4	8	8
1950	13	4	11	3	27	19	7	7
	50	22	32	12				
1951	10	1	8	0	244	0	7	6
1952	7	2	6	1	16	3	6	6
1953	14	6	6	2	3	2	7	7
1954	11	4	8	3	720+	193	9	9
1955	12	5	9	3	1,518+	218	9	9
	54	18	37	9				
1956	8	2	4	1	76	21	8	7
1957	8	5	3	1	475	395	8	8
1958	10	1	7	0	49	2	7	7
1959	11	7	7	3	57	24	7	7
1960	7	5	4	2	185	65	8	8
	44	20	25	7				
1961	11	3	8	2	345	46	8	8
1962	5	1	3	0	4	4	6	6
1963	9	1	7	1	7,218+	11	9	7
1964	12	6	6	4	266	49	9	9
1965	6	2	4	1	76	75	9	9
	43	13	28	8				
Total	642	287	378	156				
Median	8	4	4	2				

** The Weather Bureau has for some time recognized that, without detailed expert appraisal of damage, all figures published are merely approximations to fact. Since errors in dollar estimates vary in proportion to the total damage, storms are placed in categories varying from 1 to 9 as follows:

1 Less than $50	4 $5,000 to $50,000	7 $5,000,000 to $50,000,000
2 $50 to $500	5 $50,000 to $500,000	8 $50,000,000 to $500,000,000
3 $500 to $5,000	6 $500,000 to $5,000,000	9 $500,000,000 to $5,000,000,000

Blank spaces indicate no figures available.

* Including hurricanes.

# Not reported in literature, believed minor.

+ Additional deaths for which figures are not available.

NORTH ATLANTIC TROPICAL CYCLONES FOR PAST YEARS — CONT'D

Frequency of Tropical Cyclones (Including Hurricanes) by Months and Years

		May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1886			3	1	2	2	2			10
1887		1		2	2	3	6	1	2	17
1888			1	1	2	2	1	3		10
1889		1	1		1	5	1			9
1890					1					1
1891				1	2	3	4	1		11
1892			1		1	4	3			9
1893			1	1	5	3	1	1		12
1894					2	1	3			6
1895					2	1	3			6
1896				1	1	2	2			6
1897					1	2	2			5
1898					2	5	2			9
1899				1	2	1	2			6
1900					1	3	3			7
1901			1	2	2	3	2			10
1902			2			1	1	1		5
1903				1	1	4	2	1		9
1904			1			1	3			5
1905						3	2			5
1906			2		1	3	4	1		11
1907			1			2	1			4
1908	Mar. 1			1	1	3	2			8
1909			2	2	2	2	1	1		10
1910					1	2	1			4
1911					2	1	1			4
1912			1	1		1	2	1		6
1913			1		1	1	1			4
1914						1				1
1915				1	2	2				5
1916			1	2	3	4	3	1		14
1917					2	1				3
1918					3	2				5
1919				1		1		1		3
1920						4				4
1921			1			3	2			6
1922			1			1	2			4
1923					1	1	5			7
1924			1		2	2	2	1		8
1925						1		1		2
1926				1	2	5	2	1		11
1927					1	3	3			7
1928					2	3	1			6
1929			1			1	1			3
1930					2					2
1931			1	1	2	3	1	1		9
1932		1			3	3	3	1		11
1933		1	1	3	7	5	3	1		21
1934		1	1	1	2	2	3	1		11
1935					3	1	2			6
1936			3	2	6	4	1			16
1937				1	2	6				9
1938					3	1	3	1		8
1939			1		1	1	2			5
1940		1			3	2	2			8
1941						4	2			6
1942					3	3	3	1		10
1943				1	2	4	3			10
1944				3	2	4	2			11
1945			1	1	4	3	1			10
1946			1	1	1	1	2			6
1947				1	2	3	3			9
1948		1		1	2	3	1	1		9
1949					3	7	2	1		13
1950					4	3	6			13
1951		1			3	4	2			10
1952	Feb. 1				2	2	2			7
1953		1			3	4	4	1	1	14
1954			1	1	2	4	1	1	1	11
1955				1	4	5	2			12
1956			1	1	1	4	1			8
1957			2		1	4	1			8
1958			1		4	4	1			10
1959		1	2	2	1	3	2			11
1960			1	2	1	3				7
1961				1		6	2	2		11
1962					2	2	1			5
1963				1	1	5	2			9
1964			1	1	4	4	1	1		12
1965			1		2	2	1			6
Totals	Feb. Mar. 1 1	10	42	46	144	218	147	29	4	642

Frequency of Tropical Cyclones Reaching Hurricane Intensity by Months and Years

		May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1886			2	1	2	2	1			8
1887				1	2	3	2	1	1	10
1888			1		2		1	1		5
1889		1			1	3				5
1890					1					1
1891				1	2	3	2			8
1892					1	2	1			4
1893			1	1	5	3				10
1894					1	1	3			5
1895					1		1			2
1896				1	1	2	2			6
1897					1	1				2
1898					2	2				4
1899				1	2	1	1			5
1900					1	2				3
1901				1	2					3
1902			1			1	1			3
1903				1	1	3	2	1		8
1904						1	1			2
1905							1			1
1906			1		1	2	2			6
1907										0
1908	Mar. 1			1		2	1			5
1909				1	1	1	1			4
1910						2	1			3
1911					2	1				3
1912						1	2	1		4
1913			1		1	1				3
1914										0
1915					2	2				4
1916			1	2	3	2	2	1		11
1917					1	1				2
1918					2	1				3
1919						1				1
1920						4				4
1921			1			2	1			4
1922						1	1			2
1923					1	1	1			3
1924					2	1	1	1		5
1925								1		1
1926				1	2	4	1			8
1927					1	3				4
1928					2	1	1			4
1929			1			1	1			3
1930					2					2
1931						2				2
1932					3	1	1	1		6
1933			1	1	3	3	1			9
1934			1	1	1	1	1	1		6
1935					2	1	2			5
1936			1	1	3	2				7
1937						3				3
1938					2	1				3
1939					1		2			3
1940					3	1				4
1941						3	1			4
1942					3			1		4
1943				1	1	2	1			5
1944				2	1	3	1			7
1945			1		1	1	1			4
1946				1		1	1			3
1947					2	1	2			5
1948					1	3	1	1		6
1949					2	4	1			7
1950					4	3	4			11
1951		1			2	3	2			8
1952					2	2	2			6
1953					2	3	1			6
1954			1		2	3	1		1	8
1955					3	5	1			9
1956				1	1	1	1			4
1957			1			2				3
1958					3	3	1			7
1959			1	2		3	1			7
1960				1	1	2				4
1961				1		[illegible]	1	1		8
1962					1	1	1			3
1963				1	1	4	1			7
1964					2	3	1			6
1965					2	1	1			4
Totals	Mar. 1	2	17	26	106	142	70	12	2	378

TROPICAL CYCLONES IN THE EASTERN NORTH PACIFIC, 1965

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Because of the increased use of satellite reconnaissance, tropical cyclones of the eastern North Pacific were tracked more closely during the 1965 season than in previous years. In some cases it was possible to locate remote storms that might otherwise have gone undetected. In other cases satellite surveillance yielded day-to-day positions of tropical cyclones.

During the season there was one hurricane (cyclone with sustained winds in excess of 63 kt.), nine tropical storms (winds 34 to 63 kt.), one tropical depression (a closed circulation with winds less than 34 kt.), and three suspicious areas where TIROS IX, on successive days, indicated the presence of a disturbance in an area removed from shipping lanes and beyond the range of reconnaissance aircraft.

A total of 242 advisories were prepared by the San Francisco office. Doreen (the storm that lasted the longest) required 41; an unnamed tropical depression 200 mi. southeast of Acapulco, required only 2. In addition to the several suspicious areas found by TIROS, others were indicated for which no continuity could be determined. These were given special study to determine the possibility of the presence of a tropical storm, but no advisories were issued on them. Three of the 10 tropical cyclones were first located by TIROS.

The quantity and quality of TIROS photographs has increased greatly since 1961, and these pictures were valuable tools during the 1965 season. As usual, however, the forecaster often had only the weather observations from merchant ships on which to base his knowledge of the storms.

Eastern North Pacific tropical cyclones are usually not as large nor as intense as contemporary storms in the western oceans. Frequently, the closed circulation around these storms is 60 mi. or less in diameter, and even in hurricane Emily, with sustained winds of 80 kt. near the center, it was only about 120 mi. The eye of the storm is also correspondingly small. Surface shipping in the eastern tropical Pacific is confined to rather narrow lanes between Los Angeles and Panama and Honolulu and Panama. Because of their small size, it is not easy to find tropical cyclones between these shipping lanes.

Two near-the-eye surface observations were reported during the season. One radar observation was made by the ESPARTA just before Wallie moved inland the evening of June 17; the eye was about 4 1/2 mi. in diameter. On a southeast heading to Panama from Los Angeles, the MORMACTIDE passed within a few miles northeast of the center of Emily on August 31. Figure 1 shows the barogram and wind pattern reported, displayed in miles from the center of the storm.

Several eye observations were made by TIROS IX and X. On June 4, TIROS looked directly into the eye of Victoria, and on June 30, it looked down at Ava. There were a number of other eye pictures during the season, and no storm was without at least one picture.

The 1965 season brought the first visual sighting from a manned satellite of a tropical cyclone over the North Pacific Ocean when Major Gordon Cooper, aboard the Gemini space capsule, reported the location of Doreen near 23.0°N., 132.5°W, on August 25.

Progress is being made in equating satellite pictures with the storm's intensity. See Mariners Weather Log article, May 1965 issue, p. 77, relating storm diameter and degree of banding of clouds to the windspeed near the center of the storm.

While the full effects of the season's tropical cyclones were felt mostly at sea, two storms, the first and last of the season, reached the coast of Mexico. Wallie moved inland with 45-kt. winds west-northwest of Acapulco, with no reported damage. Hazel contained winds as high as 59 kt., according to press reports, as it moved into the Mazatlan area. Heavy rains accompanying the storm caused considerable flooding resulting in $10 million damage, the evacuation of about 10,000 people from low lying areas, and six deaths.

Summaries of the individual tropical cyclones follow. All times used are GMT. Tracks shown in the chart are those cyclones which reached at least tropical storm intensity.

TROPICAL STORM VICTORIA, JUNE 3-7

The first disturbance to develop into a tropical storm during the 1965 season over the eastern North Pacific Ocean was detected by TIROS IX at 11°N., 106°W., at 1726, June 3, as a tropical depression, moving northwestward at 12 kt. The D. M. POLYROVER, at 10.6°N., 104.0°W., 90 mi east of the center, reported easterly winds of 20 kt., a pressure of 1005 mb. and showery weather. The POLYROVER moved westward and by 1200 on the 4th, its wind had backed to south-southwest, 33 kt. at a point about 90 mi. north of Clipperton Island and approximately 90 mi from the center.

By 1800, TIROS pictures and observations from the POLYROVER, SAN JUAN PROSPECTOR, and ACILA indicated the depression had developed into a tropical storm centered near 14°N., 111°W. The system moved west-northwestward but a lack of ship reports and the absence of satellite observations made it difficult to track. Highest winds were believed to be 50 kt. near the center with gale force winds extending about 100 mi. from the center. At 1930 on the 7th, a TIROS picture indicated the center near 19°N., 120°W. Twenty-four hours later another Tiros picture indicated the storm had deteriorated.

TROPICAL STORM WALLIE, JUNE 16-18

A tropical depression was first charted at 1800 on June 16 with a center located at 15.0°N., 97.5°W. based on reports of the PHILIPPINE CORREGIDOR and the TARANGER. About 0900 on the 17th the disturbance developed into tropical storm Wallie about 90 mi. southeast of Acapulco. Moving northwestward and passing south of Acapulco, the storm curved to the north and moved inland about 60 mi. northwest of the city. Highest winds were estimated at 50 kt. with gale force winds extending about 100 mi. from the center. Force 8 winds, heavy rain, a confused sea, and a radar observation of the eye of the storm were reported by the ESPARTA at 17.0°N., 100.9°W., at 0100 on the 18th. Thirty-eight to 43-kt. winds were also reported by the PRESIDENT McKINLEY.

No damage to coastal installations or loss of life have been associated with this storm.

TROPICAL STORM AVA, JUNE 28-JULY 5

At 0600 June 28, an apparent circulation was noticed on the weather charts in the vicinity of 13°N., 106°W. The disturbed area developed rapidly, and by 1800 tropical storm warnings on Ava had been issued which placed the center at 15.2°N., 108.5°W. The KRISHNA reported northeast 38- to 43-kt. winds and a pressure of 998 mb. at a position about 100 mi. northwest of the center. The STEEL EXECUTIVE reported similar winds and confused seas, with 8-ft. waves on a 13-ft. swell. After these observations, little data was available but it was apparent the disturbance had weakened to a tropical depression, and was continuing to move west-northwestward at about 10 kt. At 0600 on the 30th, the center was located about 16.2°N., 114.5°W., from observations of the SAMPAN HITCH and the MARCHEN. The SAMPAN HITCH was in the vicinity of the storm from the morning of the 28th through the morning of July 1 and indicated a continued northwesterly movement of the system at a speed of 5 to 10 kt. At 1800 June 30, the SAMPAN HITCH reported 14-ft. waves and a west 30-kt. wind, locating the storm at 17.4°N., 116.3°W.; the depression had again intensified to a tropical storm and was moving west at about 10 kt.

A 1745 satellite picture on July 1 showed the storm centered approximately at 18.0°N., 119.5°W. On the 2d at 1800, the D. M. NAEUSS METEOR reported east wind, force 4, steady rain, 1 mi. visibility, and an east-northeast sea with 8-ft waves. This information located the storm at 17.8°N., 123.0°W. At 1200 on the 3d, the ODESSA located the system at 17.6°N., 126.0°W. The remnants of Ava continued in a west-southwesterly direction for several days; the last indications of it were at about 16°N., 132°W., at 1200 on the 5th.

TROPICAL STORM BERNICE, JUNE 30-JULY 8

About the time Ava developed into a tropical storm, another disturbance was forming about 300 mi. south of Puerto Salina Cruz. The STEEL EXECUTIVE encountered 45-kt. winds, 6 1/2-ft. waves on 14-ft. swells, and intermittent heavy rain at 0600 June 30. This observation located the disturbance and it was upgraded to a tropical storm, with its center about 340 mi. southsoutheast of Acapulco. The storm was moving west-northwest at about 3 kt. At 0000 and 0300 on July 1, D. M. NAESS COMMANDER observations located the storm at 11.7°N., 97.0°W., by indicating northeast winds force 7 and moderate to high seas at a point estimated about 100 mi. northeast of the center. At 1546 on the 1st, TIROS pictures indicated the storm was located at approximately 12°N., 98°W. - continuing its west-northwestward movement at 3 to 5 kt.

At 0600 on the 3d reports from the OTTERBURN, PAROS, POLAR LIGHT, and POLAR STERN relocated the storm near 14°N., 102°W. Continuing its northwestward movement, Bernice was located by TIROS near 16.4°N., 106.0°W., at 1714 on the 4th, with the storm beginning a more westward movement at about 10 kt. The TEL AVIV, at 16.5°N., 111.0°W., reported northerly winds of 48 to 52 kt., very rough seas and a 982.8 mb. pressure. The vessel was probably very near the center at the time of observation, 0930 on the 5th. The TROLLHEIM, at 0000 on the 6th reported very rough seas, force 10 easterly winds, and a pressure of 996 mb. in the storm center at 16.5°N., 114.0°W. As the storm continued its westward movement, ship reports 200 to 300 mi. from the center located it at 19°N., 125°W., at 0000 on the 8th moving 12 kt. and weakening. By 0600 on the 8th it showed signs of further weakening and 6 hr. later only a trace remained.

TROPICAL STORM CLAUDIA, AUGUST 7-10

On the weather map at 1800 August 4, a large area of pressure lower than 1008 mb. appeared centered about 420 mi. west-southwest of Acapulco, Mexico. Few ships were in the area and only gentle winds were reported. The D. M. BEERSHEVA, sailing westward at 15 kt. at 14.5°N., 112.0°W., indicated a slight consolidation of the LOW with a center charted at 15.5°N., 110.5°W., at 1200 on the 6th. Further tightening of the system was evident by 1800 with easterly force 5 winds and long east-southeast swells reported by the SANTA JUANA at 22°N., 111°W. The SEAMAR, 22°N., 109°W., indicated the center only a few degrees farther south. On 0000 of the 7th the storm was classified as a tropical depression near 20.5°N., 110.0°W., moving northwest at 10 kt. At 0300 on the 8th, the CHARLOTTE LYKES reported an easterly wind of 35 kt. at 24.0°N., 113.5°W., and at 0600 a southeast wind 30 kt. near 23.7°N., 113.6°W.; the tropical depression was upgraded to a tropical storm.

Maximum winds in the system were believed to be 45 to 50 kt. with 30-kt. winds extending 60 to 100 mi. from the center. Altering its course slightly, the storm moved west-northwestward at 10 to 15 kt., apparently unchanged in intensity. There were few ship reports and satellite pictures were unsatisfactory. Aircraft reconnaissance did indicate, however, that the storm was farther west than anticipated. By 1800 on the 9th, the system moved to 25.6°N., 122.2°W., and began to recurve northward, reaching 29°N., 125°W., by 1200 on the 10th, when it was downgraded to a tropical depression.

TROPICAL STORM DOREEN, AUG. 20-SEPT. 1

A tropical disturbance was located by a TIROS photograph on the 1800 pass on August 19. The center of the vortex was indicated (within 2 degrees) at 10.5°N., 104.5°W. By 1200 on the 20th, the SAN JUAN PROSPECTOR located the storm at 13.5°N., 109.0°W., with southeast 40-kt winds, 997.5-mb. pressure, and 12-ft. waves. The storm was apparently moving westward at about 10 kt. The PECOS, 250 to 300 mi. north and the LINKMOOR, 400 mi. southeast, both moving west with the storm, experienced 25- to 30-kt. easterly winds and 15- to 20-kt. westerly winds respectively, for 24 hr. ending at 1200 on the 23d. The storm altered its course, moving northwestward. As it did so, the LINKMOOR wind weakened and the PECOS wind increased to northeast 35 kt. by 0600 on the 24th. The PECOS passed southeast, just ahead of the storm, which was located 6 hr. later by the KYOYU MARU, sailing near 20.5°N., on an easterly course at 14 kt. The KYOYU MARU passed just north of the center with the following winds reported: "24/0000, ENE 25; 24/0600, NE 25; 24/0900, ESE 25; 24/1200, NNE 60; 24/1500, NE 60; 24/1800, ENE 35; 25/0000, SE 30; 25/0600, SE 20." These observations located the storm center at about 19.7°N., 128.7°W., at 1800 on the 24th.

The MEZADA, on an easterly course, changed to a southeasterly course to pass behind the storm. At about 27.5°N., 135.5°W., at 0600 on the 26th she reported a northeast 30-kt. wind which backed to northwest 20 kt. by 1200 and to west-northwest 20 kt. by 1800. By then the storm was at 27.0°N., 133.5°W., about 90 mi. from the MEZADA, which resumed an easterly course at 14 kt.

At 1925 on the 26th, Gordon Cooper, on board GEMINI V made his second visual observation of the eye of the storm. He located the center at 27.2°N., 133.5°W., very close to the position determined from the reports of the BOLERO, HAWAII MARU, MEZADA, and HAWAII STANDARD.

The HARMATAN, at 0000 on the 27th reported in plain language, "position 30.02 N, 133.58 W, wind NE force 6 sea rough swell heavy temp 74 baro 29.74 falling continuous squally rain." Three hours later it reported: "posn 30.12 N, 133.28 W., wind ENE force 8/9 baro 1008 mbs falling temp 72 sea rough swell ENE heavy densely overcast vis 5 mi frequent violent rain squalls vis less than 1 mi during squalls." At that time the storm center was located at about 28.0°N., 133.5°W. The cyclone continued northward but slowed to 7 or 8 kt. at 0600 on the 27th; the HARMATAN, still north of the center, reported east-northeast 35 kt.

When the storm reached approximately 30°N., 133°W., at 1200 on the 27th, it slowed down before turning and moving southwestward. By 0000 and 0300 on the 29th, the CAP FINISTERE and SAGAMI MARU indicated that the center was at 30.5°N., 135.0°W., moving southwestward and weakening. By 1200 on the 30th, it had reached 28.5°N., 140°W., and warnings were transferred to the Honolulu Hurricane Center which indicated winds became less than 33 kt. by 0000 of the 31st. Doreen became extratropical, losing its identity by 0000, September 1.

HURRICANE EMILY, AUGUST 29-SEPTEMBER 4

At 1200 on August 29 the KYOKEI MARU, at 22.7°N., 106.8°W., reported east-northeast 25-kt. winds, making it apparent that a tropical storm was forming in a large area of low pressure extending from 10 to 20 degrees north and from 103 to 123 degrees west. By 1800, with the report from the KALU at 16.0°N., 107.5°W., of a south-southwest 50-kt. wind, very rough seas, and a barometer reading of 997 mb., a tropical storm warning was issued. The center was about 30 mi. west of the KALU and maximum winds of 55 kt. were forecast with 50-kt. winds within 50 mi. of the center and 30-kt. winds outward to 100 mi. The storm was moving north-northwestward at about 8 kt.

By 1800 on the 30th, the storm was about 120 mi. northeast of Socorro Island and in an area crowded with shipping. The MEZADA, KASUGASAN MARU, MOLDANGER, OCEAN CARRIER, TOBIAS MAERSK, ALAMO VICTORY, TELAMON, CARTAGO, and SIBONGA were feeling the effects of the 25- to 40-kt. winds and 14-ft. seas. The storm slowed slightly but winds speeds increased to hurricane intensity and by 1500 on the 31st the MORMACTIDE reported south-southeast 80-kt. winds and 988.5-mb. pressure. From correspondence with the MORMACTIDE, the ship encountered hurricane Emily off Cape San Lucas, passing very near the center. What appeared to be the wall of the eye showed on the radar. The lowest barometer reading noted was 982.7 mb. at 1350 on the 31st. The vessel's position was 22.5°N., 110.4°W. The wind speed exceeded 80 kt., seas were mountainous, there was torrential rain, and visibility was reduced to 25 yds. The ship's log reported 40-ft. waves at 1500 while the ship was hove to. From 1100 to 1700 the ship made little headway. A satellite fix at 1852 on the 31st was in good agreement with surface reports.

The storm moved about 6 kt., parallel to, and 40 to 60 mi. off the west coast of Baja California. By 0600 on September 1, there were indications that winds had lowered to tropical storm intensity and, with reports from the TOMISHIMA MARU, SHUHO MARU, TINALDO, SANTA ADELA, and NEIDENFELS, the center was located at 24.0°N., 112.5°W.

As the storm continued to weaken, reports from ships decreased in frequency and locating the storm became more difficult. It was again well located at 1200 on the 2d at about 25.5°N., 114.5°W., from reports of the PENNMAR, TRBOVLJE, and STEEL RECORDER. It moved to 26.5°N., 116.0°W., by 1200 on the 3d. Twelve hours later the storm appeared weaker at about 28.0°N., 116.5°W., and the last indication of it was between Guadalupe and the Lower California coast at 1200 on the 4th.

TROPICAL STORM FLORENCE, SEPTEMBER 7-15

Starting within a broad low pressure area about 500 mi. west of Acapulco, a tropical depression was first indicated on the weather map centered about 16°N., 110°W., at 1200 on September 7. This location was substantiated by a satellite picture at 1844. The disturbance, moving west at about 6 kt., became tropical storm Florence at 0000 on the 9th with a center at 17°N., 114°W. Strongest winds were believed to be 40 kt. near the center with 30-kt. winds over a radius of 100 mi. Winds of 25 kt. at 1800 on the 8th and 0000 on the 9th were observed by the STEEL KING. The storm continued unchanged in either movement or intensity for about 24 hr. It was downgraded to a tropical depression late on the 11th. This depression was tracked in a west-northwesterly direction through 1800 on the 15th, when it was located at 24°N., 137°W.

TROPICAL STORM GLENDA, SEPTEMBER 13-22

Tropical storm Glenda was born in a low pressure area centered about 90 mi. north of Clipperton Island. The NEW KAILING at 0000 on the 13th reported an east wind of 34 kt. at 12.8°N., 109.3°W. Moving westward at about 15 kt., the storm was difficult to track due to a lack of reports. It was located by a satellite picture at 1833 on the 14th, centered near 12.5°N., 118.0°W. Although carried as a tropical storm with winds estimated at 45 kt., analysis of the satellite picture indicates winds may have been almost hurricane force near the center. The next accurate fix was at 1939 on the 15th, when the storm was centered about 13.0°N., 122.5°W., with maximum winds estimated at 40 to 45 kt. At 1909 on the 16th the satellite showed the storm near 14°N., 125°W. The WALTER RICE, at 1500 on the 18th reported east-southeast winds of 45 kt. at 17.5°N., 126.6°W., about 100 mi. northeast of the center. The POLYROVER, at 16°N., 128°W., reported south-southeast winds 45 kt., heavy rain, very rough seas at 0000 on the 19th. Further ship observations were not available. At 1800 on the 22d the center was near 22.5°N., 135.5°W., where it became a tropical depression, dissipating rapidly.

TROPICAL STORM HAZEL, SEPTEMBER 23-26

The most destructive eastern North Pacific tropical cyclone of the year began as a weak tropical disturbance southeast of Socorro Island a short time before 1800 on September 22. It was not until the disturbance moved northward to a position about 100 mi. east of Socorro 24 hr. later that it was identified as a tropical depression.

The 1200 report from the HOPECRAG and the 1800 report from Socorro Island, the STEEL TRAVELER, DUKE OF MISTRA, GULF TRADER, and PHILIPPINE PRESIDENT QUEZON indicated winds of 30 kt. for a radius of 50 mi. around the center. By 1200 of the 24th it was apparent the depression had developed into tropical storm Hazel northeast of Socorro Island and was moving northward at about 8 kt. At 1830 a satellite picture indicated winds of 40 to 45 kt. near the center. At 1806 on the 25th, another pass of the satellite indicated the center at 22.5°N., 108.5°W., little changed in intensity. Numerous 40- and 45-kt. winds were reported at 1800 map time.

The PHILIPPINE PRESIDENT QUEZON at 21.3°N., 107.3°W. reported south-southwest 50-kt. winds, seas high, swell 12 ft. at 0000 on the 26th, indicating the storm was moving east-northeast at about 8 kt.

This movement continued until the storm reached the coast, just south of Mazatlan with peak winds of 59 kt. reported. Press reports said at least 30 fishing boats were wrecked. On shore, damage was estimated at $10 million as about 10,000 people evacuated low lying areas flooded by swollen streams. At least six people died.

Several eye observations were made by TIROS IX and X. On June 4, TIROS looked directly into the eye

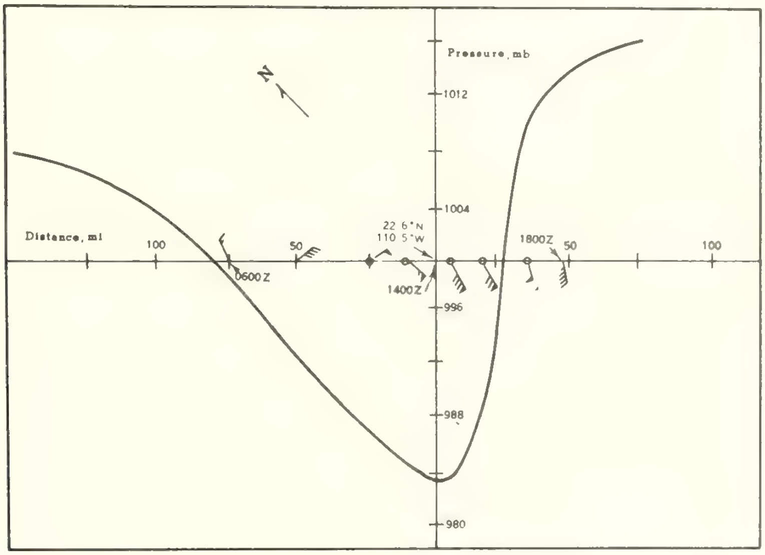
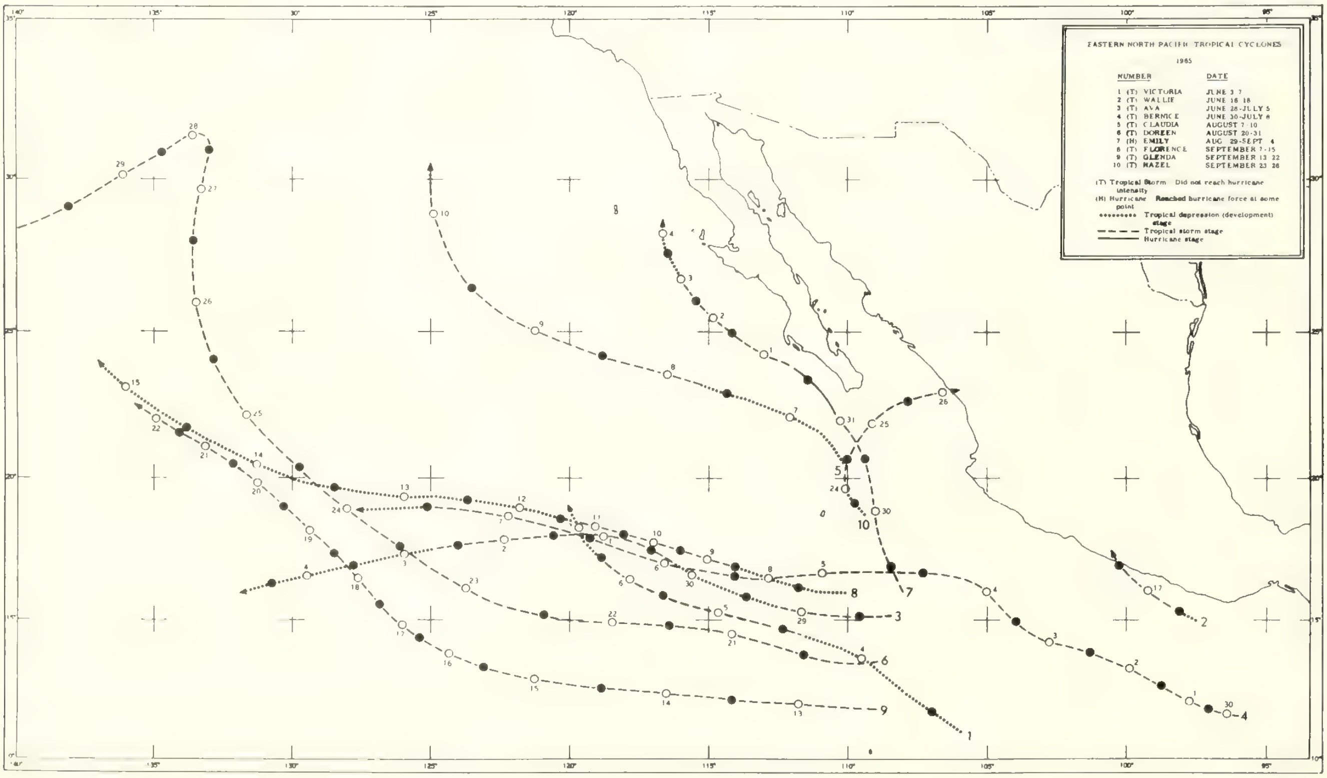


Fig. 1 MORMACTIDE barogram and wind distribution in distance from the center of hurricane Emily, August 31, 1965.

TROPICAL CYCLONES IN THE EASTERN NORTH PACIFIC, 1965

Name	Date and Area First Reported	Highest Wind Speed Reported	Lowest Pressure Reported	Date and Area of Dissipation	Remarks
1. VICTORIA (T. S.)	June 3, 1726 11.0°N., 106.0°W.	25 kt., 051500 POLYROVER		June 7, 1930 19.0°N., 120.0°W.	
2. WALLIE (T. S.)	June 16, 1800 15.0°N., 97.5°W.	45 kt., 180000 ESPARTA	1000.4 mb., 161800 PRES. McKINLEY	June 18, 0600 17.5°N., 100.5°W.	No report of damage.
3. AVA (T. S.)	June 28, 1800 15.2°N., 108.5°W.	35 kt., 281800 KRISHNA	998.0 mb., 281800 KRISHNA	July 5, 1200 16.0°N., 132.0°W.	SAMPAN HITCH (301200) and STEEL EXECUTIVE (281800) also reported 35 kt. winds.
4. BERNICE (T. S.)	June 30, 0600 11.5°N., 96.0°W.	55 kt., 060000 TROLLHEIM	982.8 mb., 050930 TEL AVIV	July 8, 1200 18.9°N., 127.5°W.	
5. CLAUDIA (T. S.)	August 7, 0000 20.5°N., 110.0°W.	40 kt., 080430	1003.5 mb., 071200 MOERDY	August 10, 1800 30.5°N., 125.0°W.	
6. DOREEN (T. S.)	August 20, 1200 13.5°N., 109.0°W.	60 kt., 241500 KYOYU MARU	998.3 mb., 241200 KYOYU MARU	August 31, 0000 29.0°N., 141.0°W.	
7. EMILY (Hurricane)	August 29, 1800 16.0°N., 108.0°W.	80 kt., 311500 MORMACTIDE	982.7 mb., 311350 MORMACTIDE	September 4, 1800 28.6°N., 116.5°W.	
8. FLORENCE (T. S.)	September 7, 1200 16.0°N., 110.0°W.	30 kt., 131800 COLUMBIA VIC.	1005.8 mb., 090000 STEEL KING	September 15, 1800 24.0°N., 137.0°W.	
9. GLENDA (T. S.)	September 13, 0000 11.8°N., 109.0°W.	45 kt., 181500 WALTER RICE	1004.7 mb., 130000 BKCO	September 22, 1800 22.5°N., 135.5°W.	
10. HAZEL (T. S.)	September 23, 1800 18.7°N., 109.4°W.	50 kt., 260000 PHILIPPINE PRES. QUEZON	986.0 mb., 251800 SANTA ANITA	September 26, 1800 23.0°N., 106.0°W.	Storm caused considerable flooding in Mazatlan, 6 dead, 10,000 evacuated low areas, $10 million damage.

All times - GMT.


EASTERN NORTH PACIFIC TROPICAL CYCLONES
1965
NUMBER
DATE
1 (T) VICTORIA JUNE 3-7
2 (T) WALLIE JUNE 16-18
3 (T) AVA JUNE 28-JULY 5
4 (T) BERNICE JUNE 30-JULY 8
5 (T) CLAUDIA AUGUST 7-10
6 (T) DOREEN AUGUST 20-31
7 (H) EMILY AUG 29-SEPT 4
8 (T) FLORENCE SEPTEMBER 7-15
9 (T) GLENDA SEPTEMBER 13-22
10 (T) HAZEL SEPTEMBER 23-26
(T) Tropical Storm Did not reach hurricane intensity
(H) Hurricane Reached hurricane force at some point
•••••••••• Tropical depression (development) stage
— — — — Tropical storm stage
———— Hurricane stage
140°
135°
130°
125°
120°
115°
110°
105°
100°
95°
1
2
3
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TYPHOONS OF THE WESTERN NORTH PACIFIC, 1965

Based on the report of the Joint Typhoon Warning Center
Fleet Weather Central, Guam, Mariana Islands

It was a record year for "super typhoons", those tropical cyclones with maximum sustained surface winds of 130 kt. or more. There were 11 typhoons in this category. The most intense was DINAH, with a maximum sustained wind of 160 kt.

The Joint Typhoon Warning Center issued a total of 805 warnings on 21 typhoons, 13 tropical storms, and 6 tropical depressions in the western Pacific in 1965. The previous record of 165 calendar days in warning, established in 1961, was broken last year with 167. Two or more tropical cyclones were carried on 55 days, with 3 on 10 of these days.

A number of typhoons moved with unusual speed before becoming extratropical. Typhoon Faye had a maximum forward speed of 65 kt. on November 26. Amy, Jean, Trix, and Carmen attained forward speeds of 40 kt. or more as much as 18 hr. prior to becoming extratropical.

In the following narrative summary of tropical cyclones that reached typhoon strength, and in the accompanying figures, typhoon intensity indicates wind speeds of 64 kt. or more; tropical storm intensity, 34 to 63 kt; tropical depression intensity, less than 34 kt. All distances are in nautical miles and all times in Greenwich Mean Time. Dates given for individual tropical cyclones indicate the periods during which warnings were issued. Storm tracks and maximum winds presented are based on post analysis.

PATSY, JANUARY 19-22

Patsy was the first January typhoon since 1958. It was in the storm stage when the first advisory was issued on the 19th. Positioning of the circulation near 14°N., 128°E., was accomplished by surface and satellite reports. On the 20th, Patsy reached typhoon strength with winds near the center estimated at 65 kt. This maximum intensity was maintained until the 21st. Early movement was northeastward, but near 130°E. late on the 20th, Patsy reversed direction and headed toward southern Luzon. Maximum winds were only 25 kt. when the cyclone moved inland near Daet.

WANDA, APRIL 12-14

Typhoon Wanda was first positioned northeast of Truk early on the 12th. Sparse surface reports indicated a depression with maximum winds of 30 kt. Reconnaissance aircraft made a visual fix shortly thereafter and the cyclone was upgraded to a tropical storm. Little change in intensity was noted until late on the 13th as Wanda continued to move on a west-northwest course. Aircraft penetration at 2300 on the 13th established maximum surface winds of 65 kt. Typhoon intensity was brief and reconnaissance showed Wanda to have degenerated into a moderate easterly wave shortly after passing over Yap on the 14th.

AMY, MAY 21-27

When sighted by reconnaissance aircraft early on the 21st near 10° N., 131°E., Amy was not well organized. Winds were only 25 kt. Intensifying and moving northwestward, the cyclone was a tropical storm by the 22d. By the 24th just east of central Luzon numerous funnel cloud formations forced aircraft from the area of the storm center. Subsequent reconnaissance that day indicated the formation and predominance of a second center near 16°N., 124°E. Amy reached typhoon intensity late on the 24th. Fringe effects from the typhoon sank an inter-island vessel with 40 persons off Limasawa Island, drowning two women and six children. Four passengers were also reported missing from the motor boat SWEET HOME. Recurvature to the northeast occurred about 100 mi. east of Casiguran. As Amy sped toward Tokyo it passed between Okino Daito Jima and Minami Daito Jima early on the 26th with 100-kt. winds. Accompanied by heavy rain, typhoon Amy slammed into the Izu Peninsula, 90 mi. southwest of Tokyo, on the 27th. Intensity had decreased, but Amy brought gale force winds and heavy rains to most of southern and central Japan. Floods and landslides seriously disrupted air, sea, road, and rail transport. At least two persons died in the floods, and three fishermen were missing after their boat capsized in heavy seas. By the time typhoon Amy left Japan, heading northwest, there were 17 persons dead, 10 missing, and 18 injured. Damage was estimated in the millions of yen in 31 of Japan's 46 prefectures. Amy re-entered the Pacific near Hitachi, rapidly taking on extratropical characteristics. Until the 29th, the extratropical stages of Amy moved as a secondary cell of a larger system. On that day near 50°N., 175°W., it became the primary cell, the deepest of the month at 960 mb. Ships reported force 10-12 winds. The ILIAMNA encountered 65-kt. winds and heavy rain on the 29th, and the GOLDEN STATE reported 50-kt. winds with moderate rain. The storm weakened thereafter, but remained quasi-stationary near St. Paul Island until the month's end.

BABE, MAY 30-JUNE 4

Typhoon Babe, a depression about 250 mi. south of Hong Kong, was indicated by surface reports on the 29th. The depression remained quasi-stationary in the South China Sea and reconnaissance aircraft found no storm indications at 1200 of the 30th. However, numerous squall areas extended from northern Luzon to Viet Nam near 15°N. Intensification occurred late on the 30th just south of Hainan and winds were 45 kt. Early the next day typhoon intensity was reached as Babe moved southeastward, passing near the Paracel Islands at maximum intensity (80 kt.). On June 1 Babe dropped below typhoon strength and turned northward. Reintensifying to a typhoon a day later, Babe moved to 18°N., 113°E., then turned to a northeasterly course, and struck China near Swatow on June 4, dissipating as it moved over land.

CARLA, JUNE 1-3

Typhoon Carla, when first detected by reconnaissance aircraft on the 1st, had winds of 50 kt., and was located about 150 mi. southeast of Taiwan. Carla was short-lived, moving directly northeastward and losing its tropical characteristics south of Kyushu on the 3d. A maximum wind speed of 120 kt., was reported early on the 2d. The storm dropped below typhoon intensity later in the day as it moved north of Okinawa.

DINAH, JUNE 10-19

Typhoon Dinah formed as a tropical depression northwest of Truk on the 10th. It moved steadily west-northwestward, reaching typhoon intensity early on the 13th near 12°N., 140°E. Dinah continued moving toward northern Luzon, passing close off the northeast corner of that island on the 17th, with a peak intensity of 160 kt. Moving over the east coast of Taiwan on the 18th, Dinah's winds dropped from 130 kt. to 40 kt. due to the mountainous terrain. Destruction was greatest on the southeast coast where 14,000 persons were left homeless, as landslides and floods demolished buildings, cut highways and rail lines, and severed communications. In all, about 61 persons were killed, 200 injured, and 14 listed as missing. A preliminary estimate put property damage at $12 million. After crossing Taiwan Dinah drifted northeastward as a tropical storm, and dissipated over the Japanese Islands on the 20th. In Japan the torrential rains triggered by typhoon Dinah flooded large areas. Fourteen deaths occurred and 410 homes were washed away, with 20,000 damaged.

FREDA, JULY 7-16

Typhoon Freda, when first discovered by aircraft on the 7th, was a tropical depression located about 100 mi. east of Ulithi. It reached tropical storm strength late that day and typhoon intensity on the 8th. From its point of origin the typhoon moved generally west-northwestward, reaching a maximum intensity of 140 kt. early on the 12th. The fringe effects of Freda were felt by the WILD RANGER on the 12th and the YOUNG AMERICA on the 13th when they reported 35- and 40-kt. winds, respectively. After crossing Luzon on the 13th the winds dropped to 75 kt. as the storm entered the South China Sea. The typhoon quickly regained its strength over the water, as it continued to move west-northwestward, and by the 14th winds had reached 100 kt. Early on the 15th the storm crossed Hainan and early on the 16th dissipated near the Viet Nam-China border. In the Philippines winds of 75 kt. were reported in northern Luzon as the storm crossed the island. Floods resulting from heavy rains drowned 17 persons in Mindanao.

HARRIET, JULY 21-27

Typhoon Harriet was a tropical depression when first discovered about 200 mi. south-southwest of Guam on the 21st. Early on the 22d it reached tropical storm intensity as it drifted northward to a position about 60 mi. west of Guam. Late on the 22d it turned northwestward and continued on this course, passing over Taiwan early on the 26th; here it killed 2 people and injured 14 others. Harriet hit the Chinese mainland near Amoy later the same day. Winds reached a maximum of 100 kt. on the 25th before the storm crossed Taiwan. In northern Taiwan torrential rains flooded lowlands near the capital city of Taipei. Winds on the periphery of Harriet were reported on the 24th by the ADABELLE LYKES (35 kt.) and the KINGSVILLE (45 kt.); on the 25th by the CHARLOTTE LYKES (40 kt.), and the FAIRPORT (35 kt.); and on the 26th by the BAY STATE (40 kt.).

IVY, JULY 27-31

Typhoon Ivy had a very erratic course. It first drifted westward from its point of discovery near 14°N., 130°E. on the 27th to a position close east of Catanduanes Island in the central Philippines early on the 30th. It then reversed its direction, moving eastward to near 14°N., 133°E. by the 31st. At this time it came under the influence of typhoon Jean located to the north. Drifting northward, Ivy was absorbed into Jean's circulation late on the 31st. On the 28th, as the storm moved toward the Philippines, wind speeds of 70 kt. were reported. They dropped on the 29th to below typhoon strength but picked up to a maximum of 80 kt. on the 30th as the storm moved eastward.

JEAN, JULY 26-AUGUST 7

Typhoon Jean was tracked as a tropical depression from its origin near 9.5°N., 156.0°E., for 3 days (26th-28th) on a west-northwestward course. Wind speeds were 30 kt. or less during this period and advisories on the depression were discontinued near 16°N., 142°E. Reconnaissance aircraft picked up the circulation again on the 31st about 400 mi westnorthwest of its last location and reported the storm had reached typhoon intensity with winds of 70 kt. Absorbing Ivy on the 31st near 17°N., 131°E., the storm then moved northward toward the Japanese Islands. It passed just west of Okinawa on the 4th and reached a maximum intensity of 140 kt. The center moved over Kyushu east of Nagasaki and then over the western tip of Honshu into the Sea of Japan. The typhoon caused 24 deaths and left thousands of people homeless. Vessels feeling the fringe effects of Jean as it moved northward toward Japan were the SGT. TRUMAN KIMBRO, 50 kt on the 4th and 5th; the PHILIPPINES, 42 kt. on the 4th and 40 kt. on the 5th; and the STEEL FLYER 40 kt. on the 6th.

LUCY, AUGUST 15-23

Reconnaissance aircraft discovered typhoon Lucy southeast of Wake Island on the 15th. Wind speeds of 60 kt. were noted. The storm moved northwestward and became a typhoon, with the winds increasing to 85 kt. at 0000 on the 16th. On the 17th, Lucy passed over Marcus Island which reported a peak gust of 88 kt. Lucy continued its northwesterly course while intensifying, and 150-kt. winds were reported on the 18th and 20th. On the latter date, the storm, located south of Honshu, veered northward toward Japan. Losing some of its intensity, Lucy recurved to the northeast early on the 22d just before crossing inland near Shizuoka. Dissipating rapidly, the storm crossed southeastern Honshu near Tokyo before moving offshore. The final advisory was issued on the 23d when the winds had decreased to 35 kt. The storm continued for a few days as an extratropical LOW. The torrential rains that accompanied Lucy flooded 17,000 dwellings and caused 68 landslides. Two persons were reported missing. Three vessels sank in the storm. The fringe effects of typhoon Lucy were felt by the following vessels: J. L. HANNA, 40 kt. on the 15th; OREGON GETTY, 40 kt. on the 18th; LESLIE LYKES, 40 kt. and 45 kt. on the 20th and 21st; GEN. D. I. SULTAN, 46 kt. and 37 kt. on the 20th and 21st.

MARY, AUGUST 15-19

Typhoon Mary was discovered by reconnaissance aircraft about 700 mi. east of northern Luzon on the 15th with wind speeds of 50 kt. The storm moved westward, reaching typhoon strength late on the 15th. The next day it veered to the northwest, passing over northern Taiwan early on the 19th. The highest wind speed, 150 kt., occurred on the 17th. The storm maintained typhoon strength as it crossed northern Taiwan but the winds decreased rapidly. It reached the mainland of China on the 19th, when the final advisory was issued. A report from Taipei stated that the typhoon caused four deaths and injuries to 71 persons; 8 persons were missing. Vessels reporting strong winds on the periphery of Mary were the BAY STATE, 50 kt. on the 17th, and the AMERICAN CHAMPION, 50 kt on the 18th and 19th.

OLIVE, AUGUST 28-SEPTEMBER 2

Typhoon Olive, when discovered on the 28th by reconnaissance aircraft a few hundred miles north-northeast of Guam, had winds of 70 kt. and was moving northward. The highest wind speed, 150 kt., occurred on the 29th. The winds decreased thereafter but the storm maintained typhoon intensity to the end of the month when it was located east of Honshu. On September 1 the winds dropped to tropical storm strength and on the next day the storm became extratropical. It dissipated south of Kamchatka on the 6th.

ROSE, SEPTEMBER 1-5

Typhoon Rose was discovered as a tropical storm by reconnaissance aircraft east of Luzon on the 1st. The maximum winds near the center were estimated at the time to be 50 kt. and 30-kt. winds extended out 100 mi. from the center. The tropical storm moved west-northwestward, increasing in intensity, and by 1200 on the 1st was upgraded to typhoon (with 90-kt. winds near the center). Typhoon Rose continued moving west-northwestward at about 10 kt. and the winds near the center increased to 100 kt. on the 2d, with the central pressure dropping to 980 mb. The winds near the center decreased to 65 kt. early on the 3d after the typhoon crossed the northern tip of Luzon, but increased to 90 kt. when it reached the South China Sea. The storm maintained its west-northwesterly direction across the South China Sea with the central wind speed ranging between 75 and 90 kt. When Rose reached the mainland of China near Chan-Chiang on the 5th, wind diminished, and warnings were discontinued as the storm dissipated.

SHIRLEY, SEPTEMBER 4-10

Typhoon Shirley, when first located on the 4th by reconnaissance aircraft, was a tropical depression northwest of Guam. Winds near the center were estimated at 20 kt. The LOW reached tropical storm intensity on the 5th and typhoon intensity on the 6th. as it moved northward and then northwestward. On the 9th near 27°N., 132°E., Shirley veered northward and as it approached Honshu, the winds near the center increased to 130 kt. Typhoon Shirley passed over Shikoku late on the 9th, and roared across Honshu on the 10th. The populous Tokyo-Yokohama area was hard hit by strong winds and torrential rains. Nearly 900 homes were destroyed, more than 2,000 others severely damaged, and 120,000 flooded. Waves and unusually high tides slashed Tokyo Harbor and prevented about 70 ships from leaving the port before the storm struck. An oil tanker capsized in Shimatsu Harbor (Kobe); 8 crewmen were missing and believed drowned. Three ships - the WINTER, ATLANTIC GENERAL, and EVERBLOOM - went aground near Wakayama in southern Honshu. Shirley left 66 persons dead or missing, 838 injured, and property damage estimated in the millions. After crossing into the Sea of Japan on the 10th, the storm weakened and winds near the center decreased to 70 kt. while the IDAHO, located some 300 mi. southeast of the center, was logging 45-kt winds. By 1800 the winds near the center had dropped to 55 kt. and the typhoon was downgraded to a tropical storm. The storm turned northeastward, crossing Hokkaido, and continued as an extratropical cyclone. It passed northwest of the Kuril Islands, moving parallel to the chain, crossed the southern tip of Kamchatka Peninsula, and turned eastward toward the Aleutians. Gale force winds were reported along portions of its course. The LOW approached the Alaska Peninsula on the 14th, but by the 15th recurved westward into the Bering Sea. It finally dissipated over the Bering Sea on the 16th.

TRIX, SEPTEMBER 10-18

Surface reports on the 10th indicated the presence of typhoon Trix, then a tropical depression, about 800 mi. east of Luzon. The winds near the center were estimated at 20 kt. By 0000 on the 11th the LOW had increased to tropical storm intensity and by about 1200 had reached typhoon strength with 65-kt. winds near the center. The typhoon moved northward, then northwestward, the winds near the center increasing to 130 kt. by the 14th. On the 15th, Trix was located about 150 mi. south of Okinawa, when it turned northeastward. Maintaining winds of 100 to 125 kt., it roared ashore on central Honshu Island, 250 mi. southwest of Tokyo on the 17th. Winds of 96 kt. and rains of up to 39 in., made Trix Japan's most deadly storm since the Muroto Typhoon killed 185 in 1961. More than 1,000 homes were destroyed by wind or crushed by landslides, while 250,000 were flooded, leaving an estimated 190,000 persons homeless. Ninety-three persons were killed and 350 injured. Twenty-eight were reported missing. The storm caused about $30 million in damages to crops alone, and the Government's National Railway claimed that damage to its property exceeded this figure. Between the 13th and the 17th many ships plying the Philippine Sea, the South China Sea, and the Pacific waters east of Honshu experienced winds in excess of 40 kt. At 0900 on the 16th the CARD reported 65-kt winds and 40-ft waves at 25.4°N., 133.0°E. The PRESIDENT HARDING at 1800 reported 50-kt. winds near 26°N., 135°E., while the GEIRA, 24 hour. later, reported 50-kt. winds near 36°N., 144°E. The typhoon crossed southeastern Honshu and continued along the eastern coast, with diminishing winds. The typhoon was downgraded to a tropical storm on the 18th and dissipated on the 19th. The Greek freighter NORTH EMPRESS collided with the Japanese motorship TOSHO MARU in the Gulf of Kobe during typhoon Trix. The Italian freighter ERETTEO stranded near the port of Uglegorsk on Sakalin on the evening of the 19th. The vessel was refloated in October and a large part of her cargo salvaged.

VIRGINIA, SEPTEMBER 13-17

Typhoon Virginia was first discovered as a tropical storm by low level reconnaissance aircraft on the 13th about 150 mi. east-northeast of Guam. Winds near the center were estimated at 40 kt. The storm moved north-northwestward east of Saipan on the 13th. On the 14th near 19°N., 144°E., the storm briefly reached typhoon intensity as it was moving toward Iwo Jima. It passed east of Iwo Jima on the 15th. The cyclone continued northward toward Tokyo, but turned northeastward on the 16th before reaching Honshu. At 1800 on that date the center of the weakening storm passed close to the GEIRA, which reported 45-kt. winds at approximately 39°N., 149°E. Warnings were discontinued at 0000 on the 17th when the circulation was about 450 mi. east of Honshu. The storm continued in an easterly direction and dissipated on the 18th near 35°N., 175°E.

BESS, SEPTEMBER 27-OCTOBER 4

Typhoon Bess was discovered east of Saipan on the 27th by reconnaissance aircraft. The winds near the center, estimated at 40 kt. when first discovered, increased to 70 kt. as the storm moved westward and intensified. Typhoon Bess passed north of Saipan about 0000 on the 28th and at 1200 turned northward. At 0600 on the 29th the OAKVILLE, in the southeast quadrant of the typhoon near 16°N., 147°E., reported 50-kt. winds. On the 30th, near 20°N., 144°E., central winds reached 150 kt. then began to decrease. By October 1, typhoon Bess was about 150 mi. east of Iwo Jima, continuing northward at 12 kt. About 250 mi. southeast of Tokyo, typhoon Bess turned northeastward with central winds of about 110 kt. Bess became an extratropical storm on the 4th with gale force winds continuing over a wide area as the circulation moved northeastward. On the 7th, the LOW was centered several hundred miles east of Kamchatka.

CARMEN, OCTOBER 1-9

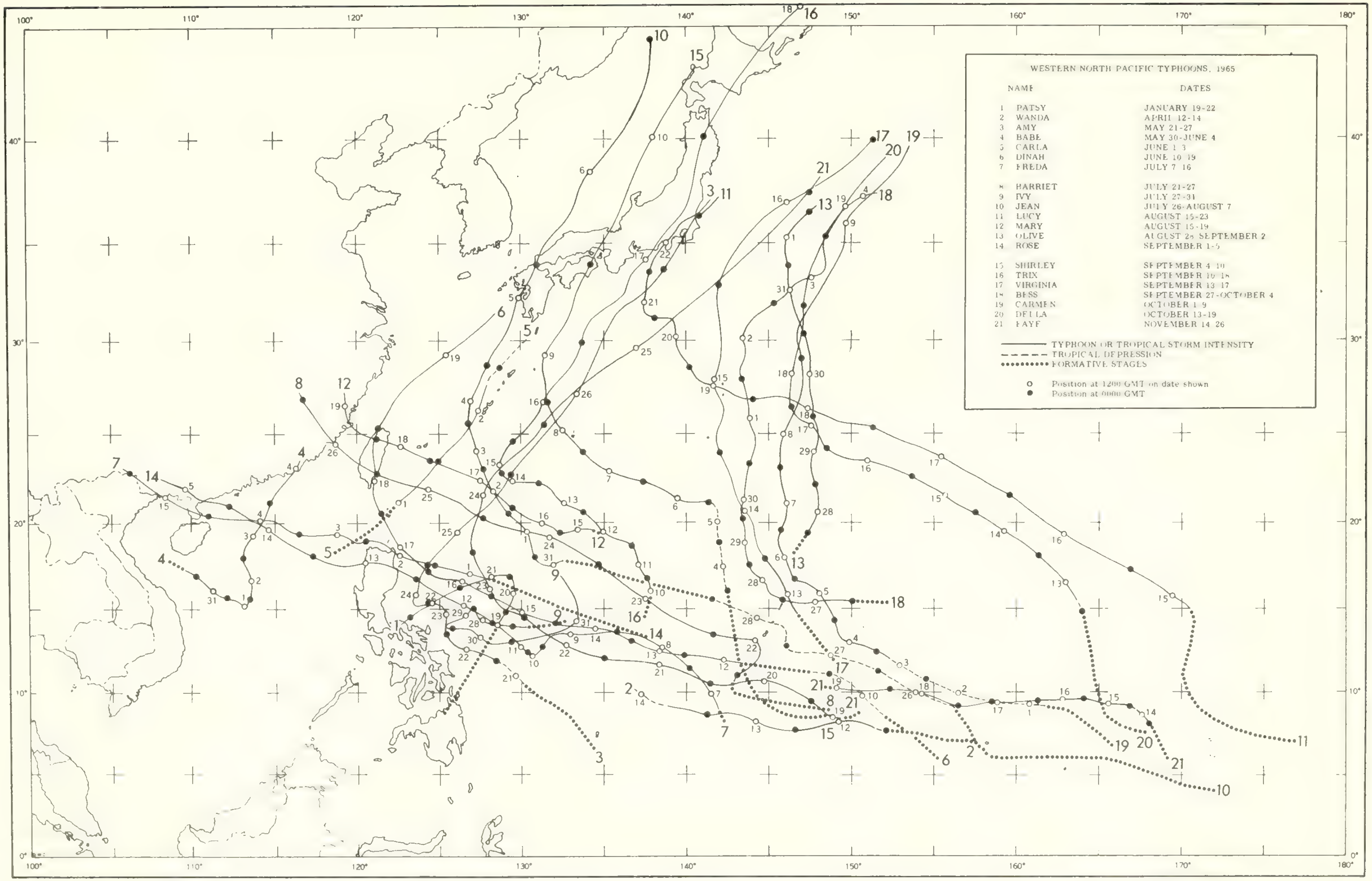
Typhoon Carmen was first discovered as a tropical depression about 120 mi. south-southwest of Eniwetok on the 1st. It moved northwestward to near 13°N., 150°E., by the 4th, being upgraded to a tropical storm. Late on the 5th it reached typhoon intensity and started to move in a northerly direction. During its passage through the northern Marianas on the 6th, Carmen brushed by the small islands of Alamagan, Agrihan, and Pagan, etc., whose total population numbered about 400. At 1300 its eye passed over Pagan. Maximum winds at that time were close to the highest reported in the storm - 150 kt. On Agrihan, devastation was complete. All its houses were demolished, as were the school, dispensary and other buildings. Subsistence crops were destroyed, coconut palms battered and broken. Because of the loss of Agrihan's capacity to support its inhabitants, all of them were evacuated to Saipan. Although there were no casualities on these islands, 208 fishermen lost their lives when 5 of 10 Japanese fishing vessels seeking shelter in the lee of Agrihan were sunk. On the 9th, typhoon Carmen passed about 500 mi. east of Tokyo. Maximum winds of 150 kt. were reported from the 7th to the 9th. On the latter day cold air invaded the circulation and the storm took on the characteristics of an extratropical cyclone, and started to move rapidly northeastward over the northern shipping lanes. It passed over the Aleutians on the 11th and by the 12th had entered the Gulf of Alaska. It then drifted slowly eastward, finally dissipating over southeastern Alaska on the 15th. From the 10th to the 15th vessels under the influence of the circulation reported force 8-9 winds.

DELLA, OCTOBER 13-19

Typhoon Della was of tropical storm strength when discovered southwest of Wake Island on the 13th. It moved northwestward reaching typhoon strength on the 15th near 21°N., 157°E. It reached 25°N., 148°E., on the 17th and then turned northward. On the 18th maximum winds of 75 kt. were reported. Della became extratropical on the 19th as it recurved northeastward, passing south of the Aleutians on the 21st, and dissipating in the Gulf of Alaska on the 24th. At 0600 on the 21st, the PHILIPPINE CORREGIDOR reported 65-kt. winds in a thunderstorm about 500 mi. southeast of the low center.

FAYE, NOVEMBER 14-26

Typhoon Faye formed near Kwajalein early on the 14th and attained tropical storm strength on that day. It moved westward to near 10°N., 142°E., where it reached typhoon strength early on the 21st. At this point the storm started to move northwestward with the wind increasing to a maximum intensity of 135 kt. early on the 24th near 18°N., 127°E. Faye then recurved northeastward passing east of Okinawa early on the 25th and east of Japan on the 26th. The storm then became extratropical, moving rapidly eastnortheastward and reaching the Gulf of Alaska on the 28th. The United States 330-ton Trust Territory vessel FOUR WINDS was reported to have had its engine room swamped from the high seas in the typhoon and had to head for Saipan.

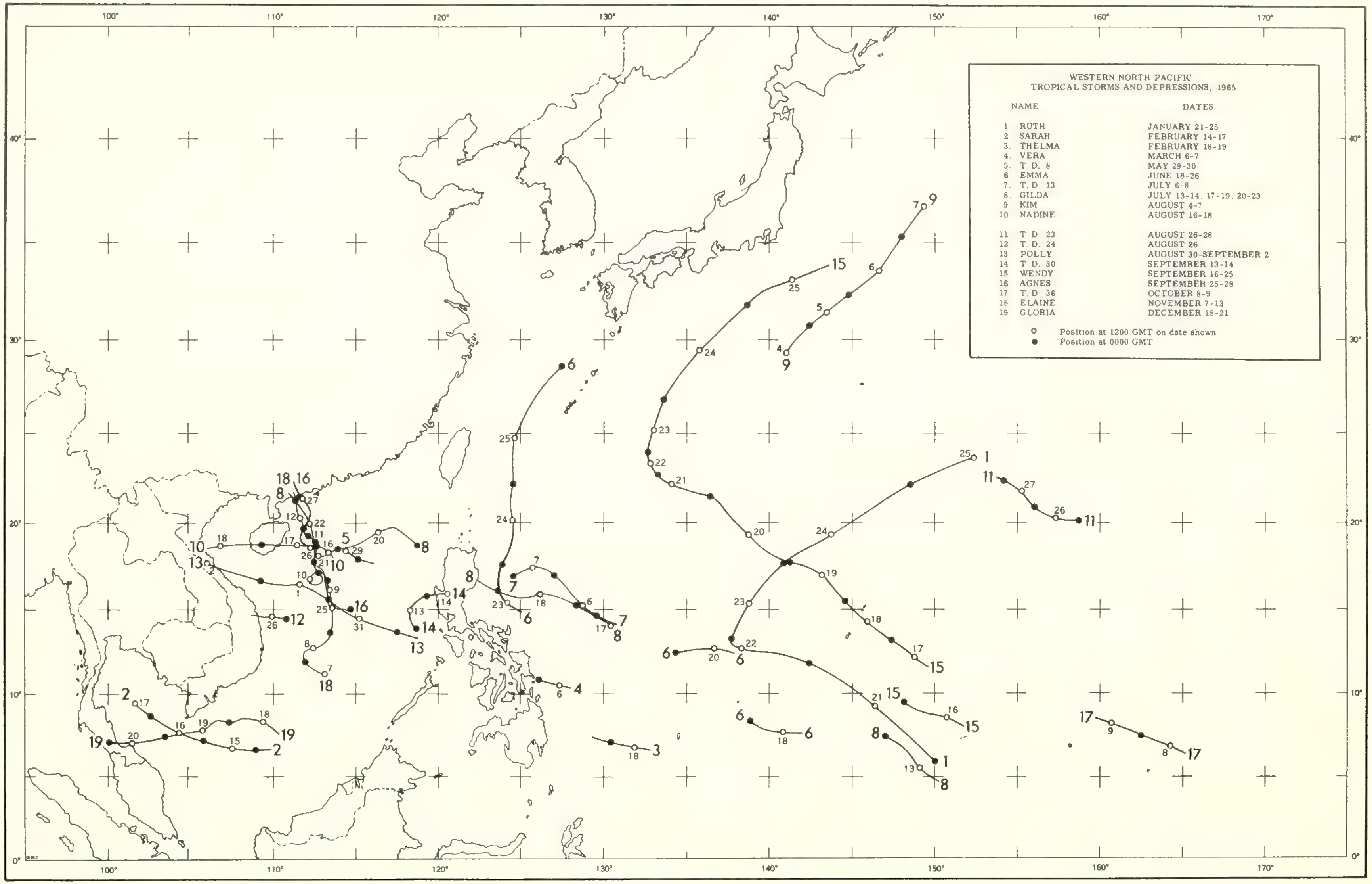


WESTERN NORTH PACIFIC TYPHOONS, 1965

	NAME	DATES
1	PATSY	JANUARY 19-22
2	WANDA	APRIL 12-14
3	AMY	MAY 21-27
4	BABE	MAY 30-JUNE 4
5	CARLA	JUNE 1-3
6	DINAH	JUNE 10-19
7	FREDA	JULY 7-16
8	HARRIET	JULY 21-27
9	IVY	JULY 27-31
10	JEAN	JULY 26-AUGUST 7
11	LUCY	AUGUST 15-23
12	MARY	AUGUST 15-19
13	OLIVE	AUGUST 28-SEPTEMBER 2
14	ROSE	SEPTEMBER 1-5
15	SHIRLEY	SEPTEMBER 4-10
16	TRIX	SEPTEMBER 10-18
17	VIRGINIA	SEPTEMBER 13-17
18	BESS	SEPTEMBER 27-OCTOBER 4
19	CARMEN	OCTOBER 1-9
20	DELLA	OCTOBER 13-19
21	FAYE	NOVEMBER 14-26

——— TYPHOON OR TROPICAL STORM INTENSITY
– – – – TROPICAL DEPRESSION
••••••• FORMATIVE STAGES

○ Position at 1200 GMT on date shown
● Position at 0000 GMT


WESTERN NORTH PACIFIC
TROPICAL STORMS AND DEPRESSIONS, 1965
NAME DATES
1 RUTH JANUARY 21-25
2 SARAH FEBRUARY 14-17
3. THELMA FEBRUARY 18-19
4. VERA MARCH 6-7
5. T D. 8 MAY 29-30
6 EMMA JUNE 18-26
7. T.D 13 JULY 6-8
8. GILDA JULY 13-14, 17-19, 20-23
9 KIM AUGUST 4-7
10 NADINE AUGUST 16-18
11 T D 23 AUGUST 26-28
12 T.D. 24 AUGUST 26
13 POLLY AUGUST 30-SEPTEMBER 2
14 T D. 30 SEPTEMBER 13-14
15 WENDY SEPTEMBER 16-25
16 AGNES SEPTEMBER 25-28
17 T.D 36 OCTOBER 8-9
18 ELAINE NOVEMBER 7-13
19 GLORIA DECEMBER 18-21
○ Position at 1200 GMT on date shown
● Position at 0000 GMT
100°
110°
120°
130°
140°
150°
160°
170°
40°
30°
20°
10°
0°

GENERAL SUMMARY OF FLOOD LOSSES FOR 1964

Elmer R. Nelson, Office of Hydrology
U. S. Weather Bureau, Washington, D.C.

Monetary losses from floods in the United States during 1964, estimated at $651,642,400, were more than 3.5 times greater than in 1963. This is the highest damage sustained from floods since 1955 when the losses totaled $995,489,500. In comparison with the national average of $350,000,000, based on the 10-year period 1951 to 1960 (adjusted to the 1960 price index), the flood loss in 1964 was 186 percent.

The total loss of life in 1964 from floods was 100 compared to 39 in 1963. This is the highest since 1955 when 302 lives were lost. In comparison with the national average of 79 lives during the last 40 years (1925-1964) it was 126 percent.

The savings resulting from the Weather Bureau Flood Forecasting and Warning Service were, as compiled from fragmentary information, approximately $40,000,000. This figure represents statistics collected from less than 10 percent of the river systems where flooding was reported during the year. Based on this information the cost to benefit ratio is 1:20.

The most damaging floods occurred in northern California and Oregon in the latter part of December 1964. This was much of the same area covered by record flooding in the Great Flood of December 1955. The 1964 flood equalled or exceeded the flood of 1955 in many places, and exceeded the historical flood of 1861-62 in a number of cases. The American Red Cross reported 40 lives were lost in the December floods. Approximately 65 percent of the damages reported during the year 1964 occurred in this area.

ESTIMATED FLOOD LOSSES FOR 1964

PROPERTY LOSSES IN THOUSANDS OF DOLLARS

River and drainage	Urban Property					Rural Property					Other Property		Miscellaneous	Unclassified	Total Loss	Lives Lost
	Residential		Commercial		Public	Crops		Livestock	Other		RR's, bridges, Highways, etc.	Public Utilities				
	Fixed	Movable	Fixed	Movable		Growing	Stored		Fixed	Movable						
HUDSON BAY DRAINAGE																
St. Mary River (Montana)	3.7	....	95.8	....	30.0	0.5	....	....	A 30.2	....	254.8	2.5	0.5	....	B 418.0	....
Total	3.7	....	95.8	....	30.0	0.5	....	....	30.2	....	254.8	2.5	0.5	....	418.0	....
ST. LAWRENCE DRAINAGE																
Lake Erie																
Niagara River (New York)	....	....	....	....	....	....	....	....	....	....	75.0	....	....	....	75.0	....
Total	....	....	....	....	....	....	....	....	....	....	75.0	....	....	....	75.0	....
Lake Champlain																
Lamoille River (Vermont)	....	....	....	....	....	....	....	....	....	....	....	....	....	250.0	250.0	....
Total	....	....	....	....	....	....	....	....	....	....	....	....	....	250.0	250.0	....
ATLANTIC SLOPE DRAINAGE																
Connecticut River	90.0	....	50.0	....	300.0	....	....	....	....	....	0.5	1.0	....	....	441.5	....
Chemung River and Tributaries	....	....	....	....	....	....	....	....	....	....	....	....	....	1,400.0	1,400.0	....
West Branch Susquehanna River	840.8	181.8	2,388.6	357.6	342.4	....	....	....	57.8	12.0	885.6	176.4	1,695.3	....	6,938.3	....
Susquehanna River	249.7	23.9	56.4	15.1	9.1	0.3	....	1.2	12.1	1.2	300.0	13.0	1,879.7	....	2,561.7	....
Tar River	100.0	....	....	....	10.0	1,650.0	....	....	....	....	42.0	....	....	....	1,802.0	....
Neuse River	2,909.7	....	....	....	548.9	6,734.4	....	....	....	....	175.5	....	....	....	10,368.5	....
Cape Fear River	266.2	....	....	....	65.0	986.0	....	....	....	....	134.8	....	....	....	1,452.0	....
Waccamaw River	5.0	4.0	5.0	3.5	6.0	50.0	....	....	....	....	....	0.5	11.2	....	85.2	....
Pee Dee River	....	....	....	....	....	0.9	....	0.1	....	2.0	8.8	....	....	....	11.8	....
Santee River Basin	75.0	....	....	10.0	55.0	1,267.0	....	2.0	1.0	2.0	105.0	....	195.0	....	1,712.0	....
Savannah River	....	....	....	....	1,089.0	....	....	....	....	266.0	....	....	....	....	1,355.0	....
Total	4,536.4	209.7	2,500.0	386.2	2,425.4	10,688.6	....	3.3	70.9	283.2	1,652.2	190.9	3,781.2	1,400.0	28,128.0	....
EAST GULF OF MEXICO DRAINAGE																
Flint River	112.0	....	....	....	....	C 324.0	....	....	....	....	25.0	....	....	....	461.0	....
Chattahoochee River	D 1,077.0	....	....	....	....	C 315.0	....	....	....	....	9.0	....	....	....	1,401.0	....
Apalachicola River	121.0	....	....	....	....	C 68.0	....	....	....	....	99.0	....	135.0	....	B 423.0	....
Choctawhatchee and Pea Rivers	....	....	....	....	....	C 116.6	....	....	....	....	70.0	....	....	....	B 186.6	....
Yellow River	....	....	....	....	....	C 12.8	....	....	....	....	5.2	....	....	....	B 18.0	....
Blackwater River	....	....	....	....	....	C 1.0	....	....	....	....	....	....	....	....	B 1.0	....
Escambia and Conecuh Rivers	....	....	....	....	....	C 301.0	....	....	....	....	54.0	....	....	....	B 355.0	....
Tallapoosa River	....	....	....	....	....	C 264.2	....	....	....	....	25.1	....	....	....	B 289.3	....
Etowah River	D 337.9	....	....	....	....	C 223.8	....	....	....	....	19.6	....	....	....	B 581.3	....
Conasauga River	....	....	....	....	....	C 389.2	....	....	....	....	40.9	....	....	....	B 430.1	....
Coosawattee River	....	....	....	....	....	C 276.8	....	....	....	....	22.0	....	....	....	B 298.8	....
Oostanaula River	4.0	....	....	....	....	C 352.1	....	....	....	....	50.1	....	....	....	B 406.2	....
Coosa River	....	....	....	....	....	C 601.2	....	....	....	....	28.7	....	....	....	B 629.9	....
Cahaba River	....	....	....	....	....	C 27.0	....	....	....	....	10.0	....	....	....	B 37.0	....
Alabama River	188.0	....	....	....	....	C 1,376.3	....	....	....	....	84.8	....	....	....	B 1,649.1	....
Black Warrior River	....	....	....	....	....	C 445.0	....	....	....	....	10.0	....	....	....	B 455.0	....
Tombigbee River	D 5.0	....	....	....	....	C 1,248.0	....	....	....	....	111.0	....	....	....	B 1,364.0	....
Chickasawhay River	56.0	....	....	....	....	C 219.0	....	....	....	....	27.0	....	....	....	B 302.0	....
Leaf River	D 8.0	....	....	....	....	C 31.0	....	....	....	....	6.0	....	....	....	B 45.0	....
Pascagoula River	....	....	....	....	....	C 23.0	....	....	....	....	1.0	....	41.0	....	B 65.0	....
Pearl River	D 236.0	....	....	....	....	C 515.0	....	....	....	....	341.0	....	....	....	B 1,092.0	....
Total	2,144.9	....	....	....	....	7,130.0	....	....	....	....	1,039.4	....	176.0	....	10,490.3	....
MISSISSIPPI SYSTEM																
Missouri Basin																
Jefferson and Madison Rivers	....	....	....	....	....	0.3	....	....	A 35.4	....	15.0	....	....	....	B 50.7	....
Sun River and tributaries	3,507.7	....	292.6	....	559.3	302.0	....	....	A2,587.4	....	190.0	496.2	68.0	....	B 8,003.2	....
Belt and Otter Creeks (tribs. of Mo.R.)	1.5	....	0.5	....	1.0	....	....	....	....	....	40.7	....	....	....	B 43.7	....
Streams in Lewis & Clark Nat'l. Forest	....	....	....	....	....	....	....	....	....	....	6,872.0	....	....	....	B 6,872.0	....
Streams in Glacier Nat'l. Park	....	....	....	....	....	....	....	....	....	....	1,548.0	....	339.2	....	B 1,887.2	....
Marias River	659.6	....	346.3	....	105.6	2,028.0	....	....	A5,879.9	....	2,934.0	128.6	21.2	....	B 12,103.2	E 31
Judith River	11.2	....	3.1	....	0.5	....	....	....	....	....	55.7	0.5	0.2	....	B 71.2	....
Milk River	....	....	....	....	....	1.0	....	....	A 1.9	....	55.4	....	....	....	B 58.3	....
Pryor Creek (near Billings, Mont.)	10.0	....	....	....	4.0	1.0	2.0	2.0	2.0	30.0	34.0	....	25.0	....	110.0	....
Powder River and small tributaries	45.0	....	....	....	27.0	....	....	....	....	....	....	....	....	....	72.0	....
Little Sioux River	....	....	....	....	....	....	....	....	....	....	....	....	....	50.0	50.0	....
Papillion River and tributaries	963.0	....	1,803.0	....	1,550.0	C 656.0	....	....	....	....	....	....	....	....	B 4,972.0	6
Nodaway River	....	....	....	....	....	C 366.0	....	....	....	....	14.0	....	....	....	380.0	....
Platte and 102 Rivers and tributaries	D 544.0	....	....	....	....	C 1,576.0	....	....	....	....	483.0	....	....	....	2,603.0	....
Smoky Hill and Saline Rivers and tribs.	....	....	....	....	10.0	37.0	....	....	5.0	....	....	....	....	....	52.0	....
Big Blue River and tributaries	1.5	....	....	....	32.5	36.0	....	....	2.5	1.0	....	....	....	....	73.5	....
Kansas River and minor tributaries	....	....	....	....	....	2.0	....	....	....	....	2.0	....	....	....	4.0	....
Crooked River	....	....	....	....	....	C 238.0	....	....	....	....	3.0	....	....	....	241.0	....
Wakenda River	....	....	....	....	....	C 178.0	....	....	....	....	2.0	....	....	....	180.0	....

See reference notes at end of table.

ESTIMATED FLOOD LOSSES FOR 1964

PROPERTY LOSSES IN THOUSANDS OF DOLLARS

River and drainage	Urban Property					Rural Property					Other Property		Miscellaneous	Unclassified	Total Loss	Lives Lost
	Residential		Commercial		Public	Crops		Livestock	Other		RR's, bridges, Highways, etc.	Public Utilities				
	Fixed	Movable	Fixed	Movable		Growing	Stored		Fixed	Movable						
Missouri Basin (Cont'd.)																
Grand River and tributaries	....	....	....	....	....	C 1,780.0	....	....	....	....	110.0	....	....	....	1,890.0	....
Missouri River and minor tribs	....	....	....	....	....	C 1,471.2	....	....	....	....	181.6	113.2	1.6	....	1,767.6	....
Total	5,743.5	....	2,445.5	....	2,289.9	8,672.5	2.0	2.0	8,514.1	31.0	12,540.4	738.5	455.2	50.0	41,484.6	37
Ohio Basin																
Allegheny River and tributaries	608.0	286.0	291.0	300.0	174.0	....	....	....	....	....	190.0	82.0	1,037.0	....	2,968.0	....
Leading Creek (near Elkins, W. Va.)	....	....	....	....	....	....	....	....	....	....	....	....	....	150.0	150.0	....
Muskingum River	....	....	....	....	....	....	....	....	....	....	....	....	....	1,018.0	B 1,018.0	3
Hocking River and tributaries	....	....	....	....	....	....	....	....	....	....	....	....	....	2,137.0	B 2,137.0	1
Flash Flood, Bluefield, W. Va	....	13.7	....	47.1	82.1	....	....	....	....	....	....	....	....	....	142.9	....
Small Streams, Alleghany County, N.C.	....	....	....	....	2.0	5.0	....	0.3	2.0	....	15.0	....	....	....	24.3	....
Scioto and tributaries	....	....	....	....	....	....	....	....	....	....	....	....	....	1,351.0	B 1,351.0	....
Little Miami River	1,350.0	180.0	215.0	86.0	220.0	60.0	8.0	2.0	105.0	90.0	275.0	102.0	1,527.0	....	4,220.0	1
Licking River	925.0	574.0	585.0	95.0	145.8	10.5	1.7	8.6	34.3	52.0	35.0	5.1	242.0	....	2,714.0	....
Whitewater River	40.0	3.0	6.0	2.0	5.0	5.0	....	....	4.0	8.0	3.0	3.0	1.0	....	80.0	....
Miami River	200.0	4.0	120.0	12.0	22.0	1.0	....	....	2.0	20.0	50.0	9.0	....	....	440.0	....
Kentucky River	550.0	105.0	156.0	50.0	170.0	81.0	18.0	11.0	60.0	48.0	65.0	30.0	156.0	....	1,500.0	1
Barren River	....	....	....	....	....	....	....	....	....	....	....	....	....	38.0	38.0	....
Rough River	....	....	....	....	....	....	....	....	....	....	....	....	....	349.0	B 349.0	....
Green River	....	....	....	....	....	....	....	....	....	....	....	....	....	1,720.0	B 1,720.0	....
Wabash and White Rivers and tribs	840.0	90.0	202.0	201.0	5,220.0	1,696.0	....	8.1	232.5	22.0	121.0	9.4	1,383.0	1,434.0	11,459.0	2
Saline River (Illinois)	....	....	....	....	....	....	....	....	....	....	....	....	....	300.0	B 300.0	....
Cumberland River	....	....	....	....	10.0	12.0	....	....	10.0	....	5.0	5.0	10.0	....	52.0	....
French Broad River	102.0	5.0	500.8	201.0	105.0	641.3	....	....	12.0	15.0	574.3	....	12.5	....	2,168.9	1
South Chickamauga Creek (Tenn.)	....	....	....	....	....	....	....	....	....	....	30.0	....	....	....	30.0	....
Ohio River and minor tribs	10,742.0	932.0	2,069.0	2,217.1	1,511.5	2,729.5	62.0	121.5	317.0	36.6	1,423.5	1,020.5	13,266.7	24,723.0	61,171.9	6
Total	15,357.0	2,192.7	4,144.8	3,211.2	7,667.4	5,241.3	89.7	151.5	778.8	291.6	2,786.8	1,266.0	17,635.2	33,220.0	94,034.0	15
White Basin																
Black River (Mo. and Ark.)	25.0	5.1	....	6.1	61.0	22.5	30.0	37.5	35.0	15.0	57.0	4.5	41.6	300.0	640.3	1
White River (Ark.)	....	....	....	....	33.5	57.0	....	2.5	4.0	2.5	2.0	10.0	....	....	111.5	....
Total	25.0	5.1	....	6.1	94.5	79.5	30.0	40.0	39.0	17.5	59.0	14.5	41.6	300.0	751.8	1
Arkansas Basin																
Neosho River and tributaries	....	....	....	....	....	116.0	....	1.6	17.5	....	65.0	....	2.0	....	202.1	....
Arkansas River and minor tribs	51.0	4.1	13.8	10.0	115.4	190.0	11.0	21.0	78.0	24.0	114.5	5.2	15.0	....	653.0	....
Total	51.0	4.1	13.8	10.0	115.4	306.0	11.0	22.6	95.5	24.0	179.5	5.2	17.0	....	855.1	....
Red Basin																
Ouachita, Caddo, and Little Missouri Rivers	....	....	....	....	101.0	10.0	....	....	10.0	....	....	....	3.0	....	124.0	....
Total	....	....	....	....	101.0	10.0	....	....	10.0	....	....	....	3.0	....	124.0	....
Lower Mississippi Basin																
St. Francis River	....	....	....	....	....	23.0	....	....	....	....	2.0	2.0	2.0	....	B 29.0	....
Yazoo and Sunflower Rivers	....	....	....	....	....	528.0	....	....	....	....	....	....	59.0	....	B 587.0	....
Big Black River	....	....	....	....	....	258.0	....	....	....	....	....	....	....	....	B 258.0	....
Mississippi River (below Cairo, Ill.)	....	....	....	7.0	7.0	197.5	....	....	8.5	2.0	15.0	....	14.0	....	251.0	....
Total	....	....	....	7.0	7.0	1,006.5	....	....	8.5	2.0	17.0	2.0	75.0	....	1,125.0	....
WEST GULF OF MEXICO DRAINAGE																
Trinity River and tributaries	785.0	....	200.0	....	550.0	237.0	....	....	....	....	500.0	....	....	....	2,272.0	4
Cibolo, Leon, Frederick and Ranger Creeks	150.0	50.0	150.0	50.0	27.0	200.0	....	5.0	....	....	46.0	....	....	....	678.0	1
Nueces River and tributaries; adjacent Small Streams	3.3	21.0	12.0	16.0	400.0	250.0	....	600.0	257.0	15.0	546.0	321.0	150.0	....	2,591.3	....
Eagle Draw (West of Artesia, N. Mex.)	....	....	....	....	....	....	....	....	....	....	....	....	....	1,235.0	1,235.0	....
Devils River	....	....	....	1.0	3.5	....	....	7.2	72.0	1.0	18.0	....	....	....	102.7	....
San Felipe Creek (Del Rio, Tex.)	175.0	25.0	....	....	8.0	....	....	....	....	....	....	5.0	20.0	....	233.0	....
Rio Grande River	1.1	....	....	15.0	24.9	....	....	5.0	....	....	....	....	20.0	....	66.0	....
Total	1,114.4	96.0	362.0	82.0	1,013.4	687.0	....	617.2	329.0	16.0	1,110.0	326.0	190.0	1,235.0	7,178.0	5
GULF OF CALIFORNIA DRAINAGE																
Flashflood in Winslow, Ariz	....	....	....	....	....	....	....	....	....	....	....	....	....	55.0	55.0	....
Total	....	....	....	....	....	....	....	....	....	....	....	....	....	55.0	55.0	....
GREAT BASIN																
Weber Canyon and tributaries (Utah)	16.0	...	5.0	....	....	....	....	....	....	....	5.0	32.5	....	4.0	62.5	....

See reference notes at end of table.

ESTIMATED FLOOD LOSSES FOR 1964

PROPERTY LOSSES IN THOUSANDS OF DOLLARS

River and drainage	Urban Property					Rural Property					Other Property		Miscellaneous	Unclassified	Total Loss	Lives Lost
	Residential		Commercial		Public	Crops		Livestock	Other		RR's, bridges, Highways, etc.	Public Utilities				
	Fixed	Movable	Fixed	Movable		Growing	Stored		Fixed	Movable						
GREAT BASIN (Cont'd.)																
Flash Flooding in Garfield and Kane Counties, Utah	......	......	......	......	......	3.0	......	......	......	......	4.6	......	......	......	7.6	....
Martin Creek and tributaries (Nevada)	......	......	......	......	......	C 72.0	......	......	......	......	......	......	......	......	B 72.0	....
Truckee River and tributaries (Nev.)	D 47.0	......	25.0	......	1,161.0	C 215.0	......	......	......	......	......	158.0	......	......	B 1,606.0	....
Carson River and tributaries (Nev.)	D 10.0	......	......	......	554.0	C 66.0	......	......	......	......	......	......	......	......	B 630.0	....
West Walker River (Nev.)	......	......	......	......	......	C 33.0	......	......	......	......	......	......	......	......	B 33.0	....
Streams Tributary to Surprise Valley, Calif	D 1.0	......	F 1.0	......	......	C 108.0	......	......	......	......	......	81.0	......	......	B 191.0	....
Susan River and Gold Run Creek (Calif.)	D 3.0	......	F 2.0	......	......	C 108.0	......	......	......	......	......	......	......	......	B 113.0	....
Total	77.0	......	33.0	......	1,715.0	605.0	......	......	......	......	9.6	271.5	......	4.0	2,715.1	....
PACIFIC SLOPE DRAINAGE																
San Joaquin River and tributaries	D 7.0	......	F 2.0	......	2,025.0	C 1,849.0	......	......	......	......	......	630.0	......	......	B 4,513.0	....
Sacramento River and tributaries	D 819.0	......	F 756.0	......	24,855.0	C 8,835.0	......	......	......	......	......	3,959.0	......	......	B 39,224.0	....
Streams in Napa County, Calif	......	......	......	......	......	......	......	......	......	......	......	......	......	391.0	B 391.0	....
Streams in Sonoma County, Calif	......	......	......	......	......	......	......	......	......	......	......	......	......	12,944.0	B 12,944.0	....
Streams in Trinity County, Calif	......	......	......	......	......	......	......	......	......	......	......	......	......	14,452.0	B 14,452.0	....
Streams in Mendocino County, Calif	......	......	......	......	......	......	......	......	......	......	......	......	......	18,618.0	B 18,618.0	....
Streams in Del Norte County, Calif	......	......	......	......	......	......	......	......	......	......	......	......	......	19,303.0	B 19,303.0	....
Streams in Humboldt County, Calif	......	......	......	......	......	......	......	......	......	......	......	......	......	102,846.0	B102,846.0	....
Streams in Siskiyou County, Calif	......	......	......	......	......	......	......	......	......	......	......	......	......	16,499.0	B 16,499.0	....
Eel River and Redwood Creek (January Flood)	16.0	8.0	......	......	130.0	12.0	......	2.8	12.0	......	......	......	6.0	......	186.8	....
Upper Klamath River and tributaries (Oreg.)	......	......	......	......	......	......	......	......	......	......	......	......	......	2,050.0	B 2,050.0	....
Rogue River and tributaries	......	......	......	......	......	......	......	......	......	......	......	......	......	16,400.0	B 16,400.0	....
Coquille River and Miscell. Coastal Streams	0.2	......	0.5	......	1.3	10.0	......	......	3.0	1.0	9.7	4.4	......	B 9,300.0	9,330.1	....
Umpqua River and tributaries	......	......	......	......	......	......	......	......	......	......	......	......	......	26,000.0	B 26,000.0	....
Flathead River and tributaries	......	......	......	......	......	......	......	......	......	......	......	......	......	23,579.0	B 23,579.0	....
Upper Clark Fork River and tribs	......	......	......	......	......	......	......	......	......	......	......	......	......	895.0	B 895.0	....
Coeur d'Alene River	......	......	......	......	......	......	......	......	......	......	......	......	......	1,725.0	B 1,725.0	....
St. Joe River	......	......	......	......	......	......	......	......	......	......	......	......	......	1,049.0	B 1,049.0	....
Lake Creek (near Riggins, Idaho)	......	......	......	......	......	0.1	......	......	25.0	2.0	30.0	......	......	......	57.1	....
Snake River and tributaries	D 551.6	10.0	F 1,042.8	......	307.5	C 2,913.4	......	......	10.0	......	4,488.9	345.9	1,402.4	516.8	B 11,589.3	....
Walla Walla River	D 174.3	......	118.1	......	272.3	C 1,329.9	......	......	......	......	443.2	106.2	348.6	......	B 2,792.6	....
Umatilla River	D 363.2	......	108.3	......	33.3	C 209.3	......	......	......	......	42.1	5.0	67.5	......	B 828.7	....
Willow Creek	D 16.0	......	20.0	......	6.0	C 461.0	......	......	......	......	730.0	5.0	2.0	......	B 1,240.0	....
John Day River and tributaries	D 130.0	......	380.0	......	105.0	C 3,480.5	......	......	......	......	1,373.6	39.0	294.4	......	B 5,802.5	....
Deschutes River	......	......	......	......	......	......	......	......	......	......	......	......	......	6,900.0	B 6,900.0	....
Willamette River and tributaries	38.0	......	1.0	......	......	......	......	......	0.5	......	......	......	1.0	B109,400.0	109,440.5	....
Columbia River and minor tributaries	......	0.6	......	......	0.3	1.8	......	......	......	......	0.2	......	......	B15,300.0	15,302.9	....
Total	2,115.3	18.6	2,428.7	......	27,735.7	19,102.0	......	2.8	50.5	3.0	7,117.7	5,094.5	2,121.9	398,167.8	463,958.5	G 42
Grand Total	**31,168.2**	**2,526.2**	**12,023.6**	**3,702.5**	**43,194.7**	**53,528.9**	**132.7**	**839.4**	**9,926.5**	**668.3**	**26,841.4**	**7,911.6**	**24,496.6**	**434,681.8**	**651,642.4**	**100**

A. Includes all rural except growing crops.
B. Furnished by or coordinated with U.S. Engineers.
C. Includes all rural.
D. Includes all urban.
E. Includes all lives lost in June flood in Montana, most of which occurred below Swift Dam on Birch Creek and below Two Medicine Dam on Two Medicine Creek.
F. Includes all commercial.
G. Includes 21 in California; 19 in Oregon; 2 in Idaho. All occurred in December floods.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

YEAR 1965

Elmer R. Nelson, Office of Hydrology
U. S. Weather Bureau, Washington, D.C.

The most important floods of 1965 were the spring floods in the Upper Mississippi, Missouri and the Red River of the North Basins. This was the greatest flood in more than 100 years along the upper Mississippi River for a distance of nearly 700 miles. Loss of life and property was minimized by protective action taken as a result of advance warnings. Nevertheless, property damages are expected to range from $100 million to $150 million, with a toll of at least 15 lives.

Severe floods occurred on the West Coast during January. This was the second consecutive month that severe floods had occurred in this area. Floods in the Sacramento and San Joaquin Basins approached the record high peaks of December 1965. Major damage stages were exceeded on the Santiam at Jefferson, Oreg., and on the Willamette at Salem, Oreg. Near major damage stages occurred on the Willamette below Salem, Oreg. Major flooding resulted on the Grande Ronde, Deschutes, and John Day Rivers during January.

Damaging floods occurred during February in the East Gulf of Mexico Drainage. Heavy flooding occurred on the Pearl River in Mississippi. The crest of 32 feet at Jackson, Miss., ranked sixth in magnitude to the 37.2 feet record crest of April 1902. Moderate flooding occurred in the Tombigbee Basin in Alabama and Mississippi.

Severe flooding occurred along a number of tributaries in the Upper Mississippi Basin during March. Overflow was particularly severe in the Zumbro and Root River Basins in Minnesota as the streams rose to record high levels. Hundreds of families were evacuated from their homes in the Root Valley. Record high stages were observed on the Cedar and lower Boyer Rivers in western Iowa. Stages approaching record high levels occurred locally on the Iowa River in Iowa and on the Pecatonica River in Wisconsin.

Record to near record floods occurred during April in tributaries of the Mississippi, Missouri, and Red River of the North. Along the Mississippi, for a distance of 672 miles, this was the highest water ever reported. All gaging stations from St. Paul, Minn., to Muscatine, Iowa, experienced crest stages 1.5 to 4.5 feet above previous record flood peaks. The river was at a level higher than the previous maximum for an average of 13 days from St. Paul, Minn., to Burlington, Iowa. Some localities experienced overflow for as much as 43 successive days. In the Red River of the North Basin, record flooding occurred on the Red Lake and Sheyenne Rivers. Crests along the main stem of the Red River of the North in the reach from Fargo to Grand Forks, N. Dak., ranged from 13 to 17 feet above flood stage, but 5.5 to 10 feet below the previous record stages.

The most important flooding during May was the record flooding that began along the upper Mississippi River during April. Record crests occurred during the first few days of May in the reach from Keokuk, Iowa, to Hannibal, Mo. Near record flooding occurred below Hannibal to Winfield, Mo. The Red River of the North, which was 4 to 6.5 feet above flood stage in the reach at and below Drayton, N. Dak., on May 1, receded within its banks during the first decade. Record flooding occurred in the Missouri Basin on the Little Blue River at Deweese, Nebr.

Floods during June caused heavy property damage and a loss of at least 65 lives. The most destructive of these floods occurred in the South Platte and Arkansas Basins in eastern Colorado. The flooding on the Arkansas from the Kansas-Colorado State Line to Great Bend, Kans., was the most damaging of record. Record stages were reached for a distance of more than 200 miles. The flooding on the Purgatoire River at Trinidad, Colo., was the worst since May 30, 1935. At Pueblo, Colo., the Fountain River had an estimated peak flow of 80,000 c.f.s., which was more than twice the previous high flow of May 1935. A severe flash flood occurred at Sanderson, Tex., in the Sanderson Canyon on the morning of June 11, which claimed 24 lives. Property damage was heavy.

Record to near record stages were reported on many streams in northwestern Missouri during July. The American Red Cross reported that at least 9 lives were lost in this area by drowning. Rural and urban damages are heavy and will total many millions of dollars. This was the second consecutive month that damaging floods had been reported in the Missouri Basin. Numerous flash floods were reported in the Great Basin in Utah during the last half of July.

The most damaging floods in the continental United States during August were the flash floods in the upper Arkansas Basin. This was the third consecutive month that damaging floods had been reported in the Colorado portion of the Arkansas Basin. The flood damage, though moderate to locally severe, was light in comparison to the June flood damage.

The most damaging floods during September occurred in northeastern Kansas, northwestern Missouri, and central Oklahoma. Soldier Creek reached the highest stage since records began in 1958 at Delia, Kans. Extensive local flash flooding occurred in the Arkansas and Red Basins in Oklahoma. Record to near record stages were reached on some streams. Heavy agricultural losses were reported. Over 1,000 families were evacuated. Record high September stages were reported along the lower Missouri River and in the Upper Mississippi Basin at and below Keithsburg, Ill.,

Flooding reported during October in continental United States was mostly light. The most extensive damages were from flash flooding in the Red Basin in extreme southwestern Oklahoma.

Flash floods occurred on several streams in southern California during November. In San Diego, flash flooding along the Sweetwater River inundated one housing subdivision. There was considerable flash flooding in San Bernardino County. Flooding elsewhere in continental United States during November was sparse and minor. In Hawaii, on the island of Oahu, heavy rains caused major landslides and localized flooding.

The most damaging flooding in continental United States during December occurred in the Colorado Basin. The upper Gila River near Cliff, N. Nex., crested 0.1 foot below the flood of January 1949. Extensive damage resulted in southern Arizona from the tributary flooding of the Gila River. Heavy rains caused extensive flooding over the interior and north coast of Puerto Rico during December. The heaviest flooding occurred in the lower Manati and Cibuco Rivers. The Bayamon, Arecibo, La Plata, Loiza, Fajardo, and Guanajibo Rivers also reached high levels. Many major highways were closed to traffic due to flooding, landslides, or damaged bridges. Three deaths resulted from the flooding.

SOLAR RADIATION DATA

Average daily values (direct and diffuse) received on a horizontal surface, tabulated in langleys.

YEAR 1965

Station	January	February	March	April	May	June	July	August	September	October	November	December	Annual
ALBUQUERQUE N.M.	271	373	470	606	672	668	631	584	505	395	267	-	-
AMES IOWA	161	277	345	290	398	484	512	457	266	299	176	129	316
ANNETTE ALASKA	41	97	-	360	444	458		212	213	103	67	39	-
APALACHICOLA FLORIDA	312	317	383	546	652	-	472	491	429	393	297	264	-
ARGONNE NAT. LAB. ILL.	159	-	329	357	518	599	573	434	308	262	150	102	-
ASTORIA OREGON	85	129	351	360	460	527	524	416	310	203	89	-	-
ATLANTA GEORGIA	253	285	313	484	617	473	510	503	383	366	241	236	389
BARROW ALASKA	# -	43	160	361	519	522	426	257	135	48	# -	# -	-
BETHEL ALASKA	52	146	235	427	402	344	288	195	132	112	28	19	198
BISMARCK N.DAK.	181	294	364	312	469	518	559	484	273	298	166	105	335
BLUE HILL MASS.	167	254	309	419	542	570	558	468	367	293	179	135	355
BOISE IDAHO	101	258	417	435	575	651	672	557	456	342	177	142	399
BOSTON MASSACHUSETTS	168	245	297	409	522	540	527	434	363	280	180	123	341
BROWNSVILLE TEXAS	332	310	-	-	543	664	655	552	547	422	328	226	-
BURLINGTON VERMONT	150	194	338	412	399	502	491	388	307	180	-	-	-
CAPE HATTERAS N.C.	217	286	347	480	577	559	543	510	436	337	255	216	397
CARIBOU MAINE	154	239	391	442	442	539	502	381	358	153	121	100	318
CHARLESTON S.C.	262	308	351	503	602	506	547	484	385	346	276	241	401
CLEVELAND OHIO	113	169	259	357	493	590	569	428	329	240	151	110	317
COLUMBIA MISSOURI	175	288	336	416	557	524	530	461	362	304	194	144	358
DAVIS CALIFORNIA	-	-	338	413	634	662	684	595	313	237	204	137	-
DODGE CITY KANSAS	205	293	361	450	516	501	574	485	372	335	214	197	375
E. LANSING MICHIGAN	145	232	296	394	516	600	554	395	294	223	122	72	320
EL CENTRO CALIF. NPF	256	-	-	534	610	618	-	-	-	-	237	219	-
EL PASO TEXAS	318	417	554	667	739	754	712	662	563	495	355	277	542
ELY NEVADA	234	376	452	506	583	605	608	561	484	409	235	211	439
EPPLEY NEWPORT R.I.	157	244	312	400	521	556	533	453	353	301	184	137	346
FAIRBANKS ALASKA	-	91	168	343	505	512	493	-	198	98	38	9	-
FLAMING GORGE UTAH	184	304	441	454	466	-	-	-	-	-	-	-	-
FORT WORTH TEXAS	276	330	374	536	418	626	668	598	506	373	239	206	429
FRESNO CALIFORNIA	161	314	410	478	684	689	671	583	494	396	206	146	436
GAINESVILLE FLORIDA	-	-	402	513	548	411	491	-	389	389	306	286	-
GLASGOW MONTANA	164	272	451	388	516	614	642	537	326	293	153	112	372
GRAND JUNCTION COLO.	243	308	433	468	588	618	622	571	-	-	-	187	-
GREAT FALLS MONTANA	123	203	359	389	460	506	557	443	235	232	129	97	311
GREENSBORO N.C.	237	290	353	461	570	487	486	503	406	368	243	211	384
GRIFFIN EXP.STA.GA.	304	350	378	553	680	489	-	516	392	366	237	222	-
INDIANAPOLIS INDIANA	188	273	306	403	614	603	605	513	413	299	191	144	379
INYOKERN CALIFORNIA	335	468	-	676	844	851	-	735	642	503	286	277	-
ITHACA NEW YORK	132	167	246	332	469	475	493	377	-	168	105	71	-
LAKE CHARLES LA.	279	271	375	476	490	578	500	423	408	371	254	216	387
LAKELAND FLORIDA	332	388	433	550	627	518	495	509	-	367	344	288	-
LANDER WYOMING	202	-	462	462	519	579	602	566	414	361	-	197	-
LARAMIE WYOMING	217	382	468	450	501	510	514	484	365	342	210	212	388
LAS VEGAS NEVADA	285	407	486	558	675	702	634	627	562	424	263	226	487
LITTLE ROCK ARKANSAS	253	317	-	552	542	570	575	544	413	354	211	249	-
LOS ANGELES CALIF.	269	354	425	492	582	496	606	541	474	377	234	235	424
LOS ANGELES CALIF.U	279	372	391	465	535	445	635	567	437	-	-	241	-
MADISON WISCONSIN	185	283	357	-	-	-	-	451	288	275	155	111	-
MANHATTAN KANSAS	214	326	371	398	446	456	494	430	315	336	211	166	341
MATANUSKA ALASKA	33	92	142	324	380	296	281	294	153	126	60	18	183
MAUNA LOA OB.HAWAII	479	580	636	657	557	795	737	733	603	616	426	459	607
MEDFORD OREGON	87	243	384	433	618	622	692	534	501	312	143	113	390
MIAMI FLORIDA	308	255	376	523	434	466	535	555	-	392	381	361	-
MIDLAND TEXAS	291	333	419	524	-	635	672	579	489	454	319	-	-
NASHVILLE TENNESSEE	210	290	297	510	581	580	553	519	399	381	211	186	393
NEW YORK N.Y.U	146	245	318	421	559	555	518	437	334	296	168	112	342
NORTH OMAHA NEBRASKA	197	305	428	430	554	588	572	524	314	387	223	162	390
OAK RIDGE TENNESSEE	168	225	261	372	462	422	-	388	306	263	160	142	-
OKLAHOMA CITY OKLA.	211	308	348	415	421	529	536	507	406	307	196	187	364
PAGE ARIZONA	217	302	408	438	481	-	-	-	-	-	-	-	-
PHOENIX ARIZONA	267	379	462	525	636	635	567	549	475	399	234	202	444
PORTLAND MAINE	156	240	331	439	516	544	546	423	360	254	164	117	341
PROSSER WASHINGTON	-	-	-	491	637	666	665	543	453	293	130	116	-
PULLMAN WASHINGTON	99	183	383	414	564	628	632	476	380	264	111	92	352
RAPID CITY S.DAK.	158	254	371	403	467	482	521	451	318	285	155	118	332
RENO NEVADA	-	-	-	-	-	-	-	-	-	-	-	171	-
RICHLAND 25 NW WASH.	-	-	-	-	-	-	628	507	417	273	120	98	-
RIVERSIDE CALIFORNIA	291	403	398	-	-	-	656	655	522	43	258	281	-
RUSTON LOUISIANA	-	-	-	-	485	543	553	-	-	-	-	-	-
SAINT CLOUD MINN.	173	274	395	365	438	561	561	479	224	282	146	105	333
SALT LAKE CITY UTAH	163	337	408	496	644	654	667	588	448	392	208	143	429
SAN ANTONIO TEXAS	306	299	393	400	349	584	579	584	477	374	250	237	403
SANTA MARIA CALIF.	256	341	411	470	614	564	617	584	444	386	229	217	428
SAULT STE MARIE MICH.	136	234	387	453	515	598	565	413	268	194	116	78	330
SEATTLE WASH. UNIV.	67	114	330	344	444	559	536	-	305	210	91	61	-
SEATTLE TACOMA WASH.	68	131	340	378	490	602	580	425	319	204	96	69	309
SHREVEPORT LOUISIANA	266	294	338	499	-	-	-	-	-	-	-	-	-
SPOKANE WASHINGTON	103	212	394	461	638	678	663	549	411	283	101	76	381
STATE COLLEGE PENN.	160	231	330	368	512	607	584	466	363	280	159	118	348
STERLING VIRGINA	204	267	327	382	504	521	509	472	382	337	221	157	357
STILLWATER OKLAHOMA	220	325	349	492	512	577	560	545	427	345	215	159	394
SWAN ISLAND W.I.	437	510	591	682	607	602	612	554	516	451	421	373	529
TAMPA FLORIDA	331	385	426	596	614	550	516	532	483	412	363	313	460
TUCSON ARIZONA	-	364	-	616	666	-	538	587	517	440	-	249	-
WAKE ISLAND,PACIFIC	374	432	470	473	511	510	575	503	510	354	358	361	453

Note: Langley is the unit to denote one gram calorie per square centimeter.
(U) Indicates Urban sites.
# Sun below horizon November 18 through January 23, inclusive.

Chart I. Departure from Normal of Annual Temperature (°F) at Surface, 1965.

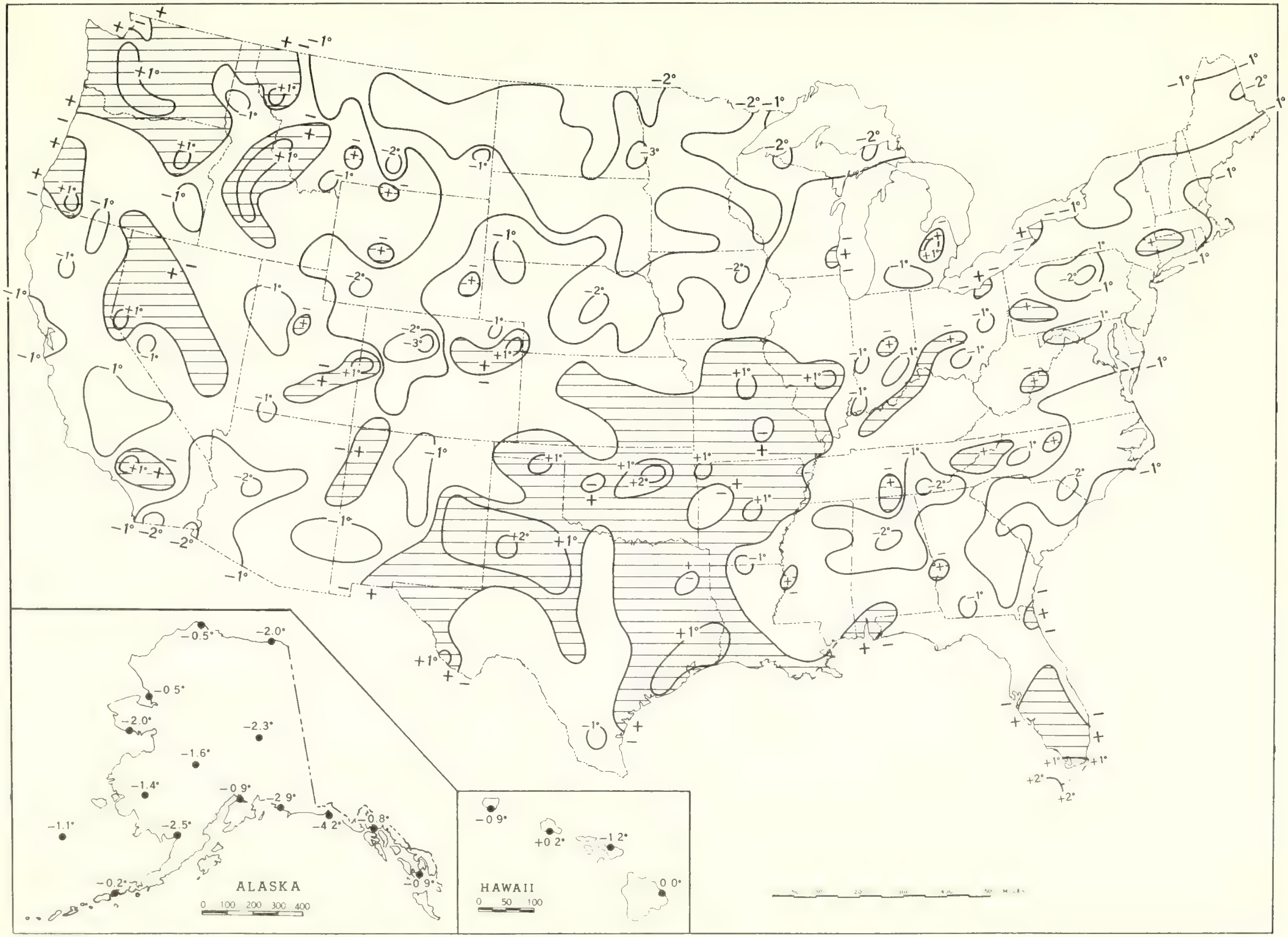


Chart II. Total Annual Precipitation (Inches), 1965.

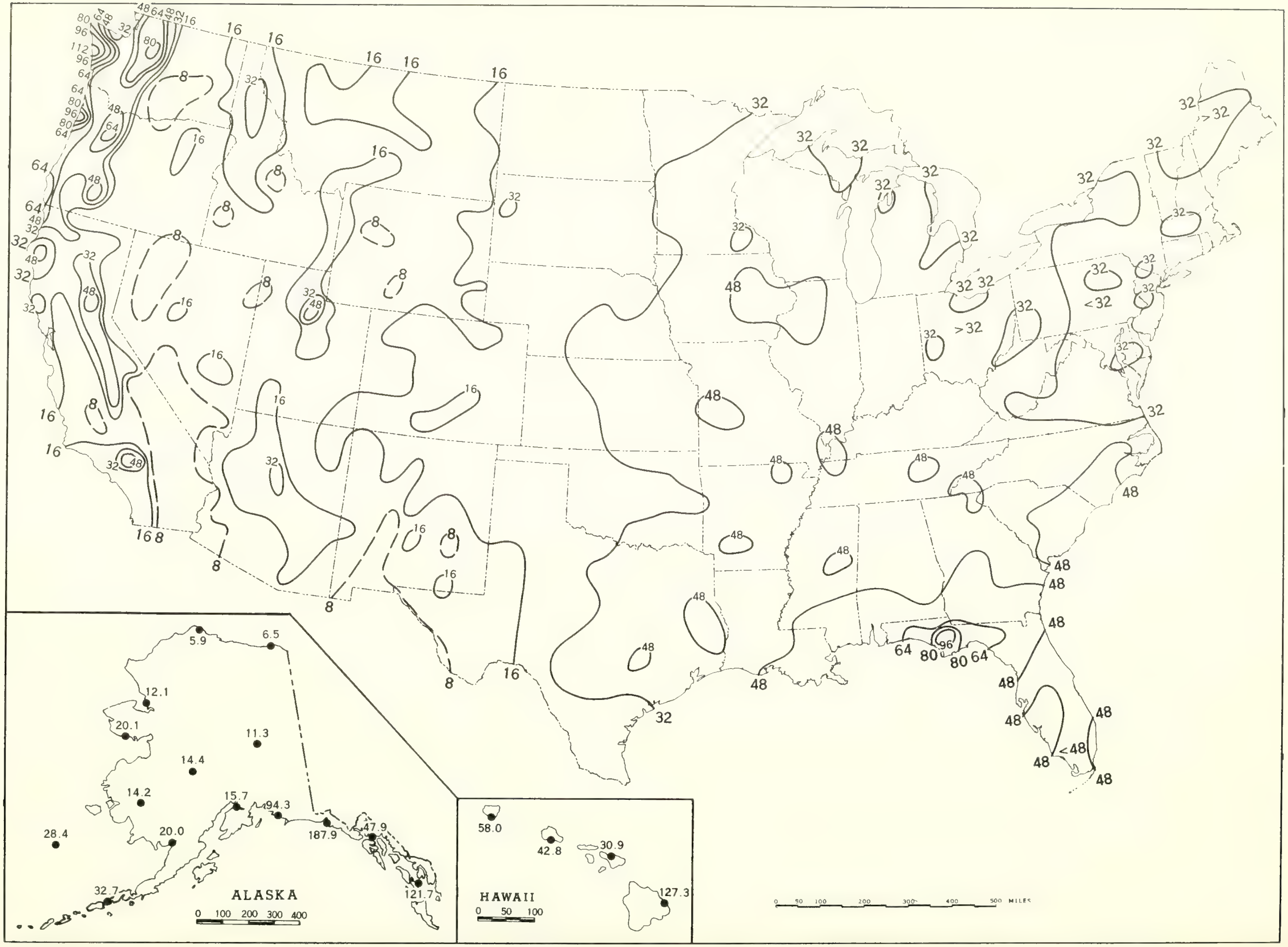
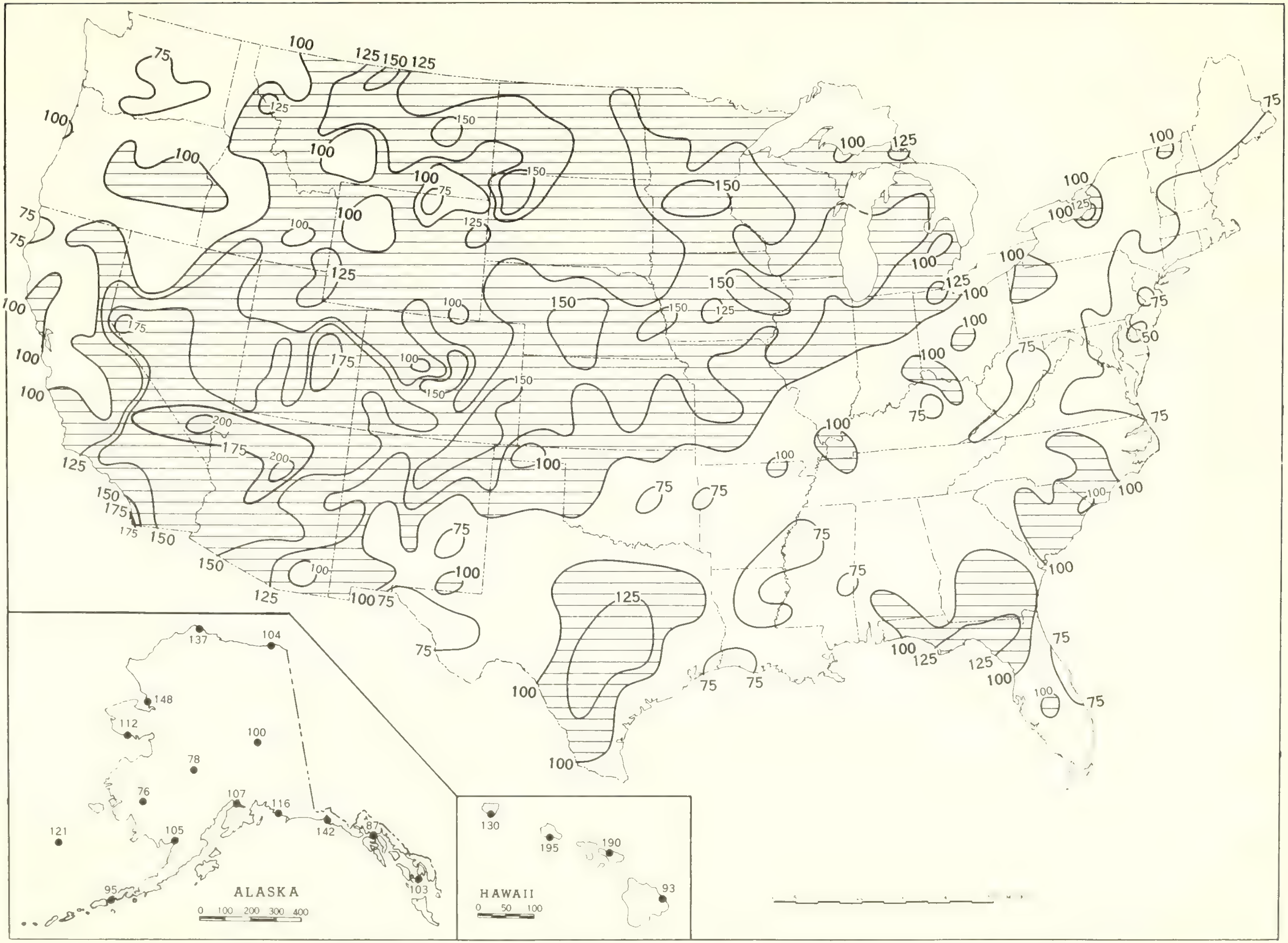


Chart III. Percentage of Normal Annual Precipitation, 1965.



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